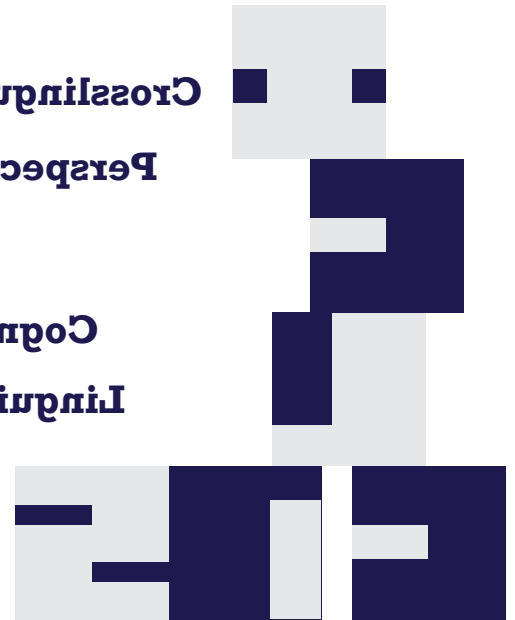


**Crosslinguistic
Perspectives
on
Cognitive
Linguistics**



INTERNATIONAL COGNITIVE LINGUISTICS CONFERENCE 15

BOOK OF ABSTRACTS

CROSSLINGUISTIC PERSPECTIVE ON COGNITIVE LINGUISTICS



**International
Cognitive
Linguistics
Conference**

August 6-11, 2019

Kwansei Gakuin University

Nishinomiya, Japan

Go to the program of:

The Aug. 6th

The Aug. 7th

The Aug. 8th

The Aug. 9th

The Aug. 10th

Aug. 6th (Tuesday)

11:45–	REGISTRATION (Central Auditorium)				
13:40–14:00	OPENING (Central Auditorium)				
14:00–15:30	PLENARY 1: William Croft. Some contributions of typology to cognitive linguistics, revisited (Central Auditorium)				
15:30–15:50	BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)				
room #	101	103	104	105	108
category	semantics (Chair: Natalia Beliaeva)	cognitive grammar (Chair: Toshiyuki Kumashiro)	construction (Chair: Naoki Otani)	construction (Chair: John Newman)	typology (Chair: Kaoru Horie)
15:50–16:15	S. Kemmer Lexical Blending: Opening a Wider Window on the Nature of Morphemes	G. Zeng The Dynamic Focal Adjustments in Event Construal: A Case Study on English WH- Dialogic Constructions	L. Sommerer Let's talk <i>face to face</i> about N-P-N constructions in Contemporary American English	Y. Shi The Ditransitive As Resultative in Chinese	J. Li Lexicalization Patterns of Events of Causative State Change in Mandarin Chinese -from a Diachronic Perspective
16:20–16:45	D. Kjellander Ambiguity at Work: Multistable Meaning Structures in Lexical Blending	T. Kumashiro The Semantic Basis of Syntax: The Case of Quantifier Float in Japanese	Q. Meng & W. Luo The Constructional Changes of English Catenative Constructions: A case study of <i>seem to</i> vs. <i>appear to</i>	M. Xu The Grammatical Constructionalization and Cognitive Mechanisms of <i>Gěi</i> (GIVE) Construction in Mandarin	M. Kirjavainen & Y. Kite Does native language affect a speaker's ability to recall details from photos? A comparison between monolingual English and Japanese adults
16:50–17:15	N. Beliaeva & N. Knoblock Conceptual Blending in the Construction of Morphological Blends	T. Kobayashi (Discourse) Deictic Usages of Demonstrative Pronoun <i>that</i> : A Cognitive Linguistic Approach	N. Otani A constructional analysis of the ' <i>better</i> <i>off</i> construction' in English	Sh. Chen & Ch. Zheng Diachronic Collostructional Analysis on the Chinese Construction "V lai V qu"	N. Chancharu The Carto-Conceptual Network models of indefinite pronouns and negation: Where linguistic typology meets cognitive linguistics
category	semantics (Chair: Dirk Geeraerts)	cognitive grammar (Chair: Susanne Flach)	construction (Chair: Reijirou Shibasaki)	construction (Chair: Lotte Sommerer)	
17:25–17:50	I. Tragel & J. Klavan Draw free, think aloud: The image schematic representation of Estonian abstract verbs	A. De Wit & Ph. De Brabanter The use of the English progressive with verbs of communication: An epistemic analysis	R. Shibasaki <i>The question remains is</i> whether constructions are in the making: Constructionalization at work	H. Jia Exploring the Cognitive Mechanisms of Psych Causative Alternation Verbs in Mandarin Chinese: A Corpus- based Approach	
17:55–18:20	X. Zhang On the Semantic Restrictions of Monosyllabic Sensory Adjectives in Metaphorical Expressions: Evidence from Mandarin Chinese	Sh. Sasaki An Analysis of <i>to</i> - Infinitives as Clausal Subjects	Y. Tsushima The Constructionalization of Implicit Theme Resultative Constructions as a 'Snowclone' in English	Hs.-Hs. Hung Language Productivity and Representation: A Corpus-Based Study of [da - NP] Construction	
18:30–20:00	Reception (Kwansei Gakuin Hall)				

Pre-event: Lectures on the Japanese language from cognitive/typological perspective. Sponsored by NINJAL
10:00–12:00, Room #206, Building G.

REGISTRATION (Central Auditorium)

OPENING (Central Auditorium)

Plenary 1: William Croft. Some contributions of typology to cognitive linguistics, revisited (Central Auditorium)

BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)

204	205	206	207	208	209
metaphor (Chair: Kazuko Shinohara)	metaphor (Chair: Kojiro Nabeshima)	pragmatics (Chair: Ryoko Uno)	multimodality (Chair: Geert Brône)	sociolinguistics (Chair: Gitte Kristiansen)	applied linguistics (Chair: Teresa Molés-Cases)
H-L. Lai Playful Metaphors in Hakka Jokes and Pragmatic-Cultural Implications	E. Wnuk & Y. Ito Heart-based emotion metaphors in Mlabri (Austroasiatic, Thailand)	Y. Hirose Where the awareness condition comes from: Cross-linguistic generalizations about viewpoint reflexives in English and Japanese	H-Ch. Hsu Speech-embedded non-verbal depictions: Embeddedness and structural complexities	W. Zhang et al. Analyzing lexical variation in regional varieties of Chinese: A concept-based approach	D. O. Jackson Pre-service English teachers' dialogic descriptions of motion: Task effects and trouble sources
E. Sweetser & Sch. LaParle War is war - or is it? Different genres show different metaphors for cancer	L. Suárez-Campos Exploring the concept of anger in Bulgarian thought embodied metaphors	Ch-Y. Chester Hsieh Subject, Stance, and Sequence: An Interactional Construction Grammar Approach to the False-belief Verb <i>Yiwei</i> in Mandarin Conversation	A. Jehoul Filled pauses from a cognitive and pragmatic perspective: how eye-tracking improves our knowledge of linguistic elements	G. Kristiansen & J. Martin Tevar Cognitive Grammar Matters: Revisiting Linguists' Use of Question Types in Attitude Research	D. Nakamura Effects of task procedural repetition on lexical diversity and clausal complexity in L2 written narrative production of motion events
Y. Choi Metonymy Affects Grammar: Korean Double Object Constructions	T. Zhang & J. Zhan A cognitive approach to metaphors and metonymies: A case of the emotion "xi" (HAPPINESS) in Chinese	K. van Krieken Linguistic Patterns of Viewpoint Transfer in News Narratives			E. Soroli et al. Event integration mechanisms across languages and their psychological reality
	metaphor (Chair: Karen Sullivan)	pragmatics (Chair: Masako U. Fidler)	multimodality (Chair: Tomoko Endo)	sociolinguistics (Chair: Maarten Lemmens)	applied linguistics (Chair: Reyes Llopis-Garcia)
	D.C. Strack Contemporaneous embodied experience influences metaphor comprehension	L. Vilkki Epistemic and inferential expressions in linguistic research articles: A contrastive (English-Finnish) corpus-based analysis	T. Endo Bodily Behavior as Constructional Meaning: The Case of Benefactive Construction in Japanese Family Interaction	M. Lemmens et al. Gender stereotypes, neologisms, and concept-formation	Y. Liao et al. Directional prepositions and the dynamics of motion event representation
	T. Xu & X. Wang Is Humor Embodied? - An empirical study of humor perception in Chinese	R. Becerra A corpus-based analysis of two "mystery" discourse particles in Mapudungun	J. Pelkey Kinesthetic Pattern Grammar in the Yama-Bhavacakra: Markedness, Blending and Bodily Midline Mimesis	G. Kristiansen Asymmetries in Pluricentric Language Perceptions	R. Llopis-Garcia Space, radial networks and prototypes: a cognitive approach to prepositions in Spanish/L2 pedagogy

Reception (Kwansei Gakuin Hall)

Some contributions of typology to cognitive linguistics, revisited*

William Croft
University of New Mexico

*to the memory of Wallace Chafe (1927-2019)

In 1997 I was invited to speak to this conference, and I discussed “Some contributions of typology to cognitive linguistics, and vice versa”, which evolved into *Radical Construction Grammar: Syntactic Theory in Typological Perspective*. This year’s conference theme is “Crosslinguistic Perspectives on Cognitive Linguistics”, and in this talk I revisit the question of the relation of typology to cognitive linguistics, and how it has developed in the past twenty-two years.

The central argument that I presented in 1997 is that morphosyntactic categories, including those of parts of speech such as noun, verb, adjective, or core grammatical roles such as subject, object and oblique are not just language-specific, but construction-specific. In other words, there are no universal morphosyntactic categories.

This conclusion, well supported by empirical evidence of distributional variation—also observed in corpus-based research in construction grammar, which to a great extent serves as the syntactic theory of cognitive linguistics—poses a problem for cognitive linguistic theories. Human cognition includes features that are general among humans. Theories such as Cognitive Grammar posit universal cognitive definitions of fundamental grammatical categories. These definitions are semantic, not based directly on syntactic distributional facts.

Yet the cross-linguistic analysis of semantic categories also indicates that there is not a finite set of universal semantic categories either. One cannot assume that semantic categories expressed in European languages are the most useful or the only ones that occur across languages. For example, Dryer (2013) finds that the definite-indefinite distinction is less common than distinctions based on the tracking status of referents (see also DuBois 1980). More radically, the ‘in’-‘on’ type spatial relations (Bowerman and Pederson; Levinson et al. 2003) are organized in a continuum of gradient semantic dimensions (Croft 2010), not discrete universal semantic categories.

However, there is another approach that is more promising to address this problem. Linguistic function includes construal of semantic content. One can offer a precise definition of construal and its constraints (Croft 2007, 2012). An example of construal is the set of propositional act constructions (reference, predication, modification) that package the information content of “content words”. That is, universals of noun, verb and adjective are found in the information packaging of content words in the process of verbalization (Chafe 1977a,b).

In work in progress (*Morphosyntax: Constructions of the World’s Languages*), I survey cross-linguistic variation and universals for constructions that encode the major functions expressed in language. From this survey, I conclude that all linguistic meaning involves information packaging of semantic content. This conclusion is valuable for understanding cross-linguistic variation, but it should not come as a surprise to cognitive linguists for whom meaning is construal (Langacker). The information packaging functions are more plausible bases for definitions of universals of grammatical categories and constructions. Nevertheless, even here there are continua, including a modification-predication continuum and a reference-modification continuum.

Constructions are comparative concepts. Recent work in typology offers robust definitions of comparative concepts for cross-linguistic comparison (Haspelmath 2010; Croft 2016). I distinguish constructions—any form expressing a function—from strategies—a subset of constructions that use a particular set of formal structures. Understanding strategies is the heart of grammatical analysis. Three types can be identified: encoding, coexpression and recruitment strategies. The first two types are more grammaticalized versions of recruitment, that is, the recruitment of a constructional form for a new function. Recruitment is, of course, another type of construal, of one function as being similar to another function. The marriage of typology and cognitive linguistics is a fruitful one.

Lexical Blending: Opening a Window on the Nature of the Morpheme

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Keywords: Lexical Blending, Cognitive Grammar, Morphemes, Neologisms

Lexical blends make up a notable portion of the continual flood of neologisms emerging in English. Speakers produce and interpret lexical blends every day, and the sheer number of coinages has made exhaustive collection virtually impossible. With my students I have constructed a database of neologisms containing several thousand lexical blends. They include proper nouns like *Zootopia* (< *zoo* and *utopia*), blends for newly conventionalized concepts, e.g. *mansplaining* 'patronizing explanations by a man to a woman on subject she knows more of than he' (< *man* and *explaining*), and *threadjack* 'to sidetrack or take over an internet discussion thread by deliberately introducing a distracting, emotion-laden, but minimally relevant post' (*thread* and *hijack*). There are also a vast number of humorous nonce blends such as *meowt* ([cat] crying to go out, < *meow* and *out*). Blends can no longer be dismissed as marginal to or even outside of the system of English word formation (as claimed in Bauer 1988:39).

Our knowledge of blends in English and other languages has recently been advanced in empirical range, methodology, and theoretical issues (Gries 2004, Lepic 2016, Renner et al. 2012). Building on [author] (2003) and more recent work, and using the database mentioned above, I describe the formal and functional characteristics of English blends using Cognitive Grammar, positing cognitive mechanisms for the integration of formal and semantic information. It is shown how different blend formation types relate to one another and to the processes closest to them, notably compounding and affixation. The constructional aspects of lexical blends are described, e.g. the way a blend can generate a whole family of blends via a gradually crystallizing constructional template. The analysis is brief but points to an account that is empirically well-grounded, consistent with what is known of cognitive and social processes involved in creation, interpretation, and propagation of linguistic units, and also general enough to accommodate the various types of blends naturally and integrally, despite their heterogeneity and distinctive properties.

Following from the analysis, I argue that the sub-morphemic word parts in blends are not qualitatively different from morphemes. In fact, once we see morphemes and non-morphemic elements as ranging along a cline of symbolic units, we find a natural account of the special properties of blends and a basis for integrating them into linguistic theory, along with other non-prototypical meaningful units such as phonaesthemes and the partially integrated loanwords found wherever languages come into contact. I note some significant methodological and theoretical challenges still to solve, and suggest that the study of blends gives insight into the cognitive and social processes involved in the creation, learning, spread, and change of new lexemes.

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Ambiguity at Work: Multistable Meaning Structures in Lexical Blending

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Keywords: Lexical blending, Structural overlap, Multistable meaning, Corpus data, Data collection

Structural overlap in lexical blends, i.e. when its source words share letters, is often described as a recurring characteristic of this word formation process (e.g. Beliaeva 2014, Gries 2006, Kelly 1998, Lehrer 2007). The rich semantic potential of overlap is exemplified in blends such as *testimoney* (testimony + money), *dragula* (drag + dracula), and *crooklyn* (crook + Brooklyn). The complex relation between source words of blends with overlap has been discussed from various viewpoints (cf. Beliaeva 2014, Gries 2006), but the dominance of structural analyses of source words means that conceptual perspectives and explanations await further investigation (cf. Bauer 2012, Gries 2012). There are two objectives of this presentation. First, it describes a data collection model and a methodology addressing the problem of how to retrieve lexical blends in a systematic manner. Second, it investigates semantic aspects of lexical ambiguity of the blends in the dataset.

Few previous studies give a transparent account of how the blends in the data have been collected, let alone present a systematic rationale motivating the employed procedures of retrieval. This study addresses this issue by designing a data collection model based on an offline version of the *News On the Web* corpus (NOW; <https://corpus.byu.edu/now/> Retrieved 2019-02-19). A randomized set of 100 words among the 2000 most frequent common nouns in the corpus are truncated according to the rationale of their *selection point* (Gries 2006). These items are then the basis for corpus queries in a SQL script environment, which results in lists that have been analyzed manually so as to identify lexical blends.

The transparent and systematic dataset of the study not only enables descriptions of *semantic ambiguity* and *multistable meaning structures* as such, these phenomena are also related to the context of the corpus as a whole. Moreover, it can be shown how common a certain strategy is in the data, but it also allows for future investigations across other data sets. The semantic part of the study is oriented towards how lexical ambiguity is expressed and applied in the dataset. The example blends, *testimoney*, *dragula*, and *crooklyn*, illustrate how the sharing of structure creates a multistable form allowing both interpretations simultaneously. In addition, the data displays instances in which the semantic potential of seemingly unrelated concepts is activated on the basis of lexical frequency. For instance, in a blend such as *bodacious* (bold + audacious; <https://www.merriam-webster.com/dictionary/bodacious> Retrieved 2018-11-12) the presumed source words explain some of the usage data, while a recurring association with *sex* may seem coincidental. However, the data of this study reveals that an initial splinter *bod**, which is calculated using Gries' (2006) notion of selection point, produces *body* as the most frequent item in a corpus query. A concealed and ambiguous meaning potential is thus activated in *bodacious*, and the semantic richness of the blend is extended with interacting covert structures. In other words, the meaning of *bodacious* is understood as a multistable network of associations that draws its linguistic motivation from unresolved ambiguities.

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Conceptual Blending in the Construction of Morphological Blends

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Keywords: mental spaces, blending, morphological blends, linguistic creativity, language of conflict

The presentation applies the conceptual blending theoretical framework (Fauconnier & Turner, 1998, 2002) to the analysis of a number of morphological blends that entered the Russian and Ukrainian languages in recent years as a result of the political, social, and military conflict in Ukraine. The study applies the conceptual integration framework to the morphological blends to check whether they can be considered a non-prototypical case of conceptual blending. We study the process of creation of a morphological blend as a cognitive process that maps perceived similarities between the concepts expressed by the 'donor' words, which contribute to the resulting blend, and as a strategic activity that purposefully draws on the available linguistic and extra-linguistic resources of the speaker. Because of the novelty of the items we examine, the mechanisms of the "backstage cognition" allowing the meaning construction to be successful (Fauconnier, 1994), such as background knowledge, general cognitive abilities, and information from the immediate context, are easier to identify and analyze.

Discourse of the Ukrainian conflict gave rise to multiple novel lexical items, including several new insulting nicknames for the Russian and Ukrainian presidents. This study focuses on the morphological blends involving the names of Putin and Poroshenko, such as Putler (Putin + Hitler) and Poproshenko (poproshaika 'beggar' + Poroshenko). A total of six blends of this sort, three each for the respective presidents, were used as 'seed words' to identify texts to comprise a medium-sized specialized corpus of approximately 800,000 words collected from web-based sources using the WebBootCaT tool of the corpus managements system Sketch Engine (Kilgarriff et al., 2004). The contexts of usage of the target words (a total of 290 tokens of blended names with *Putin* as one of the constituents, and 275 tokens of blended names with *Poroshenko* as one of the constituents) were compared to the contexts of non-blended names *Putin* and *Poroshenko* (a sample of 100 out of 5,253 and 416 tokens, respectively).

The results of the study demonstrate clear differences between the contexts of use of blended vs. non-blended names in political media and discussions, in terms of the style and register of the discussion, emotional markers and content, which is consistent with previous findings that blended names are often used in political discussions to add derogatory connotations, or to discredit the political opponent (Gorban, 2016). We propose that the insulting force of the blends we analyse can be viewed as the emergent property of the blended space represented by the blended names in our corpus.

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Draw free, think aloud: The image schematic representation of Estonian abstract verbs

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Keywords: abstract verbs, image schemas, think aloud protocol, free form drawing task, Estonian

The present paper discusses an innovative experimental design to study the meaning and image-schematic representation of abstract verbs. We employ a free form drawing task together with video screen captures and a think-aloud protocol, allowing participants to choose their own image-schematic representation of abstract verbs. The results of our study highlight some of the shortcomings of the previous studies where the participants have had to choose between the image-schematic representations predetermined by the researchers (cf. Meteyard & Vigliocco 2009, Spivey et al. 2005). We proceed from the assumption that our (embodied) experience is likely to be used when describing the events expressed by abstract verbs (when drawing or explaining the drawings) (cf. the embodied nature of language as discussed in Gibbs 2005 and Barsalou 2008). The captures of the video screen together with the think-aloud protocol provide us with valuable information in terms of what is relevant for speakers when they represent abstract verbs.

In our paper, we report the findings of a free form drawing task conducted with 20 native speakers of Estonian. In the experiment, participants were asked to create and explain their own schematic representations of 20 abstract verbs in Estonian. We used an iPad to capture and trace the on-line processing of abstract verbs. The verbs were presented to the participants without context. In the instruction the participants were asked whether they thought the verbs have a direction and instructed to draw it. In addition, they were asked to explain aloud their thinking while completing the task. The recordings of the explanations were transcribed and the subsequent video clips were subjected to manual qualitative data analysis. We have identified a set of features for each of the drawings produced for the abstract verbs, including the type and shape of arrows or lines, the presence of ego and/or patient etc. We hypothesise that the features present on the image-schematic representations of the abstract verbs produced by the participants allow us access to the underlying semantic features of event “configuration” for each of the verbs. We expect to find correlations between the valency, transitivity, and the potential of the abstract verb to be part of VV constructions and its image-schematic representations produced in the drawing task.

Our study shows that the shape, type, order and number of arrows or lines ties nicely up with vectorial classification of verbs (cf. McGregor 2002). While the majority of the verbs in the experiment have been represented by an arrow, the following three verbs have consistently been represented by other means: *armub* “falls in love”, *jääb* “stays”, *teab* “knows” and *tunneb* “feels/knows”. In addition, the manner of the action implied by the verb can be seen in the type and shape of the arrow and/or line used to represent the verb. For example, while some verbs have a clear direction (e.g. *meeldima* ‘like’), other verbs are depicted by a variety of lines. Still, similar strategies were noticed across the test subjects, for example *elama* ‘live’ was often depicted with a wavy line, a zig-zag or a spiral, *mõttelema* ‘think’ correlates with circular motion and *määrama* ‘determine’ with a dot or a square (punctual representation). In order to test whether a difference in the writing system affects the results, we conducted the same experiment with 12 speakers of Mandarin Chinese. The preliminary results indicate that the results are similar for the two languages.

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On the Semantic Restrictions of Monosyllabic Sensory Adjectives in Metaphorical Expressions: Evidence from Mandarin Chinese

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Keywords: metaphor, Mandarin Chinese, monosyllabic sensory adjectives, category hierarchy, cognitive grammar.

There are some restrictions on the metaphorical use of monosyllabic sensory adjectives in Mandarin Chinese (Yu 2004, Tang 2010). For instance, although when the monosyllabic adjective “*tian*” (sweet) is used as predicate, “**Ta de xiaorong tian.*” (His smile is sweet) is unacceptable; if it is replaced with a disyllabic adjective like “*tian-tian de*” (sweet-sweet AUX), which conveys virtually the same meaning, “*Ta de xiaorong tian-tian de.*” (His smile is sweet-sweet AUX) becomes perfectly acceptable. In addition, although when the monosyllabic adjective “*tian*” (sweet) is used to modify a noun as in “**tian (de) xiaorong*” (sweet smile), the expression is unacceptable, when a disyllabic adjective is used, as in “*tian-tian de xiaorong*” (sweet-sweet AUX smile), the expression becomes acceptable. In this research, we propose that these restrictions above are based on some semantic grounds, not on phonological ones. Metaphors are semantic phenomena. Thus, it is natural to investigate the semantic difference between monosyllabic and disyllabic words. In fact, the phonological restrictions above eventually turn out to be just epiphenomena. Actually syllable structures are strongly related to category hierarchy. Thus, the restriction on metaphorical use of monosyllabic adjectives can be that of basic level adjectives. In fact, we conclude that basic level adjectives cannot be used metaphorically because they lack invoking *conceived time* (Langacker 1990) as part of conceptual content. This conclusion raises another question; why does only Mandarin have the restriction on metaphorical expressions while other languages do not? We can answer it by positing a polysemous structure based on synecdoche, which is pervasive in category hierarchies. For example, a Japanese word “*sake*” designates as a synecdoche both *alcohol* (higher or basic level) and *rice wine* (lower level) in a category hierarchy. Thus, we can posit the existence of *sake*¹ (alcohol) and *sake*² (rice wine) in Japanese vocabulary. Languages express distinct level categories in one form. Therefore, we can safely assume *sweet*¹/*sweet*² in English or *ama*¹/*ama*² (sweet) in Japanese at different levels of category hierarchy. And we propose that only the lower level *sweet*² and *ama*² can be used for metaphorical expressions in these languages, as “*tian-tian*” can in Mandarin. In short, while lower level adjectives with conceived time in conceptual content can be used as metaphorical, basic level adjectives cannot be used as metaphorical. Although some languages appear to have no such restrictions on metaphorical use, they are merely implicit.

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The Dynamic Focal Adjustments in Event Construal: A Case Study on English WH- Dialogic Constructions

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Key words: dialogic construction; event construal; focal adjustment; dynamic grounding;

According to Langacker (2007:17), **construal** is our ability to conceive and portray the same situation in different ways, and there are many aspects or dimensions of construal. In the early works on Cognitive Grammar contributed by Langacker (1987, 1991, 1993, 1999), *construal* is discerned in a broad sense from five aspects, namely, **the level of specificity (or schematicity), prominence, scope, background,** and **perspective**. Later on, Langacker (2007:17) particularly emphasizes three of them, which are **level of specificity, prominence,** and **perspective**. Along with the in-depth explorations on natural languages in the framework of Cognitive Grammar, the kernel concept of *construal* is re-elaborated but from only four aspects: **focusing, specificity, prominence, perspective** (Langacker 2008/2013:55). In his recent studies, Langacker (2015:120) further examines the nature of *construal* and also specifies it into five dimensions, which are **perspective, selection, prominence, dynamicity,** and **imagination**. This cognitive study on English WH-Dialogic constructions strongly evidences speakers' employment of such dimension of construal as **focusing, perspective, selection, prominence, dynamicity** in dialogic interactions.

To begin with, in the framework of Cognitive Linguistic Studies, a WH-question construction and one of its answer constructions virtually indicate the different **levels of schematicity** of the same (simple or complex) event structure. To be more specific, a WH-question represents the schematic/type structure of an event, while its answer is the instantiation of this schematic/type structure. The **Schema/Type-Instance** relation between a WH-question construction and the answer construction suggests the dynamic *grounding* of the *WH-word* (e.g. what, when, who) that initiates a question. Then, according to the different consequences of *grounding* of WH-words initiating a question, we group the data of 5,051WH-dialogues collected from COCA into three semantic categories. They are: (1) Answers indicating direct instantiation of WH-words (77.53%); (2) Answers indicating indirect instantiation of WH-words (1.84%); (3) Answers indicating non-instantiation of WH-words (20.63%). Essentially, the different semantic categories of answers in WH-dialogues demonstrate the dynamic **focal adjustments** in WH-dialogues in the process of WH-word *grounding*, resulting in the cases of consistency or non-consistency of **focal attention** between speakers, revealing the facts that speakers have their own **perspectives** to interpret the same event, and their own **focuses of attention** that make certain elements of the event **prominence**. Additionally, the answerer answers the question by employing structures with various levels of complexity and abstractness, suggesting the different **levels of specificity** of the schematic event (viz., WH-question) at the syntactical level.

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The Semantic Basis of Syntax: The Case of Quantifier Float in Japanese

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QUANTIFIER FLOAT (QF, hereafter) is one of the most intensely investigated topics in Japanese syntax (e.g. Shibatani 1977, Kuroda 1983). In (1)a, the quantifier (Q, hereafter) is a nominal modifier marked by the genitive *no*. In (1)b, the Q “floats” off of the head NP and appears post-nominally. This floating is constrained, as indicated by the unacceptability of (1)c. Miyagawa (1989) claims that the phenomenon is subjected to the MUTUAL C-COMMAND REQUIREMENT, forcing the head NP and the Q to c-command each other. Thus the sentence is ungrammatical because the Q inside the VP cannot c-command the head NP in the subject position. Furthermore, QF is claimed to be a textbook example of a proof of the presence of a movement rule in Japanese (cf. Tsujimura 2014). The grammaticality of (1)d is ascribed to the scrambled direct object NP, whose trace, if not the NP itself, can be c-commanded by the Q.

- (1)a. *San-nin-no gakusei-ga hon-o katta.* → ‘Three students bought books.’
 three-person-of student-NOM book-ACC bought
- b. *Gakusei-ga san-nin hon-o katta.* → ‘Three students bought books.’
 student-NOM three-person book-ACC bought
- c. **Gakusei-ga [hon-o san-nin katta]_{VP}.* → ‘Three of the students bought books.’
 student-NOM book-ACC three-person bought
- d. *Hon-o_i gakusei-ga [t_i san-satsu katta]_{VP}.* → ‘Three copies of the books, students bought.’
 book-ACC student-NOM three-volume bought

In Cognitive Grammar (CG, hereafter), such syntactic constructs as c-command and NP movement of course do not exist, excluded by the stringent CONTENT REQUIREMENT, which prohibits any semantically-void element in grammar. Therefore, QF could serve as a strong case against such a semantic approach to grammar; in this paper, however, I aim to demonstrate that a semantic analysis of QF is viable notwithstanding and further that it is also preferable.

A key to such an alternative is the varied types of counterexamples that have been presented. The sentences in (2) are “structurally” identical to (1)c in all relevant respects, yet they are clearly acceptable (cf. Gunji and Hashida 1998, Mihara 1998, Takami 1998). Note that Miyagawa cannot accommodate these “exceptions” by relegating them to “pragmatics” because what is ruled out by syntax cannot be ruled in by pragmatics. The only possible course of inquiry would then be to explain the infelicity of (1)c, as well as the felicity of (2), not in syntax, but in semantics.

- (2)a. ?*Tsugi-kara tsugi-e-to gakusei-ga hon-o san-nin katta.*
 next-from next-to-with student-NOM book-ACC three-person bought
 ‘One after another, three students bought books.’
- b. ?*Kinoo gakusei-ga Shichi-nin-no Samurai-o san-nin mita.*
 yesterday student-NOM seven-person-of samurai-ACC three-person saw
 ‘Three students saw *The Seven Samurai* yesterday.’
- c. ?*Gakusei-ga hon-o san-nin-mo katta.*
 student-NOM book-ACC three-person-as.many bought
 ‘As many as three of the students bought books.’

To this goal, I adopt the view that floated Qs function as adverbials (cf. Ishii 1999, Nakanishi 2007) and as such modify the meaning of the predicate, quantifying the head NP only indirectly. That is to say, in the semantic structure of a floated Q, the process expressed by the predicate is quantified and replicated, with the result of replicating the participants as well. Based on this view, I claim that the acceptability of a floated Q is determined by the replicability of the process involved, not that of the targeted participant itself and that varied types of factors are brought to bear in this assessment.

In the case of (1)c, the two participants are interpreted indefinitely, without any contextual support, which results in double replication of both the subject and the direct-object participant. This double replication is a cognitively-taxing task that results in unacceptability without any aid. In (2)a such aid is provided by the seriality of the evoked temporarily distinct processes, which invoke participant replication by themselves. In the case of (2)b and (2)c, only replication of one single participant is required, resulting in improved acceptability. In the former, the direct-object participant is a proper noun, which is not replicated, and in the latter, the presupposition necessarily evoked by the particle *mo* already encompasses the subject participant, obviating its replication.

In conclusion, it is argued that CG can explain the basic data on QF in (1) without relying on any uniquely syntactic notion and can accommodate the counterexamples in (2) without additional cost. Notice that the proposed analysis is made possible by bringing together a wide range of factors affecting the unifying semantic schema, which the syntacticians (e.g. Kuroda and Miyagawa), lexical semanticists (e.g. Mihara), formal semanticists (e.g. Nakanishi), and functionalists (e.g. Takami) all have failed to observe. Therefore, QF in Japanese allows us to recognize the advantage, actively promoted by CG, of observing a phenomenon without preconceptions and across all factors involved and of seeking for an underlying operation responsible in order to reach a revelatory analysis.

(Discourse) Deictic Usages of Demonstrative Pronoun *that*: A Cognitive Linguistic Approach

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Keywords: deixis, demonstratives, imperatives, current discourse space, grounding, perspective

Focusing particularly on the imperative form *Look at that*, this paper proposes that discourse deictic usages of the demonstrative pronoun *that* reflect speakers' varying cognitive processes and that such processes can be analyzed uniformly in the context of Langacker's (2001, 2008) theory of current discourse space (CDS).

A common description of the difference between *this* and *that* explains that the former refers to an entity in the proximity of the speaker whereas the latter refers to a distant entity. When the entity is located at the same distance from both speaker and hearer, the selection of *this* or *that* depends on whose point of view is being expressed by the speaker (Fillmore 1982). Interestingly, according to Sawada (2013), the speaker sometimes indicates an entity close to themselves by the distal demonstrative *that*, as illustrated in (1). Sawada (2013) argued that this form of *that* reflects the speaker's perspective shift to the hearer and functions for drawing the hearer's attention. Although previous studies have highlighted intriguing phenomena, it remains unresolved why the hearer's region or speaker's perspective shift is involved in some specific usages of *that*.

- (1) "Look at **that**!" He held out his hand. On the palm were three little pyramids of black, doughy clay.
(Arthur Conan Doyle, "The Adventure of the Three Students," p. 604; quoted in Sawada 2013: 2)

In addition to the deictic usages exemplified above, we discuss two other discourse deictic usages of *that*. In (2), the speaker's use of the expression intends to show his happiness or surprise rather than attract the hearer's attention (as the referent is what the hearer brought to the speaker). On the other hand, in (3), *that* refers to the ongoing conversation itself.

- (2) Parker: Daddy, daddy, daddy! Look what I did!
Booth: Wow, look at **that**! (Bones, 2006/9, TV drama)
- (3) Jessica: Doesn't matter, because he cures more than he makes. Like when you stuck your nose into my case last year and he beat you.
Harvey: Crushed him.
Jessica: Then, he took his ball and went home.
Harvey: Should have stayed there.
Tanner: Look at **that**. Finishing each other's sentences. How cute. (Suits, 2012/8, TV drama)

As a means to approach the research question, we analyzed data from the American TV dramas *Bones*, *The Mentalist*, and *Suits* (Seasons 1 through 4), which together comprise a total of 238 episodes spanning approximately 10,000 minutes. From our analysis, it can be clarified that speakers of the first usage (as in (1)) utter *Look at that* so that hearers focus on what is referenced by *that*. The primary purpose of speakers of the second usage (as in (2)) is then to emphasize the speaker's emotion, whereas speakers of the third usage (as in (3)) refer to the ongoing conversation or situation itself, thus dulling its pointing function. CDS would provide a straightforward description of the three usages in a unified manner: 1) descriptive axis; 2) individual axis; and 3) discursive axis (cf. Langacker 2016: 30).

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The use of the English progressive with verbs of communication: An epistemic analysis

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The semantics of the English progressive is typically analyzed in terms of aspecto-temporal notions such as duration or ongoingness, in contrast with its simplex counterpart, which is said to involve a complete viewpoint on a situation that is stable over time. Yet this distinction in terms of purely aspecto-temporal notions is difficult to maintain if we consider the following examples featuring verbs of communication (attested in the spoken component of the Corpus of Contemporary American English), in which the simple present and the present progressive appear to be interchangeable without there being an aspectual meaning difference:

- (1) a) *All I **am saying** is that if Israel will decide to act, there will be sufficient coordination*
 b) *All I **say** is, let this court contest play itself out and I think the state Supreme Court decision may well be dispositive.*
- (2) a) *Is that why you're **asking** for presidential involvement?*
 b) *Yes. I -- I understand why you **ask** that question, but I just don't -- I just -- to me, I was there.*
- (3) a) *I'm **telling** you a more tightknit group of people you will be hard pressed to find, strong, proud, caring people with community at its core.*
 b) *I **tell** you, the Democrats are going to be watching this very closely.*

It is remarkable that other types of dynamic verb do not appear to exhibit this type of variation (*?All I **do** at this moment is helping out; ?I don't understand why you **speak** to me here; ?I'm promising you, we'll be watching this closely*).

In our study, we investigate these noteworthy aspectual characteristics of *say*, *tell* and *ask* in English on the basis of samples of 200 progressive occurrences per verb in the COCA corpus. For each progressive token, we look for a minimally different simplex counterpart so as to form minimal pairs. We demonstrate that verbs of communication are special in that they often do not appear in reports of concurrent events. In (2), for instance, the asking actually took place right before being reported, and in (1) the speaker is summarizing what (s)he said previously. Thus, while most reports of (present-time) ongoing events obligatorily require the use of the progressive in English, such a temporally motivated obligation is typically lacking with verbs of communication. Why, then, do speakers of English still resort to the progressive with these verbs? The answer to this question lies in another special feature of verbs of communication: they typically come with complements that carry information that is important in the discourse, i.e. reports of what someone has said, told, asked etc. This is the kind of information that speakers typically like to zoom in on, and we argue that the progressive constitutes the excellent grammatical tool to do so, since it construes situations as phenomenal, and thus not entirely predictable (Goldsmith & Woisetschlaeger 1982; De Wit & Brisard 2014). In other words, in order to analyze the aspectual variation displayed in our corpus-based minimal pairs, we rely on cognitive analyses according to which aspectual meaning is not (primarily) temporal, but rather epistemic (De Wit 2017). In our talk, we discuss the various interpretive, performative and narrative usage types of progressive *say*, *tell* and *ask* where this epistemic function is specifically exploited.

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An Analysis of *to*-Infinitives as Clausal Subjects

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Keywords: *to*-infinitives, subject, cognitive grammar, autonomy, generality

As Egan (2008: 100) notes, *to*-infinitival clauses as subjects appear to collocate with a very limited range of predicators. However, previous studies of *to*-infinitival clauses as subjects (e.g. Egan (2008), Duffley (2003)) do not explain the reason why *to*-infinitives as subjects are used with a very limited range of predicators. Therefore, the aim of this presentation is to account for this reason. In order to quote instances of *to*-infinitives as subjects, I have used the Corpus of Contemporary American English (COCA). Most of the downloaded instances collocate with the matrix verbs *be*, *require*, *mean* as in (1). So why are *to*-infinitives as subjects used with very limited predicators? Sasaki (2018) claims that a *to*-infinitive like the one in (2) refers to a virtual event, but the virtual event corresponds to a certain future actual event and implicates a future event. This study also considers *to*-infinitives to be a type of virtual events. However, I claim that *to*-infinitives as subjects refer to a general event. For one thing, Langacker (2008: 438) claims that a *to*-infinitival clause “describes an event only in generalized fashion.” Additionally, a clausal subject is autonomous vis-à-vis the verb (cf. Langacker (1987: 236)) and is semantically less affected by the verb, as compared to the direct object in particular. It follows therefore that *to*-infinitives as subjects retain their generality, which is based on “virtuality” (Langacker (1999)), contrary to the case of *to*-infinitives as objects which are semantically affected by the matrix verb and often lose their generality as in (2).

- (1) a. *To walk* 26 miles is a very difficult goal to achieve.
 b. *To achieve* this will require concessions on the part of both sides.
 c. ...and *to love* nature means that you accept its force. (COCA)
- (2) He intends/wants to achieve the goal.

Therefore, the *to*-infinitives in (1), which function as a clausal subject, retain their generality and refer to a virtual event; the *to*-infinitival clause in (1b) might seem to imply a future orientation, but it still retains its generality, as compared to the *to*-infinitival clause in (2). It is therefore valid to claim that a verb takes a *to*-infinitive as the subject only when it is compatible with a *to*-infinitive functioning as a clausal subject that refers to a general event. For example, in (1a), the verb *be* connects the general event designated by the *to*-infinitival clause with the general judgment, i.e. *a very difficult goal*. Also, in (1b), *require* expresses what is necessary to bring about the general event designated by the *to*-infinitival clause, and in (1c), *mean* defines what loving nature in general means. However, such verbs are very limited. For example, because *to*-infinitives as subjects describe an event only in generalized fashion and their trajector is not specific, they are not appropriate for the clausal subject of *intend* and *want*, which expect their clausal subject to specify the one who entertains the volition, as in (2). This presentation will show the data from COCA in more detail, and specify why *to*-infinitives as subjects collocate with a very limited range of predicators.

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Let's talk *face to face* about N-P-N constructions in English

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Keywords: Usage-based Cognitive Construction Grammar, binominals, N-P-N constructions, abstract schemas, constructional (vertical and horizontal) links

This paper analyzes a specific type of binominal NP, namely N-P-N constructions in which both nouns are singular count, identical and conjoined by a preposition (e.g. *face to face*, *night after night*, *inch by inch*). It has been stated that these symmetric, semi-idiomatic constructions – depending on the chosen preposition and type of noun – can express various meanings like succession, juxtaposition or transition in time and space (Jackendoff 2008; Haïk 2009; Zwarts 2013). The constructions' binominal nature, their apparent frozenness and their syntactic restrictions (e.g. determiners are not permitted) make them an interesting target for analysis. Especially their empirical analysis forces us to tackle several open questions in constructional modeling.

Empirically, this paper uses data from the COCA to investigate the frequency and productivity, as well as the modification and extension potential of one subtype only; namely the $[CN_{sg,time}^i P CN_{sg,time}^i]_{Cx}$ –construction in which the head noun is a temporal unit (e.g. *day by day*, *month to month*, *summer after summer*). Questions to be addressed include which preposition is most productive and in what ways the construction can be modified or extended (ex.1–4):

- (1) *One of the frustrations many Americans felt as they viewed **day after day of suffering** without any rescue was this: Where was the cavalry?* (COCA: 2006 MAG WashMonth)
- (2) *They use up vacation days, **hour by precious hour**.* (COCA: 1994 NEWS WashPost)
- (3) *[W]e had 20-knot winds on the nose for **hours after hours** and **days after days**.* (COCA: 2007 MAG MotorBoating)
- (4) *the federal government over the years has **year by year by year** decreased support for families* (COCA: 2012 SPOK Fox_Sunday)

In terms of theoretical modeling, the paper takes a Cognitive Construction Grammar approach (Goldberg 2006; Hilpert 2014; Diessel 2016; Ellis, Römer & O'Donnell 2016; Sommerer & Smirnova forth.) and will sketch the constructional network of $[CN_{sg,time}^i P CN_{sg,time}^i]_{Cx}$ –constructions, focusing on the meaning side of the respective subtypes. It will also make suggestions about how this construction is vertically and horizontally connected to other related constructions like $[CN_{sg,measurement}^i P CN_{sg,measurement}^i]_{Cx}$ (e.g. *inch by inch*, *step by step*) or $[CN_{sg,bodypart}^i P CN_{sg,bodypart}^i]_{Cx}$ (e.g. *face to face*, *shoulder to shoulder*).

In current network models, constructions like *day by day* or *night after night* are conceptualized as fully specified, fixed chunks which deserve their own node in the network and are positioned on the lowest level. What current models rarely focus on is how to account for potential modification and extension in the constructs in ex. (1) – (4). This paper attempts to offer a potential solution. Additionally, it will be argued that in a usage-based model which strives for cognitive plausibility it is not feasible to postulate the entrenchment of an abstract overarching schema (i.e. a mothernode) like $[N P N]_{Cx}$ high up in the network. It is unlikely that speakers abstract such a general schema in a bottom-up acquisition process. Ultimately, it will be suggested that “purely formal generalizations, that is constructions without meaning, have no natural place in the construct-i-con” (Hilpert 2014: 57).

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The Constructional Changes of English Catenative Constructions: A case study of *seem to* vs. *appear to*

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Keywords: construction grammar; English catenative constructions; semantic changes; semantic vector space model; correspondence analysis; cluster analysis

This research studies the constructional changes of two near-synonym catenative constructions in English — ‘*seem to*’ and ‘*appear to*’ — via a type-based semantic vector space modeling, following Hilpert’s (2016) convention.

After searching for the overall frequencies of ‘*seem to V*’ and ‘*appear to V*’ throughout all decades in COHA, the top 200 R1 collocates for each construction are extracted, with 150 shared collocates. Thus, a semantic vector space with 250 joint collocates is created, drawing on a 50-million-word sample from the word-lemma-pos version of COCA in a 4L-4R context span. Judging from the average silhouette width values, the shape of the dendrogram in a hierarchical clustering as well as that of a clusterplot in a non-hierarchical clustering by R programming, a 5-cluster decision is adopted as the optimal solution for the semantic classification of these shared collocates. By setting a threshold silhouette width value to 0.1, the prototypical members in each semantic cluster are picked out, and five semantic labels are given tentatively: ‘stative-descriptive’ ‘motional-resultative’ ‘cognitive-agentive’ ‘emotional-attitudinal’ and ‘psychological-metaphorical’. After a simple correspondence analysis, the general trend of semantic development for both these two micro-constructions is observed, with some meta-semantic labels superimposed — they both display a gradual shift in collocational preferences since 1900s: *seem to* mainly co-occurs with conceptual/perceptual verbs to express the speaker/writer’s subjective attitude towards real-world events, whereas *appear to* tends to collocate with stative verbs as an objective description and representation of the physical world. This view is in line with the distinction between their corresponding adjectival and adverbial forms (i.e.: ‘*seeming/seemingly*’ vs. ‘*apparent/apparently*’).

Following Hilpert’s (2013) definition on constructional changes, it is at least safe to conclude that although the forms of both these two constructions remain unchanged diachronically, yet the shift in their collocational preferences is still a solid proof of their constructional changes. However, it is hard to decide whether their meanings are gradually converging or diverging simply from the scatterplot of simple correspondence analysis.

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A constructional analysis of the ‘*better off* construction’ in English

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Keywords: construction grammar; ‘*better off*’ construction; illocutionary force; BNC and COCA; hapax

This presentation aims to analyze the grammatical, semantic, and pragmatic characteristics of the so-called ‘*better off* construction’ (hereafter, the BO construction), which has rarely been the focus of previous studies of construction grammar (Fillmore et al. 1988; Goldberg 1995). *Better off* is derived from a comparative form of *well-off*, and is used predicatively as in ‘He is now *better off* (than before)’ and ‘She is *better off* {with/without} me.’ However, *better off* has a special use in which it can take a complement XP; the whole combination then means “to be in a better situation, if or after something happens.”

- (1) He is better off {*buying it/learning it*}. [XP = present participle]
- (2) You’d be better off {*left alone/gone from here*}. [XP = past participle]
- (3) I’d be better off {*dead/alone*}. [XP = adjective]
- (4) She’d be better off *out of work* [XP = prepositional phrase]

As in (1)–(4), *better off* XP (i.e. the BO construction) seems to have status as a construction; it shows both syntactic irregularity and semantic uncompositionality: Syntactically, the XPs do not fit into any traditional grammatical categories and, semantically, the situation illustrated by each XP is compared with a worse situation which is introduced in or inferred from the previous context.

To identify further characteristics of the BO construction, the present study carried out two case studies on the *British National Corpus (BNC)* and the *Corpus of Contemporary American English (COCA)*. The first study involved an extensive search for *better off* in the *BNC* as follows: First, I extracted all the examples of *better off* from the *BNC* (871 examples); second, I manually annotated six features of all examples (i.e. syntactic regularity, modal auxiliary, function of *better off*, grammatical subject, word class of XP, register); and third, I investigated the contexts in which the BO constructions are used, generating co-occurrence tables of these features and evaluating them.

The study investigated that (i) 96% of the uses of *better off* are predicative, 63% take a complement XP, and 20% take a syntactically irregular XP, (ii) compared to *better off* used without a XP, the BO construction (= *better off* with a XP) tends to co-occur with both first/second person pronouns and modal auxiliaries, and (iii) the BO construction has an illocutionary force and functions as an indirect speech act such as ‘advice’, ‘suggestion’, ‘pleading’, and ‘warning’.

- (5) (a) But you’d be much better off with someone else.
- (b) ... you may be better off working closer to home.

The second study investigated the productivity of the BO construction. To measure productivity, I counted the number of hapaxes (i.e. a word that occurs only once within a context) that appear as the head of the XP in *COCA*. As a result, the study found that 40% of adjectives, 29% of present participles, and 50% of past participles are hapaxes.

The results of the two case studies together suggest that the BO constructions (i) include both syntactic and semantic irregularities, (ii) are likely to be used as indirect speech acts having an illocutionary force, and (iii) are highly productive constructions in present-day English.

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***The question remains is* whether constructions are in the making: Constructionalization at work**

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This study examines one recent innovative construction in Present-day American English, i.e. *the question remains/arises/becomes is*, based on a variety of corpora, and argues that constructions are in the making all through the ages, resulting in the formation of anacoluthonic constructions. The process of creating innovative constructions is called ‘bridging’ (Iwasaki and Ono 2001): some constituents of one construction can be used as part of another construction in the course of the speaker’s sentence production, as in (1). Elements in focus are underlined.

(1) *The question remains is* how is the quality? (mywowbb.com; Web; accessed on Nov 10, 2018)

In (1), *the question is* plus a direct or indirect interrogative clause and *the question remains* plus a direct or indirect interrogative clause seem to go through the speaker’s mind, concurrently or sequentially, and in another moment, they merge into the complex-clause construction as in (1). The former *the question is* construction is first attested in 1815, while the latter *the question remains* in 1850, according to the results of the COHA survey. In addition, one related construction *the remaining question is* appears in 1822 onward. Those nouns that serve to anticipate what comes next are called ‘shell nouns’ (Schmid 2000); however, the recent innovative shell noun construction as in (1) has not yet come under close scrutiny.

Croft (2001) states that constructions are considered to make up a network whose elements are taxonomically related. In this particular case, a cluster of related constructions renders an anacoluthonic construction as in (1), which means that a change in the constituency of a syntactic structure during its production results in the formation of another structural pattern, i.e. apo-koinou constructions in the last decade of the twentieth century, albeit in extremely small numbers: constructions are formed and progress in a network not in isolation (see Shibasaki 2018 for a historical survey).

The whole process of change can be accounted for in the framework of constructionalization (Traugott and Trousdale 2014), because these constructions exhibit those apparently not well captured through traditional phrase structures. Furthermore, while *the question remains is* has a strong tendency to introduce direct interrogatives, none of the interrogatives is enclosed in direct quotation marks, either single or double, in the corpora surveyed for this study (cf. *The Chicago Manual of Style* 2017: ¶6.42): the emergent nature of grammar that blurs the lexico-grammatical boundary and punctuation is characteristic of constructions in the making, i.e. constructionalization.

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The Constructionalization of Implicit Theme Resultative Constructions as a 'Snowclone' in English

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Keywords: Implicit Theme Resultative Construction (ITRC), construction, constructionalization, constructional change, snowclone

The main purpose of this paper is to clarify the constructionalization of **Implicit Theme Resultative Constructions**, which the author's studies (2010, to appear, *inter alia*) call the sentences below.

(1)a. Persil washes whiter. (BNC) / b. Concentrated washing powders wash whiter. (Aarts 1995: 85)

c. Our new washing machine washes cleaner. (Author 2010: 1) / d. This brush paints darker. (Aarts 1995: 86)
Aarts (1995) firstly points out the existence of this type of sentences. A series of the author's studies (2010, to appear, etc.) suggests that ITRCs has a resultative secondary predicate to mean the 'result' of their syntactically implicit themes, and further that they carry the meaning of the 'property' of their subject entities. The studies also claim that they have their similar syntactic and semantic characteristics to Middle Constructions, which hold their property meaning, and to Resultative Constructions, which represent their resultative meaning. The studies define ITRCs as a blended (or, bridge) construction. Therefore, ITRCs have their own form (i.e., "NP₁ V ϕ Resultative Phrase") and meaning (i.e., "X (in virtue of Property) ENABLES Y TO BECOME Z") and form their own constructional network.

The previous studies with reference to ITRCs refer to Aarts' (1995, 1997) syntactic and semantic approaches, and Goldberg's (2001, 2005) pragmatic ones, and a series of the author's Cognitive Linguistic ones. Since none of the previous studies clarify the process of the constructionalization of ITRCs, this paper attempts to resolve it in the framework of Traugott and Trousdale (2013, 2014) and Traugott (2014). First of all, the paper points out that ITRCs are a kind of the so-called '**snowclones**', which are compatible with the **lexical constructionalization**. Pullum (2003) defines a snowclone as "a multi-use, customizable, instantly recognizable, time-worn, quoted or misquoted phrase or sentence that can be used in an entirely open array of different jokey variants by lazy journalists and writers." Traugott and Trousdale's works suggest that snowclones have at least four stages in the process of constructionalization: "(a) A pre-formula stage in which variations on an expression occur, all understood literally, and requiring no special knowledge; (b) A catchy fixed formula is used (with similar meaning) often drawing on a proverb, title, or quotation; (c) The fixed expression may be quickly extended with the development of open slots or playful allusion to it, e.g. via puns or other variations of it; (d) Snowcloning, a second fixing as variants become (relatively) routinized as formulas with open slots in them" (Traugott 2014: 15).

At present rough sketch of the constructionalization of ITRCs as follows. First, sentences like 'Persil washes whiter' in (1a) are literally understood. Second, a fixed formula such as 'INSTR wash/es ϕ whiter' instantiated in (1b) is constructed, based on Middle Constructions, Resultative Constructions, and other idiomatic expressions. Third, a pattern like 'INSTR wash/es ϕ AP-er' having partial open slots is extended and instantiated such as in (1c). The second and third stages refer to the partial phases of **pre-constructional changes**. Forth, the fixed expressions in the third stage are relatively routinized as a **snowclone**, and more schematized pattern 'INSTR V ϕ AP (or PP)' is reasonably extended and fixed with the form-meaning pairing, which sanctions sentence (1d). This is the **constructionalization** of ITRCs. After the constructionalization, ITRCs are likely to have some **post-constructional changes**, in which the constructions can be further extended (i.e., a super-schematic pattern and its full instantiation).

This paper would conclude that the constructionalization motivates ITRCs with the form-meaning pairing.

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THE DITRANSITIVE AS RESULTATIVE IN CHINESE

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This article aims to demonstrate that in the Chinese ditransitive construction the verb and the indirect object first combine to form an immediate constituent like a transitive resultative phrase and then have the patient noun—the direct object as their object. In other words, there are syntactic parallelisms between the ditransitive construction and resultative constructions in Chinese. This article aims to show that the typologically weird feature of the Chinese ditransitive results from two factors: (a) the ditransitive construction typically expresses a location change of the patient, a kind of resultative; (b) the ditransitive and the resultative share the same schema, and thus the ditransitive construction is subject to the analogization of the resultative construction that possesses more frequency and greater prominence. These findings are consistent with Hudson (1992) which claims that the direct object is the real object of the ditransitive construction in English. Also, our analysis provides further support for the tenet of Radical Construction Grammar (Croft 2001) claiming that every construction is language-specific because it is subject to the influence of the overall grammar. This Chinese case sheds light on the conclusion of Bybee (2013) that semantic structure is more basic than syntactic configuration in many cases, and hence semantics often overrides syntax.

All the ditransitive instances that express a *give* transfer (i.e. the movement of the patient from subject to indirect object)¹ can be transformed into the disposal construction whose predicates are typically a ‘verb + resultative’ phrase. Only the direction object (O_d) can be moved to the preverbal position but the indirect object (O_i) cannot, as illustrated in (1).

- (1) a. *Wǒ gěi-le tā yī-zhāng piào.*
 I give-PFV she one-CL ticket
 ‘I gave her a ticket.’
 b. *Wǒ bǎ piào gěi-le tā.*
 I BA ticket give-PFV her
 ‘I gave the ticket to her.’
 c. **Wǒ bǎ tā gěi-le piào.*
 I BA she give-PFV ticket

In other cases, only the object of a transitive verb can be used in the preverbal position.

The present analysis shows that semantic relation is more essential, which often override syntactic structures. Any generalization of syntactic configuration cannot be solely based on word class, and the semantic relation between constituents must be taken into account in order to identify a syntactic structure. Also, there are no universal structures in human languages. The meanings and forms of constructions result from various factors, such as grammar systems, lexical systems, and even phonological systems, which may root in the contexts of the languages. The present analysis, we believe, will shed light on the usage-based model, too. It will be helpful in rethinking and developing theoretical linguistics in the near future.

Keywords: ditransitive construction; resultative construction; semantic structure; construction grammar; syntactic configuration

¹ The Chinese ditransitive construction can express two-way transfers: either from the subject to the indirect object or vice versa. This will be further discussed in what follows.

The Grammatical Constructionalization and Cognitive Mechanisms of *Gěi* (GIVE) Construction in Mandarin

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GIVE constructions have been frequently-used and figure significantly in many languages. On the basis of construction grammar (Traugott & Trousdale 2013), this study investigates the constructionalization and constructional change of *Gěi* (GIVE) constructions in Mandarin Chinese by retrieving two corpora, and pinpoints the diachronic evolution of 'GIVE-O-Verb' construction, the cognitive motivations and mechanisms behind. Data have been extracted from CCL and BCC in terms of five Chinese historical periods (Ancient stage> Middle Ancient stage> Early Modern stage> Latter Modern stage> Contemporary stage). The results come as follow.

Firstly, '*Gěi*' (GIVE) can function as a verb, preposition or auxiliary in Mandarin. 'GIVE-O-Verb' construction has evolved from the ditransitive construction 'GIVE-IO-DO' in the Early Modern stage. The prototypic constructional meaning of 'GIVE-O-Verb' was benefactive in Yuan Dynasty (A.D. 1271~1368). In the succession of constructional changes, 'GIVE-O-Verb' construction has involved a gradual semasiological variation. The constructionalization of 'GIVE-O-Verb' construction has developed a constructional hierarchical network (Traugott 2007) and seven constructional meanings: benefactive(33%), enabling(17%), helping by replacing(25%), directional(12%), imperative(2%), passive(7%) and assisting(4%).

Secondly, the verb phrase in 'GIVE-O-Verb' construction has no direct semantic relation to the preposition-object structure 'GIVE-O', which leads to non-compositionality and high productivity of 'GIVE-O-Verb' construction, enhances the degree of schematicity, and influences the directionality of its grammatical constructionalization. Nevertheless, some particular verb phrases (e.g. *zàochéng* (make), *kànkàn* (look)) come to be the frequent collocations in this construction to convey conventional meanings. Moreover, in the constructionalization of 'GIVE-O-Verb' construction, the verb '*Gěi*' (GIVE) has been grammaticalized as a preposition; the semantic role of the object has extended from the beneficiary; and the giving has become more abstract. The new "form-meaning" pairing of 'GIVE-O-Verb' construction has selected the semantic meanings of its components, and gained unique constructional meanings and various syntactic functions.

Last but not least, the constructionalization of 'GIVE-O-Verb' construction has been driven by the grammaticalization of '*Gěi*', the constructional coercion, and conceptual nesting (Talmy 2000). The cognitive mechanisms in the process of constructional change involve the analogization in the local change of the form and neo-analysis in the expansion of semantic scope. The study offers several possible explanations for constructionalization of *Gěi* (GIVE) constructions from a cognitive, functional and diachronic perspective.

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Diachronic Collostructional Analysis on the Chinese Construction “V lai V qu”

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Keywords: corpus linguistics, Construction Grammar, collostructional analysis, subjectification, Chinese construction “V lai V qu”

Collostructional analysis (Stefanowitsch & Gries 2003; Gries & Stefanowitsch 2004; Gries et al. 2005, 2010) is a family of corpus-based quantitative methods used to measure the interrelations between lexemes and constructions, having received substantial popularity among cognitive and corpus linguists. While much work in collostructional analysis has done on English constructions, relatively little attention has been paid to Chinese. This paper offers a collostructional analysis of the Chinese construction “V lai V qu”, based on the Chinese Corpus of Beijing Language and Culture University Corpus Center (BCC). “V lai V qu” is a unique and productive Chinese construction with “lai/qu” (come/go) as grammaticalized deictic verbs. The collexemes strongly attached to “V lai V qu” are grouped into three semantic classes, which help track semantic shifts of this construction. It appears that the prototypical meaning of this construction refers to back-and-forth movement in physical space, which has been gradually extended to temporally iterative action and further a discourse marker with presupposition, as illustrated in (1), (2), and (3). Subjectification, “a semantic shift or extension in which an entity originally construed objectively comes to receive a more subjective construal” (Langacker 1991: 215-216), can be considered as cognitive motivation for semantic extension of this construction. From (1) to (2), and then to (3), “V lai V qu” demonstrates gradually increasing subjectivity. This research contributes to promoting the quantitative empirical study on Chinese constructions and testing hypotheses in grammaticalization areas. Furthermore, the analysis of “V lai V qu” deepens our understanding of human beings’ subjective thinking.

(1) “他在房间跑来跑去。”

Ta zai fangjian pao lai pao qu.

He in the room ran come ran go.

“He ran around in the room.”

(2) “他在房间想来想去，不知所措。”

Ta zai fangjian xiang lai xiang qu, buzhi suocuo.

He in the room thought come thought go, didn't know what to do.

“He thought it over and over in the room and didn't know what to do.”

(3) “说来说去，他还是选择了这个房间。”

Shuo lai shuo qu, he haishi xuanze-le zhege fangjian.

Say come say go, he still chose-PERF this room.

“All in all, he still chose this room.”

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Exploring the Cognitive Mechanisms of Psych Causative Alternation Verbs in Mandarin Chinese: A Corpus-based Approach

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Keywords: psych causative alternation verbs; causal chain; onset causation; agentivity; Mandarin Chinese

The causative alternation has been an important phenomenon in ergativity studies and has been extensively discussed from typological, formal, functional cognitive and lexical semantic perspectives. It is found that few psych-verbs participate in the causative alternation in English, however, psych-verbs in French, Greek and Romanian, and Mandarin Chinese participate in causative alternation (see Levin 1993; Alexiadou & Iordăchioaia 2014; Zeng 2009). Previous studies relevant focus on either the descriptions or explanations of the causative alternation verbs from the introspection. Little has been done on the psych causative alternation phenomenon in Mandarin Chinese, not to mention empirical studies.

Within this background, the current study sets out to investigate the distributional patterns, semantic properties and different constraints of psych causative alternation verbs in Mandarin Chinese to explore further the cognitive mechanisms underlying the phenomenon by selecting exhaustively psych causative alternation verbs in CCL (Center for Chinese Linguistics PKU) corpus. Taking the first five highest-frequency verbs, namely, 感动 gan-dong 'move', 震惊 zhen-jing 'shock', 振奋 zhenfen 'excite', 为难 wei-nan 'embarrass', 委屈 wei-qu 'wrong' as examples, the study analyses 500 concordances in total and finds that 1) Nine types of distributional patterns of these psych causative alternation verbs, of which the top three frequent patterns are NP1+V+ (ASP)+NP2, Shi/Jiao/Yang/Ling+NP+V and NP2+V+(ASP). 2) Change of psychological state, causativity and agentivity of the causer and causee are the determining semantic properties. Besides semantic constraints, pragmatic and co-occurrence constraints stand out to play important roles in the causative alternation. 3) We speculate that onset causation exhibited by the verbs and the absolute construal and the force dynamics of the event participants in the causal chain help the alternation capability of the psych verbs. The lability of Chinese verbs and the different lexicalization patterns and conceptualization might be the contributing factors.

Our study might shed some new light in better understanding of the casual structures, which is one of the constitutional factors in human cognition organization, and the causative alternation in Chinese.

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Language Productivity and Representation: A Corpus-Based Study of [da - NP] Construction

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Keywords: Construction Grammar, Corpus Linguistics, Chinese Linguistics, lexical semantics, usage-based constructionist approach

Polysemy is ubiquitous in a language in that nearly every word is polysemous to a certain extent. Ever since the term 'polysemy' was introduced into linguistics, its existence and definition have been the subject of intense debate within the field. Generally, polysemy is defined as "the association of two or more related senses with a single linguistic form." (Taylor 1995: 99). This definition, however, is problematic due to its presupposition that the meanings of linguistic units (e.g., lexical items) can be identified, characterized and enumerated (Taylor 2003). An important question that then arises is: whether and in what way the meanings are related? Furthermore, despite many problems raised by polysemy, surprisingly, speakers of a language are rarely aware and troubled by it. Therefore, it is necessary to explore human cognition and conceptual organization to understand the networks of meaning relations.

In cognitive semantics, polysemy is regarded as patterns of flexibility (or nonfixed) in meaning. Certain contextual patterns in which a polysemous word embedded can be interpreted in multiple ways. Since exploring schematic collocations and analyzing symbolic units are helpful to understand language users' underlying knowledge and processing of co-occurrence patterns (Langacker 1987; Logan 1988), the present study explores the schematicity and productivity of [dǎ - NP] pattern through a large online Chinese corpus – BLCU Corpus Center (BCC). Although some scholars have explored etymology of dǎ 'to strike' and tried to explain its extended meanings (e.g., Huang 2000; Lee 2010; Zhu 2004), the schematicity and productivity of [dǎ - NP] construction remain unknown.

Drawing on Construction Grammar and usage-based constructionist approach, this study aims to clarify what polysemy is, why a word is polysemous, and how people process a polysemous word and assign its meaning by analyzing the synchronic usage of [dǎ - NP] construction in Chinese. As the frequency of use has an impact on a speaker's language processing and memory representation (Bybee 2007), two types of frequency data, the type frequency of the conceptual category [dǎ - NP] (i.e., the number of different tokens) and the token frequency (i.e., the number of times a certain type is observed in the data), are analyzed to elucidate the productivity of [dǎ - NP] construction. Furthermore, the schema-driven and exemplar-based models will be presented to explain how new concepts are developed through the extension of a prototype. So far, none of the studies on the pattern of [dǎ - NP] have scrutinized its token frequencies and sorted them based on current usage via Chinese corpus. Hence, the current study is expected to explain language productivity and cognitive representation with solid evidence.

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Lexicalization Patterns of Events of Causative State Change in Mandarin Chinese- from a Diachronic Perspective

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Keywords: events of causative state change; lexicalization patterns; diachronic changes; typological shift

The present research examines the typological status of Mandarin Chinese in encoding events of causative state change from a diachronic perspective. We investigate the lexicalization patterns of events of causative state change in four periods of Chinese language, i.e. Old Chinese, Middle Chinese, Pre-Modern Chinese and Modern Chinese. Our statistical study shows that (i) Chinese has been undergoing a typological shift from a verb-framed language to a satellite-framed language, (ii) in the period of Old Chinese, people tend to use verb-framed structures to encode events of causative state change, but in quite different patterns from some typical verb-framed languages, (iii) the typological shift is motivated syntactically, semantically and prosodically, (iv) Modern Chinese is still in a transitional stage from V-language to S-language, so the typological shift has not yet been fully achieved.

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Does native language affect a speaker's ability to recall details from photos? A comparison between monolingual English and Japanese adults

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Keywords: language and thought, recall, morphological number marking, Japanese, English

The question as to whether native language shapes the way speakers view the world has been debated in the cognitive sciences for decades. Slobin's (e.g., 2003) *thinking for speaking* view holds that structural differences between languages can affect speakers' non-linguistic cognition.

Previous research has shown that native language can have an effect on speakers' general cognitive processes for example when it comes to figure-ground orientation (Tajima & Duffield, 2012), source evidence information (Tosun et al. 2013) and grammatical gender (Boroditsky et al. 2003). The current paper contributes to this body of research and presents a study investigating whether structural characteristics of English and Japanese affect speakers' ability to recall details from photos.

Japanese has an elaborate counting system for nouns, but importantly, nouns generally themselves do not take number markers and can stand alone. Thus, for example, the sentence *Inu ga aruiteimasu* is ambiguous as to whether it refers to 'A dog is walking' or 'Dogs are walking'. Japanese speakers can thus refer to scenes without overtly expressing whether there are one or >1 entity in the scene. On the other hand, English requires speakers to express whether they are referring to one or >1 entity. For example, A dog is walking vs. Dogs are walking mean different things, and using the former sentence to describe the latter scene would be considered ungrammatical and false. Following Slobin's *thinking for speaking* view, this structural difference between Japanese and English, whereby one language necessitates attention to and recall of number (English) and the other one does not (Japanese), we hypothesised that Japanese speakers would show a lower response accuracy than English speakers in recalling the number of entities they had seen.

In an experimental setting, we showed English (N=30) and Japanese (N=33) adults a sequence of 110 photos after which we asked them questions about the photos. We found that even though the two groups recalled answers to control questions equally well, the English participants showed a significantly higher accuracy rate for questions testing recall for number than Japanese participants. Furthermore, when recalling number information, the Japanese group gave significantly more correct answers to questions for which the correct answer was 1 than when the correct answer was 2, while no such difference was observed in the English-speaking group. These results suggest that obligatory grammatical encoding of number information or the lack of it in a language affects speakers' ability to recall number information.

We will discuss our results in relation to language and non-linguistic cognition and suggest reasons for the effects found.

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The Carto-Conceptual Network models of indefinite pronouns and negation: Where linguistic typology meets cognitive linguistics

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Keywords: semantic typology, indefinite pronouns, negation, conceptual space, (inter)subjectivity

This paper introduces a new approach to the comparative study of linguistic functions, called the carto-conceptual network (CCN) approach, and illustrates how this approach works by applying it to actual data sets. This newly proposed approach is based on the research tradition of semantic typology (e.g. van der Auera & Plungian, 1998), but takes on the conceptual space viewpoint on meaning as proposed by Gärdenfors (2000, 2004). This new approach is especially designed to overcome the disadvantages inherent in the two previous approaches to meaning comparison, i.e. the semantic map (SM) model (Haspelmath, 1997), and the multidimensional scaling (MDS) model (Croft, 2008). Specifically, unlike SM, the CCN approach does not rely on the perfect fit principle and is computationally tractable, hence the ability to cope with a much larger data set. Furthermore, unlike MDS, the CCN approach offers a more accurate way of representing geometrically the conceptual proximities between the functions. Moreover, language universals in the form of implicational hierarchy can be represented in a SCN model in a way that the principles behind the model remain consistent. When applied to Haspelmath's (1997) indefinite pronoun data as a test case, this new approach can produce satisfactory results, and some interesting tendencies previously neglected become discernible, such as the historically attested but presently missing functions of a Finnish indefinite pronoun.

CCN is then applied to a new set of typological data, that is, 169 negative constructions across 15 negative functions: Negative Imperfective, Negative Perfective, Negative Predicative Possessive, Negative Existential, Negative Nominal Predicate, Negative Adjectival Predicate, Contrastive Negation, Negative Responsive Interjection, Negative Interrogative, Negative Desiderative (DESI), Negative Deontic Necessitive (NCSS), Negative Optative (OPT), Negative Hortative (HORT), Negative Imperative (IMP), and Negative Directive Interjection. This sample is both genetically and geographically controlled (47 languages in 47 different genera and 5 different areas), and probably the largest and most systematically distributed sample of negative meanings to date. A correlation coefficient analysis is performed on the negative construction data in order to render a conceptual space populated by nodes representing the different negative functions.

Then, the newly proposed optimal route analysis (ORA), which is based on the geometrical techniques of Voronoi tessellation and Delaunay triangulation, is performed on the conceptual space in order to determine probable connections between the functions. It is found that the emergent carto-conceptual pathways reflect some interesting cognitive notions that are relatively understudied in negation, most notably (inter)subjectivity. Specifically, there is a particular pathway that connects from DESI (*You don't want to go*) to NCSS (*You must not go*), to OPT (*May you not go*), to HORT (*Let's not go*), and to IMP (*Don't go*), in such a way that it reflects the continuum of objectivity-(inter)subjectivity (Langacker, 1991; 2008). An important implicational universal can then be formulated: no construction can encode any two negative functions located along this continuum without encoding the negative function(s) located in between. It is finally suggested that more typological data on different linguistic phenomenon be analyzed using this newly proposed method so that it can be further refined.

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Playful Metaphors in Hakka Jokes and Pragmatic-Cultural Implications

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Key words: playful metaphor, frames, cross-linguistic, cross-cultural, humor

Linguistic components of sounds, words or meanings are often manipulated to maximize the potential humorous effect of a joke. In particular, playful metaphors in jokes are created in an aim of language play that can contribute to the amusement of others and even to the solidarity among members in a community (cf. Ritchie 2013). Since interpretations of the amusing imagery triggered by playful metaphors can differ from language to language and from culture to culture, it is hence worthwhile to investigate deeper how playful metaphors are used by jokes in different languages. To this end, this study examines forty story-telling Hakka jokes that employ playful metaphors for the domain of SEX. The goal is twofold: to characterize the playful metaphors as well as the frames that these metaphors emerge, and to examine their pragmatic and cultural functions.

Two frames emerge from these stories: SEX ORGANS ARE COMPLEX OBJECTS/PLANTS and SEXUAL ACTIVITY IS COOKING/PLANTING. Playful creation of metaphors is observed with complex objects, plants or animals analogizing biological shapes or functions of male and female sex organs. Interestingly, they come in pairs: pig intestines to pans, mallets to gongs, white radishes to pits, or bamboo shoots to sticky rice cakes, with their shapes or properties metonymically profiled to bring about symbolic imagery of the organs and to insinuate sexual activities they can play on. Sexual activities are described by playful language that triggers the images of motion and fluidity such as rice transplanting, goose chasing, or food soaking. Further examination of the characters in the stories indicates that the protagonists are often daughter-in-law's or son-in-law's, and the scenarios are often about their clumsiness due to sexual inexperience or about their impropriety of having affairs.

From a cross-linguistic and cross-cultural perspective, the emergence of the two frames is not uncommon for SEX domain. However, the manipulation of playful metaphors together with projected imagery is both conceptually-supported and culturally-bounded. The utilization of certain playful metaphorical expressions to characterize sex organs and sexual activities evokes knowledge schemas from real-life Hakka folk experiences, including things they use for cooking, for planting or for raising animals. The selection of protagonists also reveals Hakka people's conception of family members from marriage—a highly moral-oriented value toward those affinity-in-laws. The findings that represent shared values of Hakka people carry pragmatic and social-cultural implications. Since sex is considered a socially tabooed topic in some cultures, talking about it directly is embarrassing and may damage listeners' face. Hence, as covert and humorous carriers, these sex-related Hakka jokes in a story-telling form not only serve as a narrative strategy to go around the uneasiness but also facilitate relational and social harmony as speakers can avoid committing themselves too strongly to what they are communicating (cf. Smith 2015; Dynel 2018).

War is war – or is it? Different genres show different metaphors for cancer

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Since Sontag's (1978) claims that women were presented as victims by constant use of cancer metaphors taken from war, there has been major progress in the study of metaphor and its place in discourse. Semino et al. (2015) find that patients and medical professionals use both Combat metaphors and Journey metaphors about cancer, and in similar proportions. We (Laparle & Sweetser, 2018) have offered evidence that not all "combat" metaphors are equally victimizing of patients: *You go kick ass, girl* as a comment on a breast-cancer blog is very different from *My body is being invaded*. A crucial difference is the mapping of particular roles from the source Combat frame to the target Cancer (or Cancer Treatment) frame: a patient's role is more volitional and active when seen as combatant than as invaded territory. We have been examining multiple discourse genres about cancer; our corpus includes material from published patient-blogs, medical websites and popular-audience scientific sources, and scientific journals. Each genre has its own profile of metaphoric mappings, and of frequencies.

Scientific journals focus on physical mechanisms of cancer development and treatment, not on patient experience. The metaphors include BODY IS ECOSYSTEM, CELLS ARE PEOPLE, BODY IS NATION, CANCER CELLS ARE INVADERS. Extensions of these include T-CELLS ARE PATROLS AGAINST INVADERS, and further blends, such as CANCER CELLS ARE AN INVASIVE SPECIES, and CANCER TREATMENT IS ECOLOGICAL MANAGEMENT. At the cellular frame-level, scientists are "on the side" of T-cells against Cancer cells, but the Patient's whole body and personhood are backgrounded.

Patient blogs, unsurprisingly, take the patient's viewpoint metaphorically as well as literally. CANCER (TREATMENT) IS A JOURNEY and CANCER (TREATMENT) IS WAR/COMBAT are pervasive: the Patient is the Traveler and Self-defender. Absent in scientific and medical genres are metaphors such as CANCER IS A KIDNAPPER - "kidnapping" the Patient from her regular life onto an involuntary Journey with Cancer (CANCER IS AN ABUSIVE COMPANION is also attested). Roles in Combat metaphors also vary: alongside Cancer as an Attacker, Patients "fight back" and "pop back up when knocked down." Here the whole Body is mapped, and even more saliently the Person (Self); the Self, not the Body, is the metaphoric Traveler, Combatant or Kidnappee, with the entailed emotional viewpoints of these roles.

Public medical websites and popular science naturally lie between, trying to make science accessible to patients, while also empathizing with patients' experience. Here, CANCER IS A JOURNEY mingles with T-CELLS ARE PATROLS, as writers try to bridge the gap between Cells and Personhood.

Different genres show distinct profiles of metaphors for cancer and treatment. Identity of lexical material (e.g. attack, invade) or even of frames does not guarantee identity of metaphoric structure or inferences: the specific frames, roles and mappings are crucial to the discourse message.

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Metonymy Affects Grammar: Korean Double Object Constructions

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Keywords: metonymy in grammar, Korean double object constructions, cross-linguistic comparison

Introduction It has been argued that the availability or unavailability of metonymy affects grammar and vice versa (Barcelona 2009, Panther and Thornburg 2000, Panther 2011, Radden 2009, Ruiz de Mendoza and Hernández 2001, Ziegeler 2007, Brdar 2009, Brdar and Brdar-Szabo 2017). Panther and Thornburg (2000), for example, argues that the metonymy EFFECT FOR CAUSE is available in English allowing the stative predicates in imperative constructions, which require action predicates. The sentences *Stand in line* and *Have your documents ready* are allowed in English while their counterparts are not in German. The stative predicates *stand* and *have* must be replaced by action predicates in German. The contrast in the two languages can be explained by the (un)availability of the metonymy EFFECT FOR CAUSE. English utilizes it while German does not. Following their lead, this paper will demonstrate peculiarities of Korean DOCs in comparison with English ones and explain the contrasts based on (un)availability of the metonymy ACTION FOR IMPLICATURE INDUCING A CAUSED EVENT. **Peculiar Properties of Korean Double Object Constructions (DOCs)** First, in English, ditransitive verbs such as *write* and *buy* consistently occur in DOCs, while in Korean, their compatibility with DOCs is not consistent. The verb *ssuta* 'to write' can occur in a DOC only when it comes with the complement *a letter*. Similarly, the compatibility of the verb *sata* 'to buy' with a DOC depends on the complement it takes. It can occur in a DOC only when it comes with the complement *lunch*. Another peculiarity is that in Korean, a regular transitive verb can increase its valency in certain contexts. The verb 'to hold' does not allow DOCs in English but its counterpart in Korean, *tulta*, can occur in a DOC when it comes with the complement *a welcome sign*. The English verb *take out* does not occur in a DOC but its counterpart in Korean is compatible with a DOC when it takes the complement *a sword*. The same thing happens with the metaphorical use of the verb *ssuta* 'to use'. Furthermore, the Korean verb meaning 'to kneel down' shows different behaviors depending on its context. When the action of kneeling down is used in the context of cleaning, the verb is not compatible with a DOC, but in the context of praying for forgiveness, it can occur in a DOC.

Explanation All the peculiar behaviors of Korean predicates regarding their compatibility with DOCs can be explained by the availability of the ACTION FOR IMPLICATURE INDUCING A CAUSED EVENT metonymy in Korean. Returning to the examples, the verb *ssuta* is compatible with a DOC because its complement *phyenci* 'a letter' implicates that the letter will be sent to someone. However, the combination of the verb and other complements do not have a similar implicature, and therefore they remain incompatible with DOCs. The verb *sata* 'to buy' can be explained in the same way. In Korean culture, buying lunch indicates that the lunch was bought for someone else, rather than for oneself. Because buying lunch implicates treating someone, it is compatible with a DOC. However, one can buy a pen or a bag for oneself rather than for someone else, and that is the default understanding of the act. Therefore, in these cases, the verb remains incompatible with a DOC. Similarly, holding a welcome sign is to show the sign to someone else. The implicated purpose 'showing' evokes a situation which requires an indirect object, resulting in a DOC. Similarly, drawing a sword implicates that it will be used to attack an enemy, a situation that includes an indirect object. Kneeling down to clean the floor does not require an indirect object but kneeling down to pray for forgiveness requires another object. **Conclusion** In Korean, verbs can become compatible with DOCs based on their complements and whether those complements invoke the ACTION FOR IMPLICATURE INDUCING A CAUSED EVENT metonymy. The finding provides one more cross-linguistic evidence to the claim that metonymy affects grammar.

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Heart-based emotion metaphors in Mlabri (Austroasiatic, Thailand)

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Keywords: emotion, metaphor, spatial orientation, Austroasiatic, Mlabri

In many cultures, heart is considered to be a key center of emotion. Emotion language reflects this relationship, and emotion literature is rich in examples documenting heart-based metaphorical expressions attested in the world's languages. Here, we consider the role of heart-based emotion metaphors in Mlabri, an Austroasiatic language of a recently settled hunter-gatherer group of Northern Thailand, drawing on first-hand data from elicitation with emotionally evocative stimuli as well as the general Mlabri corpus. Similarly to the majority language of Thailand—Thai—Mlabri employs heart-based metaphorical expressions in its emotion vocabulary. Although some of them rely on similar metaphorical mappings, e.g., *klɔl plɔŋ* 'hot heart' (Thai *jai rɔɔn* 'hot-tempered') and *klɔl tɛk* 'cool heart' (Thai *jai yen* 'calm, relaxed'), or contain borrowings, e.g., *ʔɔn klɔl* 'sad' (Thai *ɔɔn jai* 'downhearted, depressed'), the emotion lexicon of Mlabri reveals clearly distinct conceptualizations of emotion. A central example discussed here is that of the spatial orientation metaphor, instantiated in the expressions: *klɔl jur* 'heart going down' and *klɔl khɔn* 'heart going up'. Unlike the common HAPPY IS UP / SAD IS DOWN mappings attested in English and many other languages (Lakoff & Johnson 1980; Kövecses 1991; Yu 1995), the Mlabri terms seem to use the vertical orientation (more precisely, vertically-oriented motion) to map the dimension of arousal (energized-quiescent) rather than valence (pleasant-unpleasant). Hence, *klɔl jur* is best translated as 'glad, at ease, delighted' while *klɔl khɔn* as 'uneasy, disturbed, angry'. While not equally well-attested cross-linguistically and at first sight possibly counter-intuitive, the mapping appears to tap into a salient dimension of emotion (Russell 1980) and be rooted in physical experience.

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Exploring the concept of anger in Bulgarian thought embodied metaphors

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Key words: conceptual metaphor theory, metonymy, anger, Bulgarian, embodiment.

The study of metaphor is crucial to achieve a better understanding of emotions. Previous research in the identification and description of conceptual metaphors shows that our conceptual system of emotions is based on metaphors (Barcelona and Soriano 2004; Yu 2008; Kövecses 2014; Soriano 2016; Ogarkova and Soriano 2018). The conceptual structure that organises our perception of emotions is shaped by physical and cultural experiences that are reflected in language, giving rise to similarities but also differences across languages.

This study focuses on the conceptualization of anger in Bulgarian. It explores the role of bodily and cultural factors in the creation of metaphorical and metonymical expressions of anger in this language. The main goals of the study are to explore the value of Conceptual Metaphor Theory (CMT) (Lakoff and Johnson. 1980) in the study of emotions and to find out whether these results are coherent with the conceptualization of anger in other languages.

An interdisciplinary approach has been adopted by combining linguistic and psycholinguistic analyses. The linguistic analysis is based on a corpus of conventional anger expressions that has been created following the source-domain oriented method (Deigman 1999). These everyday expressions are analyzed and contrasted with the data gathered from the coreGRID questionnaire. The GRID methodology approach (Fontaine, Scherer and Soriano 2013) was specifically created for the study of emotions in the field of psycholinguistics.

The results of this research show the benefits of combining both methodologies and their relevance for the study of the emotions. The analysis indicates that there is a large number of anger metaphors and metonymies in Bulgarian based on the reflection of the physiological changes that causes the emotion in the body. For example, the agitation *Бушувам*, the raise of the temperature or the blood pressure, *качва ми се кръвта на главата* 'my blood takes the head' and the behaviour adopted within this emotion. Bulgarian shares some conceptual metaphors for emotions that are present in other languages: the image of the body as a container for the emotion, the increase of the temperature with the increase of the emotion intensity, or the emotion as an illness. There are however other expressions based on cultural beliefs like *вземат ме дяволите* 'be taken by the demons', or *Кисел като арнаутин* 'sour as an Albanian', that evidence that cultural beliefs do play a role in the conceptualization of this emotion in Bulgarian and should be also taken into account in the conceptualization of anger in this language.

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A cognitive approach to metaphors and metonymies: A case of the emotion “xǐ” (HAPPINESS) in Chinese

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According to Cognitive Linguistics, human emotions of many cultures conform to certain basic biological, physiological and psychological processing inside of the human body and of the interaction with the external world. This paper analyzes Chinese metaphorical and metonymic expressions of “xǐ” (HAPPINESS) from “seven emotions and six desires” in Chinese traditional culture to demonstrate how emotions are constructed from embodied experiences in Chinese distinctive cultural settings, social system, and ways of thinking. The research confirms that underlying these metaphors and metonymies about “HAPPINESS” is indeed a plentiful store of Chinese unique social and cultural connotations. Moreover, the idea here reveals how the same perception of “HAPPINESS” are conceptualized and expressed by metaphors and metonymies of language through detailed cross-linguistic analysis.

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Contemporaneous embodied experience influences metaphor comprehension

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Keywords: Embodiment, metaphor, task-orientation, frame semantics

Research on embodied simulation has hinted that action repertoires and language related to those repertoires may be mutually reinforcing. For example, Tomasino and Rumiata have noted how the “task-related feature retrieval” (2013: 8) capability of a verbal stimulus positively correlates with the potential of that stimulus to lead to activation in (non-language-related) sensorimotor areas of the brain. In light of this and other similar research, Strack (2019: 116-128) has asserted that an individual’s goal-oriented embodied experiences will crucially affect how that person interprets language they encounter. The hypothesis is that people with extensive exposure to a given goal-oriented task set will have such a thorough understanding of the semantic implications of concepts involved in that task set that they will naturally be predisposed to interpret language in ways that align with it.

To test whether a person’s task-oriented embodied experiences actually affect interpretational outcomes, a simple experiment was conducted: survey participants (18 Japanese university students) were asked to complete sentences by choosing from two apt response options, at least one of which includes a metaphor associated with a specific task-oriented embodied experience. For example, one survey question (administered in Japanese) offered the incomplete statement, “If children are shut up inside a room all day they get frustrated. Once in a while, they need to be _____.” Forced choice response options included the dog-walking metaphor “taken for a walk” (expressed as “*sanpo saseru*,” a metaphorical phrase when used with reference to humans in Japanese) and the sometimes literal, sometimes metaphorical expression “made to run around” (“*hashiraseru*”). While a significant number of participants who self-reported owning dogs chose the response option “taken for a walk” ($r=.612$, $p<.01$), responses of non-dog owners were non-significant (that is, more or less evenly distributed between “taken for a walk” and “made to run around”). Similarly, on another question, participants with driver’s licenses were observed to be significantly more likely to choose a driving-related metaphorical response option ($r=.478$, $p<.05$) than non-drivers.

On the other hand, not all task-oriented embodied experience-related metaphors generated similar significant results. For example, a participant’s past “participation in team sports” and past experience “going to school by bicycle” failed to receive a significant number of responses for metaphors that reflected such experiences. One reason might be that one’s current embodied activities may affect linguistic understanding to a much greater extent than one’s past activities. Another possibility is that the sports-related metaphorical response option offered might not have exactly matched the type of team sport participated in.

In any case, the results of this small-scale survey are intriguing. If contemporaneous task-oriented embodied experiences are found to positively influence metaphor comprehension relating to those experiences, then the extent to which such goal-oriented experiences inform language interpretation will need to be further explored.

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Is Humor Embodied? - An empirical study of humor perception in Chinese

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Keywords: Conceptual metaphor, Embodiment, Humor understanding, Bodily motion

The study investigates how humor is understood and conceptualized by Chinese speakers with an empirical approach. It has been proposed that human perception of the world is grounded in salient bodily experiences such as sensory simulations, situated actions and bodily postures (see Barsalou 1999, 2008). Over the last few decades, efforts have been made by cognitive linguists to prove this experiential view of language understanding (e.g., Glenberg & Kaschak 2002, Zwaan & Pecher 2012). However, it is still controversial whether the understanding of abstract concepts can be fully explained under this view. The current study aims to address the important issue of humor understanding and perception by looking into the language-specific association of humor and conventional metaphors (Lakoff & Johnson 1999, Gibbs 1994). Based on findings of two empirical studies, we propose that humor, as an abstract concept, is understood through embodied conceptual metaphors.

The two studies, which are mutually complementary, include a corpus-based textual analysis and a behavioral experiment. First, we examined humor-related texts extracted from a large Chinese corpus (the CCL corpus by Peking University). By searching for passages related to the lemma xiào 笑 'laughter/to laugh', a large number of embodied conceptual metaphors are found, such as HUMOR IS FORCE (e.g., bèi hōng-xiào jī-dǎo 被哄笑击倒 'knocked down by laughing'), HUMOR IS BODY POSTURE (e.g., xié-jiān chǎn-xiào 胁肩谄笑 'a fake smile with hunched shoulders'), and HUMOR IS SENSORY PERCEPTION (e.g., kǔ-xiào 苦笑 'bitter smile'). These metaphors are in line with previous findings on metaphorical expressions in English and German (Samermitt & Gibbs 2016). Second, we conducted a behavioral experiment to further testify if humor is embodied through metaphors. Based on the conceptual metaphors identified in the text analysis, two frequently used expressions with bodily movement yǎng tiān dà xiào 仰天大笑 'laughing with upper body up to the sky' and pěng fù dà xiào 捧腹大笑 'laughing by holding one's belly', are chosen as the stimuli for metaphor-based bodily cues, to be compared with non-metaphor-based cues (such as moving horizontally). Forty-two participants in two experimental groups (twenty and twenty two in each group) were first familiarized with and instructed to repeat the different sets of bodily cues demonstrated in a video clip respectively. Another control group of twenty three participants was not required to view video clips or do bodily motion. All three groups were then asked to rate the same set of twenty written jokes. Results show that the group of participants who are cued with and mimicked the metaphor-based movement rated the jokes significantly higher than the other two groups. And there is no significant difference between those who mimicked the non-metaphor-based movement and those in the control group. In other words, the metaphorically-triggered bodily experience can prime participants with higher perceptual tuning to humor, which results in higher ratings of the jokes.

Therefore, it is concluded that humor is embodied through metaphorical associations in a language-specific manner. The findings support the embodied view of humor understanding and sheds new light on the theoretical development of the embodiment of abstract concepts.

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Where the awareness condition comes from: Cross-linguistic generalizations about viewpoint reflexives in English and Japanese

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Keywords: viewpoint reflexives, awareness condition, speaker's objective self, self-dissociation, self-association

It has been observed since Cantrall (1969) that reflexives in English can be used not only as reflexive markers but also as viewpoint expressions; i.e., choice of a *-self* form over a pronoun indicates that the situation in question is seen from the viewpoint of its referent, as illustrated by well-known examples like *The adults in the picture are facing away from us, with the children placed behind {themselves/ them}*. The viewpoint use of English reflexives has been considered to follow what Kuno (1972, 1987) calls the awareness condition: The referent of a viewpoint reflexive must be aware of the situation represented by the clause containing it. This condition has been accepted in many cognitive linguistic studies, including Deane (1992), Kemmer (1995), and van Hoek (1997).

This paper, however, points out some problems with the awareness condition and argues, based on Hirose's (2002, 2018) work on the Japanese reflexive *zibun* 'self,' that the principles governing its viewpoint use apply cross-linguistically to English as well and provide a more adequate account of the facts intended to be covered by the awareness condition. In particular, it is shown that the nature of viewpoint reflexives in English can be more properly explained in terms of what Hirose calls the speaker's "objective self," exemplified by the use of *myself* in examples like *I dreamed of myself being lonely*, where the reflexive refers to the self of the speaker that is objectified in the sense that it is placed on a level with others.

The typical viewpoint use of a reflexive is when the speaker projects his/her objective self onto another person, so the following generalization can be proposed: A viewpoint reflexive (whether in Japanese or in English) represents the speaker's objective self, i.e. the self that the speaker dissociates from his/her consciousness and projects onto another person (as the most prominent participant in a situation). The objective self thus defined has both the "self as other" aspect and the "other as self" aspect, and this duality leads to the following two principles. (i) Principle of self-dissociation: in order to dissociate themselves from their consciousness, speakers must get far enough away from themselves. (ii) Principle of self-association: in order to associate themselves with another person, speakers must get close enough to that person. These principles, together with the principle of objective-self projection by the speaker, are shown to reveal that the awareness condition is simply a default one derived from them: what really matters is the speaker's construal of the referents of viewpoint reflexives, not the objective status of those referents themselves.

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Subject, Stance, and Sequence: An Interactional Construction Grammar Approach to the False-belief Verb *Yiwei* in Mandarin Conversation

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Keywords: false-belief verb; Interactional Construction Grammar; stance; subject; sequence

The study of complement-taking mental predicates (CTMPs) such as think and guess in English has received much attention from the fields of Cognitive Linguistics and functional linguistics (e.g., Thompson, 2002; Van Bogaer, 2011). Despite the body of publications, past research tends to focus on the patterns of particular high-frequency CTMPs or put forward a framework that can be applied to account for the general features of this group of verbs. Relatively few look into CTMPs that report (previous) false or incorrect beliefs. Those that touch upon the issue of false-belief predicates often fail to discuss their use in spoken discourse (e.g., Hu, 2006; Glass, 2015). As discourse-based studies of the English phrase I thought have pointed out, previous incorrect beliefs can be reported in particular constructions to serve specific interactional functions (Kärkkäinen, 2012, Smith, 2013). Their findings strongly suggest that false-belief predicates deserve more in-depth investigation.

To address this gap, the present study intends to investigate the use of *yiwei* '(someone) mistakenly thought,' which is a lexicalized item for reporting false belief (Hu, 2006; Glass, 2015), in Mandarin conversation. A detailed analysis of this verb is conducted, drawing on the framework of Interactional Construction Grammar (Fried and Ostman, 2005; Linell, 2009; Wide, 2009; Fischer, 2010; Nikiforidou et al., 2014; Diewald 2015, among others), which integrates the approach of Interactional Linguistics (Couper-Kuhlen & Selting, 2018) and the theory of Construction Grammar (Fillmore et al., 1988; Goldberg, 1995), and on the 80 instances of *yiwei* from two of the largest corpora of spoken Taiwan Mandarin, the NTU spoken Chinese corpus and the NCCU corpus of spoken Chinese (Chui & Lai, 2008).

The instances of *yiwei* retrieved from the corpora yield a number of significant findings: First, *yiwei* tends to precede content that is structurally less extended and complex, which differs from other more common CTMPs (cf. Huang, 2003). That is, there seems to be a pairing between the meaning of the verb and the structure of the construction(s) in which it is used. Second, combinations of the false-belief verb with different subjects appear to form constructions that help achieve various stance-related, interactional purposes (e.g., foreshadowing discrepancy or showing disagreement). Third, the function of the same combination may vary in accordance with the sequential environment in which it occurs. In other words, the subject-verb fragment and the sequential context together constitute a broader construction that connects the lexico-grammatical resources and socio-interactional needs in Mandarin conversation (cf. Fried and Ostman, 2005; Linell, 2009; Wide, 2009).

By virtues of these findings, this study not only serves as a basis for cross-linguistic comparison of the use of false-belief verbs in discourse, but also sheds some light on the mutual influence between grammar and interaction and the possibility of incorporating Construction Grammar and Interactional Linguistics.

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Linguistic Patterns of Viewpoint Transfer in News Narratives

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Keywords: corpus linguistics; discourse analysis; Mental Space Theory; narrative; viewpoint

When processing narrative discourse, readers construct a network of mental spaces through which they move as the story unfolds (Sweetser & Fauconnier, 1996). Different spaces can be profiled at different points in the narrative and shifts between spaces occur frequently. Keeping track of this dynamic network is a highly complex process that, despite the cognitive load it demands, progresses remarkably smoothly. The present study aims to examine to what extent this process is facilitated and guided by linguistic structures.

To attain this aim, a cognitive linguistic corpus analysis of news narratives was conducted. News narratives construct a complex network of mental spaces (Sanders & Van Krieken, 2019): a Reality Space representing the deictic center of reader and journalist *here-and-now* (publication date); a Narrative Space representing newsworthy events *there-and-then* (crime, accident); and an Intermediate Space representing the information of the news actors, retrieved or overheard by the journalist at a time *in-between* the newsworthy events and the present (press conference, court case). Determining to what extent and how shifts between these three spaces are linguistically marked is the central goal of this study.

A corpus of 100 crime news narratives published between 1960 and 2009 in 11 different Dutch newspapers was collected, divided into sentences ($N = 3,923$) and subsequently analyzed by two independent coders on two variables. First, the space in which each sentence was anchored was determined (Reality Space; Narrative Space; Intermediate Space; $\kappa = .88$). Second, all sentences marking a shift from one space to another space were identified ($N = 648$) and analyzed on the type of linguistic element signaling the shift (temporal adverb or tense shift; speech or thought report; other; none; $\kappa = .92$).

Results show that shifts between spaces were significantly more often linguistically marked (86,6%) than not marked (13,4%). Furthermore, the type of linguistic marker differed significantly across the various shifts ($p < .001$). Shifts from the Narrative Space to the Intermediate Space were most often marked by a speech or thought report, whereas shifts from the Intermediate Space to the Narrative Space were typically *not* linguistically marked, thus requiring readers to draw pragmatic inferences in processing the narrative progression. Shifts from the Intermediate Space to the Reality Space were mostly marked by a temporal adverb or tense shift, whereas shifts from the Reality Space to the Intermediate Space were most often marked by a speech or thought report. Finally, shifts from the Narrative Space to the Reality Space and vice versa were in the vast majority marked by a temporal adverb or tense shift. These findings demonstrate that the marking of shifts between mental spaces in news narratives follows clear linguistic patterns, thereby enabling readers to smoothly move through the dynamic mental spaces network. As such, this study advances our understanding of the relation between the linguistic and the cognitive representation of narrative discourse.

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Epistemic and inferential expressions in linguistic research articles: A contrastive (English-Finnish) corpus-based analysis

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Keywords: cross-linguistic, epistemic, inferential, academic discourse, corpus-based

This presentation discusses how English and Finnish epistemic and inferential expressions are used in linguistic research articles, published in internet journals. The main focus is put on epistemic modals and adverbs and inferential modals and adverbs. My theoretical framework is cognitive-functional, and as a background study, I refer to the results of my typological study of epistemic modality and inferentiality, based on the sample of 130 languages. In addition, I draw on studies in academic discourse, corpus linguistics, and politeness. Both the English and Finnish epistemic modals and adverbs prototypically express degrees of the speaker's certainty, while the inferential modals and adverbs in these languages prototypically express various inferential properties as well as degrees of the speaker's certainty. Several epistemic and inferential expressions have often been discussed as belonging to hedging strategies, and hedges have been considered the most significant aspect of interpersonal discourse in various academic genres in a number of disciplines (e.g. Hyland 1998). Hedges have been shown to frequently express several meanings simultaneously. Writers may use them to distinguish fact from opinion, to offer a credible representation of themselves and their work, and to give polite deference to colleagues' views.

In this presentation, the main questions addressed are: What kind of uses of the selected expressions can be distinguished in English and Finnish linguistic research articles? Are there differences in the usage of these expressions in these two types of articles? How can the possible differences be explained? To answer these questions, an electronic corpus of 60 linguistic research articles, published between 2014 and 2016, was compiled. 30 English articles were taken from three international internet journals, and 30 Finnish articles were taken from three internet journals of local impact. A detailed contextual analysis of utterances containing the selected expressions shows that these expressions are used, firstly, to convey prototypical epistemic or prototypical inferential meanings in both the English and Finnish articles. Secondly, the expressions are used to indicate similar, multifunctional uses in both types of articles. Some of the latter are predominantly epistemic or predominantly inferential. Other uses of the latter type are predominantly polite, interpersonal uses. Different types of uses are understood as hedges in this presentation, and they can be described by means of cognitive domains and meaning potentials. Individual differences between writers are also discernible in both types of articles. Recently, the importance of considering individual differences between language users has been emphasized in several studies of academic discourse (e.g. Hyland 2015, Suomela-Salmi & Dervin 2009) as well as in Cognitive linguistics (e.g. Barlow 2013, Divjak et al. 2016).

However, important differences between the two types of articles were also found. Especially, the English articles include a greater amount of various predominantly reader-oriented, polite uses of the expressions. This does not necessarily mean that Finnish research articles are less polite than English research articles, because, for example, other types of hedges and implicitness may also be considered from the perspective of politeness. I will argue that the explanation for the divergences found should be sought not so much in the different linguistic background as in the culture of the disciplinary community the scholar belongs to.

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A corpus-based analysis of two “mystery” discourse particles in Mapudungun

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Keywords: particles, discourse markers, corpus, stance, Mapudungun.

This study presents the description and analysis of two discourse markers used during interactions in Mapudungun (isolate, South America). Both particles, *ta* and *nga*, were defined as “decorative” by Augusta (1903). Few attempts to identify their functions have been made since then: Smeets (1989) interpret them as anaphoric pronouns, and Zúñiga (2006) as assertive and emphatic particles.

For the purpose of this study, the author understands discourse marker in the broad sense given by Schiffrin (1987) and Maschler & Shiffrin (2015). In Schiffrin’s words, these markers are sequentially dependent elements which bracket units of talk. In addition, they have a metalingual interpretation in the context where they occur (Maschler & Shiffrin 2015), that is, they provide commentary or specify procedurally a relationship between two segments of discourse (Fraser 1998). From cross-linguistic analyses, I consider the variety of formal elements that can be recruited as discourse markers and the different functions they can have (Zavala 2001; Fairbanks 2016). As it has been pointed out by Brody (2010), I acknowledge the multifunctionality of discourse markers, and the cross-linguistic differences inherent to each discourse system.

The data used in this research form a conversational corpus collected through interviews to 7 native speakers integrally done in Mapudungun. The interviews were recorded and transcribed, and they constitute altogether a corpus of approximately 5:30 hours. As a result, the particle *ta* is the most frequent word in the corpus (1,517 hits). In turn, *nga* has comparatively a low frequency (77 hits) and is unevenly distributed. However, both particles are similar in that they lack propositional meaning, are mostly optional, are difficult to describe semantically (cf. Ojibwe’s “mystery particles”, Fairbanks 2016) and appear at different unit boundaries. Regarding their usages, neither of these particles function as an anaphoric pronoun, although they can follow a demonstrative, which itself does. Secondly, some of their appearances could be described as assertive and emphatic, especially when they connect a subject with its predicate, but this seems not to be their unique nor their basic function. Thirdly, in terms of their position, *ta* occurs especially between subject and both verbal and nominal predicates (28% of the corpus analyzed so far), between the verb and complements or adjuncts (30%), and after connectives (24%), with no tokens at final position. In turn, *nga* is used in intermediate position (68% of the analyzed data), after connectives (11%) and at final position (21%).

In conclusion, I propose that their distribution is central to understand their function: they tend to delimit units and, thus, they can signal their relationship and, in some cases, their equivalence. In addition, they seem to signal the speaker’s attitude towards the utterance: while *nga* conveys a speaker’s intent of alignment between his/her own presuppositions and those of his/her interlocutor (Du Bois 2007), *ta* does not index such interactional move.

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Speech-embedded non-verbal depictions: Embeddedness and structural complexities

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Keywords: depiction; gesture; speech-gesture integration; iconicity; Construction Grammar

Depictions, defined by Clark (2016), are physical scenes people create and display, with a single set of actions, at the same place and time, to facilitate the addressee's imagination of the depicted scenes. Iconic in nature, depictions subsume phenomena in communication where the form of the sign bears physical resemblance to the meaning. While depictions are ubiquitous in real-life language use and come in various subtypes (ibid.), of special research interest are tokens of speech-embedded non-verbal depictions; i.e. depictions that are embedded in speech, but that themselves contain no speech. Potential evidence of non-speech modalities being an integral part of language use, these tokens — cases where meaning is communicated non-verbally and without temporally co-occurring speech — are the ones that have until recently escaped the attention of most linguists, with few exceptions (e.g. Fricke, 2012; Ladewig, forthc.).

In view of this, we examined >10 hrs of video recordings of American TV talk shows, in order to unravel the systematicity of speech-embedded non-verbal depictions, tapping specifically into their relation to speech and their internal structure. Over 200 tokens of such depictions were identified, embedded on the levels of the word, phrase, sentence, and beyond. The versatility in depiction-speech integration underlines non-verbal signals' capability of communicating structurally diverse meanings, also lending support to the view that non-verbal depictions as form-function pairings are not unlike verbal constituents in the sense of Construction Grammar (Croft, 2001). In addition, the tokens also exhibit internal structural complexities of speech-embedded non-verbal depictions. In particular, numerous series of consecutive depictions, staged by a single depicter or jointly by multiple depickers, are observed building up complex composite meanings. For example, to demonstrate how he would not be able to refrain from actually eating if he were to play a role requiring eating on scene, Conan O'Brien staged three consecutive depictions, all of which share the same posture and arm configuration (annotation simplified):

(1) [bites into a burger] — [sucks fingers] — [sticks out R index, signaling others to wait]

Such depiction series consist of a base-depiction — which is the common thread of the series — and, staged on top of it, several elaboration-depictions — which either each contribute to the composite meaning of the series independently, or build and elaborate upon prior elaborations in the same series (as in 1). Elaboration-depictions are also observed serving the functions of indexing and commenting on the base-depiction, highlighting the layered (Clark, 1996) nature of depictions, as events on multiple layers are simultaneously profiled.

Building on Clark's notion of depicting and the handful of available studies on non-verbal communication without co-occurring speech, the present study demonstrates not only the versatility of the depictions in question, but more importantly their internal complexities. While it would be missing the point to debate to what verbal counterparts the structural complexities of multimodal depictions correspond, the findings do counter opinions that dismiss non-verbal signals as para-linguistic or as isolated occurrences lacking systematicity, arguing instead for them being structured linguistic construct(ion)s (cf. Zima & Bergs, 2017).

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Filled pauses from a cognitive and pragmatic perspective: how eye-tracking improves our knowledge of linguistic elements

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Keywords: eye-tracking, multimodality, filled pauses, pragmatic markers, gaze behavior

Filled pauses (FPs), small linguistic elements such as *uh* and *um*, have been approached from different domains, resulting in different findings. The study started in the field of psychology, where a FP was regarded as a reflection of underlying mental processes, such as cognitive processing, lexical search and anxiety (e.g. Goldman-Eisler 1968). Later studies noted however, that FPs also have a signaling function in interaction. They may signal a speaker's intention to hold the turn, announce a delay in speaking or signal a topic shift (e.g. Clark & Fox Tree 2002, Rendle-Short 2004). Recently, Crible, Degand & Gilquin (2017) proposed to change the symptom-signal dichotomy into a continuum, suggesting that FPs can fulfill both functions at the same time, to a greater or lesser extent.

In this study, we show how including speaker's eye gaze into the analysis of FPs can offer a better understanding of their cognitive and/or pragmatic function. It is a well-known fact that withdrawing gaze from an interlocutor can facilitate a speaker's cognitive processing (Argyle & Cook 1976). In this respect, it is unsurprising that gaze withdrawal often occurs when speakers are planning a turn or when speech is more hesitant (Kendon 1967). However, quantitative studies show that the co-occurrence FPs with gaze withdrawal is not as high as expected: only 63% of all FPs co-occur with gaze away from the interlocutor (Jehoul et al. 2017).

We collected a video corpus of three-party interaction, where the participants were equipped with eye-tracking glasses and had a conversation and brainstorm session in Dutch. This resulted in a corpus of 11 unscripted conversations and 8 brainstorm sessions (each 15 minutes). A combination of quantitative and qualitative techniques was used to test whether a difference in gaze behavior could be related to a difference in function.

The quantitative results show that gaze aversion is indeed a marker of a higher cognitive load. We found that gaze withdrawal occurs more frequently:

- (i) In co-occurrence with *um* in comparison to *uh*, supporting earlier claims that *uh* and *um* differ in function (Clark & Fox Tree 2002).
- (ii) In co-occurrence with turn-initial FPs, opposed to turn-medial FPs in conversations, which may be linked to the level of cognitive planning (Shriberg 1994).
- (iii) In co-occurrence with FPs in brainstorm sessions in comparison to free-range conversations, plausibly reflecting a different type of mental activity.

These results fed into a qualitative study of FPs in different positions in a sequence. It was found that FPs occurring in positions where cognitive issues were displayed (e.g. in word searches) are accompanied by different gaze behavior than FPs functioning on a pragmatic level (e.g. announcing a new element of a list). These results show that speakers' gaze is a useful resource to understand the cognitive and pragmatic features of FPs.

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Bodily Behavior as Constructional Meaning: The Case of Benefactive Construction in Japanese Family Interaction

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Keywords: Multimodal analysis, Benefactive construction, Interactional frame, Participation framework

Speakers in daily conversation use their bodies while they talk. In the framework of Cognitive Linguistics, the focus of multimodal analysis tend to be placed on more or less iconic hand gestures that depict physical movements produced along with spatial expressions. However, as Goodwin (2018) nicely demonstrated with various cases, participants in interaction deploy a wider range of resources and achieve more than semantic representations. This study investigates the Japanese benefactive *-te ageru* construction with special focus on the participants' bodily behaviors, aiming to reveal what roles bodily behaviors play in the production and understanding of the construction.

The data for this study come from interaction among family members videotaped in the participants' homes. 14 families participated and the total length of recording is about 500 hours. In child-caregiver interaction, the benefactive *-te ageru* construction is mostly used by the caregivers to suggest the older child to change the participation framework by including the younger child in the ongoing activity, as the construction emphasizes that the action is done for the sake of the beneficiary, which in turn highlights the generosity of the agent. In this presentation, I focus on two cases to demonstrate that linguistic instructions using the construction are embedded in the contexts that consist of both linguistic and non-linguistic behaviors and the environment.

Example (1) shows that the physical positions of the participants can be the pre-condition for the use of the construction; the older child stays away from other participants, which makes it hard for them to play together. Mother's use of the construction, especially in line 05 ("Let's play together (for the younger child)"), is triggered by the older child's non-friendly attitude and the physical distance between them. In Example (2), after the mother produces the *-te ageru* construction "Please let your brother borrow the toy he likes", she hands a toy box to the older child. The use of the tool (i.e., toy box) provides the condition for the achievement of instructed action, as it allows the older child to pick a toy from the box in front of her and use it to attract the attention of the younger child.

While it has been argued that speaker's knowledge about a construction should be represented in the interactional frame as well as the semantic frame (Matsumoto 2010), it is still not clear how the representations in interactional frame are determined. This study suggests that multimodal analysis is crucial for the understanding of the ongoing interaction and thus contributes to the representation in interactional frames.

Example (1)

- 01 ((Older sister (K1) wants to start something with her mother (M1). K1 is sitting on a chair at the dining table, while M1 and a baby (B1) are sitting on the floor.))
 02 M1: *Kana mo asoberu yatsu ni shite age*. "Do something Kana (=B1) can also play (for her)."
 03 ((K1 stays on the chair and tells B1 to bring a book.))
 04 M1: *sonnan kawaiiso yan ka*. "That way (we should) feel sorry, don't we."
 05 *isshoni asonde ageyoo na*. "Let's play together (for her (=B1))."

Example (2)

- 01 ((Older sister (K2) pushes back her little brother (B2) when he reaches a toy that was between K2 and B2.))
 02 M2: *ja Shiho-chan Tasuke no suki na omocha kashite agete?*
 "Then, Shiho (=K2), please let Tasuke (=B2) borrow the toy he likes (for him)."
 03 ((The mother (M2) picks up a toy box and hands it to the father, and the father hands the toybox to K2. K2 takes a toy-flyer and makes a big noise with it.))

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Kinesthetic Pattern Grammar in the Yama-Bhavacakra: Markedness, Blending and Midline Mimesis

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Keywords: embodiment, grammar, cognitive semiotics, conceptual blending, markedness, mimesis

Across a wide range of approaches to cognitive linguistics, practitioners and theorists pursue cross-linguistic applications and non-western cultural models in order to better test, refine and develop the field (see e.g., Heine 1997, Slingerland 2005, Rice 2017). Theories of embodied cognition should be no exception. To inquire further into the experiential foundations of cognitive grammar in bodily dynamics of upright posture (developing ideas from Ellen 1977; Heine 1997; Van Lier 2010; Pelkey 2013, 2017a, 2017b, 2018), I pursue a cognitive semiotic analysis of the Tibetan Bhavacakra diagram. Since the tradition emerges out of a decidedly non-western context, it provides critical supporting evidence for a set of general organizational patterns or mimetic schemas (Zlatev 2016, 2018) in human cognition. I define the larger set of schemas as “kinesthetic pattern grammar”, arguing that that such phenomena are best accounted for as patterned bundles of kinesthetic relations introduced via the reorganization of the anatomical planes intrinsic to the evolution of upright posture. This, in turn, provides further critical grounding for multiple theory-internal concepts and constructs such as grammatical markedness (pace Haspelmath 2006), and conceptual blending (pro Fauconnier & Turner 2002).

Notably, the Tibetan Bhavacakra, or ‘wheel of life’, features depictions of the six realms of samsara or ‘rebirth’ (including heaven, hell, human, animal, titan and hungry ghost realms). These realms are depicted between the spokes of a wheel, and that wheel is supported by Yama, the monster of impermanence. Yama’s hands support the upper frame of the wheel while its feet support the lower frame. Drawing on discussions of textual and visual records in Teiser (2007), plus a working database of 30 visual exemplars, the paper presents statistical, structural and critical evidence to demonstrate that the relative placement of each of the six realms to each other, and to the viewer-inverse image of Yama as interlocutor, are theoretically non-trivial and phenomenologically non-arbitrary. Distinctive patterns of vertical/transverse and lateral/horizontal oppositions emerge that could only make sense with experiential reference to human kinesthetic midlines. Visual and textual content analyses suggest important correlations between the Tibetan wheel model and structuralist adaptations of the logical square of oppositions. As such, the analysis not only adds plausibility to the origins of cognitive grammar but also identifies much needed continuity between theoretical constructs in cognitive linguistics and structuralist semiotics.

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Analyzing lexical variation in regional varieties of Chinese: A concept-based approach

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Keywords: lexical variation, concept, Cognitive Sociolinguistics, Chinese, basic level

Research question – In the framework of Cognitive Sociolinguistics, this study empirically tests to what extent there is lectally structured onomasiological variation in the Chinese lexicon and specifically, to what extent such lexical variation is influenced by features of the concepts.

Background – With decontextualized evidence from dialect dictionaries and psychometric data, previous studies in Cognitive Sociolinguistics have shown the impact of concept characteristics on lexical diversity in language varieties (e.g. Speelman & Geeraerts 2008; Franco et al. 2019). The present study intends to provide additional quantitative corpus-based evidence for the hypothesis that lexical variation is constrained by lectal features and also by features of the concepts to be named.

Material – The data for the present study is taken from the ‘Tagged Chinese Gigaword Corpus’ (Huang 2009), which is a newswire corpus containing texts from three regional varieties of Chinese, i.e. Mainland, Taiwan and Singapore Chinese.

Method – To measure **lexical lectometric distance**, we rely on the onomasiological measure for lexical uniformity designed by Geeraerts et al. (1999), which has been successfully applied in previous lexical lectometry studies (e.g. Ruetten et al. 2016). The uniformity measurements allow to quantify the amount of lexical variation between varieties both per concept and on an aggregate level. Next, we zoom in on concepts with low naming uniformity across varieties and investigate four concept characteristics that may explain higher degrees of lexical variation: (1) **conceptual entrenchment**. We use concept frequency in the corpus as an approximation and interpret the correlation against the background of the potentially opposing forces idiosyncratic naming preferences and expressive diversification. (2) **lexical fields**: Based on Chinese WordNet, we set a high-level cutoff in the WordNet taxonomy and use the hyponym label as an approximation for lexical field; (3) **vagueness**. We use token-level Word Space Models to model semantic vagueness of lexical items (cf. Heylen et al. 2015); (4) **affect**, which is operationalized as a sentiment score per concept that aggregates over the scores assigned to each occurrence that concept by a sentiment analyzer. Finally, we build a linear **regression model** to assess the effect of the four explanatory variables (concept characteristics) on the response (lexical lectometric distance).

Relevance – The relevance of the study is double. First, the findings of the study contribute to the current lectometric research by testing the uniformity measurement’s viability on a language that is typologically not related to the languages scholars have looked at so far, such as English (Ruetten et al. 2016), Dutch (Geeraerts et al. 1999) and Portuguese (Soares da Silva 2010). Second, theoretically, the paper adds to the growing recognition of concept characteristics as a determinant of (degree of) variation (Speelman & Geeraerts 2008; Franco et al. 2019). This idea has been part of Cognitive Linguistics since the first formulation of the basic-level hypothesis but is now being studied on a broader and more systematic semantic basis.

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Cognitive Grammar Matters: Revisiting Linguists' Use of Question Types in Attitude Research

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Keywords: cognitive sociolinguistics, language attitudes, cognitive grammar, question types, research methods

In this paper we present recent experimental work in the field of cognitive sociolinguistics. Specifically, the aim of this research is to test the effects of the question types which linguists traditionally use to elicit attitudes towards linguistic varieties or corresponding speech communities. Most linguists take it for granted that some question types (those making no reference to linguistic varieties and/or psychological attributes) trigger 'deep' attitudes in implicit manners. Other question types supposedly elicit attitudes explicitly by directly mentioning linguistic varieties/accents and/or factors on the scales of status, solidarity or dynamism. Hence, the examples in (a)-(f) supposedly "do the same basic job", but encode different degrees of explicitness-implicitness in term of elicitation techniques:

- (a) This person can be relied on: she will not let you down
- (b) I would lend this person my mobile and some money
- (c) This person is trustworthy
- (d) This accent is used by people who will not let you down
- (e) This accent denotes trustworthiness
- (f) This accent denotes trustworthiness. I would lend this person my mobile phone and some money

In 6 controlled experiments we first aimed to test the extent to which such question types actually operate as an independent variable and yield different results. Each of the 6 groups of respondents consisted of an average of 28 first-year undergraduate students of English philology. Ethics statements were explained and distributed. All variables were held constant, except for the variation in the instruments (6 different questionnaires composed of different question types). The 6 panels all listened to the same speech fragment (thus holding topic and potential lexical priming constant) read by the same individual (holding factors such as speed, intonation, dynamism, voice quality and gender effects constant as well). The dimensions on which all 6 groups of respondents evaluated the speech fragment on a 5-level Likert scale were: social status, education, intelligence, trustworthiness, sense of humor, social attractiveness. Results show no significant statistical differences across question types when the results for the 6 dimensions are calculated in *global* terms. However, when correlations are made for individual dimensions across the questionnaires, significant differences do appear. Dimension 4 (trustworthiness) is for instance significant for question type 2 (p-value: 0.0001): respondents systematically agreed that they would *not* act in accordance with the statement expressed for dimension 4 (*I would lend this person my mobile and some money*). We interpret these results by analyzing the various question types in terms of different grammatical construals, and show that from the point of view of Cognitive Grammar these questions types are *not* just implicit-explicit counterparts of the same basic dimensions. Rather, some types evoke a speaker-oriented epistemic schema and others a listener-oriented possession or transfer schema, which may have an influence on the results. In this paper we also compare the results for a standard L1 accent with a non-standard L2 accent.

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Gender stereotypes, neologisms, and concept-formation

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Keywords: gender stereotypes, neologisms, diffusion, concept-formation, hypostatization

Over the past decades, studies on gender biases in language (and beyond) have shown various differences between men and women in all domains, which leads Tannen (1990) to claim that men and women belong to two different cultures (see also Hellinger & Bußmann 2001, 2002, 2003, 2015). This paper presents three studies looking into gender stereotypes in English based on three different studies.

The first study is a corpus study (data drawn from the BNC and COCA) concerning stereotypes related to the domain of intelligence which stipulate that men possess innate intelligence (“raw intellectual talent”), while women do not. As Wyer *et al.* (2001) show, this stereotype has had considerable influence on the entry of women into the professional world. Similarly, Leslie *et al.*'s 2015 study evaluates the gender imbalance in academia, and more especially in the STEM fields. The corpus data, based on adjectives referring to (innate or acquired) intelligence, such as *brilliant*, *intelligent*, *gifted*, etc. overwhelmingly confirm what Leslie *et al.* call the “field-specific ability belief” which holds that women are stereotyped as not possessing the raw innate talent needed for certain kinds of disciplines (among which some STEM disciplines and some disciplines in the humanities).

The second study, an extension of the first, is a collocation analysis (based on COCA) of adjectives that qualify a (selective) number of gender-specific nouns, such as *man*, *woman*, *father*, *daughter*, *girl*, etc. The (statistically significant) differences overwhelmingly confirm gender stereotypes. Men are qualified in terms of (i) sexuality, (ii) status and intelligence, and (iii) strength and bravery; women, in terms of (i) relationships, (ii) beauty and sexiness, (iii) dumbness and hysteria, and (iv) race, religion or origin.

The third study is different in kind and looks into stereotypes as reflected in gender-specific neologisms (regular derivations or blends) following the template *man(-)X*, such as *man bun*, *manscara*, or *mansplain* (*man+explain*). The data for the qualitative part of the study is drawn from two crowd-sourced user-content based websites (*the Urban Dictionary* and *Merriam Webster's Open Dictionary*); in total 1,403 neologisms have been analysed. We show that there are different motivations underlying these neologisms, such as the male (re)appropriation of domains stereotypically associated with women, the confirmation of stereotypes, and naming undesirable male behaviours (e.g., *mansplain*). As already observed by Spender (1980), such naming practices of undesirable male behaviours give credit to the experiences of women, e.g. *sexual harassment* or, more recently, Kate Manne's (2017) term *himpathy* (the inappropriate and disproportionate sympathy powerful men often enjoy in cases of misogynistic behavior). Quantitative data from the iWeb corpus shows that precisely neologisms that name such undesirable behaviours have a higher degree of diffusion compared to those built on other motivations (such as domain reappropriation). Following Schmid (2008), this shows how such neologisms can be helpful to understand the issue of concept-formation and hypostatization, the subjective impression that the existence of a word suggests the existence of a class of things denoted by the word.

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Asymmetries in Pluricentric Language Perceptions

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Keywords: cognitive sociolinguistics, pluricentricity, language identification, language perception, language attitudes

In this talk we present results from a large-scale pan-European experimental study on the identification and evaluation of native and non-native varieties of English (Kristiansen, Zenner & Geeraerts 2018). In the experiment 8 panels of over 100 listeners each first evaluated 12 native and non-native accents of English on a series of psychological attributes. For this task we implemented a 5-dimensional likert scale. The 12 speech fragments were held below a duration of 30 seconds and consisted of the same short text written in standard English. In the second stage of the experiment the listeners proceeded to an identification of the 12 accents on a multiple-choice 24 option questionnaire.

The part of the results which is brought under scrutiny in this presentation zooms in on the asymmetries detected in the data and which pertains to the two pluricentric languages: German and Swiss German on the one hand, and Netherlandic Dutch and Belgian Dutch on the other hand. In this paper we expose and examine the fact that in both cases the evaluational and identificational results exhibit striking differences that need to be explained in terms of relative social (dominant) perceptual salience. In this talk we describe these differences in detail (e.g. while the Belgians and the Swiss identified the Dutch and the German foreign accents almost to perfection, this was only true in 50 % of the cases when the Belgians and the Swiss were identified by the Germans and the Netherlandic populations). We also analyse and interpret the differences regarding the evaluational dimensions (ratings on intelligence, friendliness, trustworthiness etc.).

For a very precise type of evaluation we in addition use a very large data base (n = 391) for the Belgian simple.

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Pre-service English teachers' dialogic descriptions of motion: Task effects and trouble sources

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Keywords: second language pedagogy, motion verbs

In task-based language teaching (TBLT), teachers interactively provide language input and model task performance. As such, their communicative effectiveness (i.e., clarity and precision) is essential. The nature of pedagogic tasks is held to influence usage of constructions which differ typologically across the L1 and L2, such as motion verb (MV) constructions, in experimental (Cadierno & Robinson, 2009) and classroom (Eskildsen, Cadierno, & Li, 2015) studies. However, further research is needed with a wider range of task designs and language users. This experimental study examined the effects of dialogic task design on pre-service English teachers' use of MVs in a direction-giving map task. The study integrated frameworks from TBLT, cognitive linguistics, and conversation analysis. In a repeated-measures design, 16 pre-service teachers at a Japanese university performed simple and complex tasks in the teacher's role, with a peer in the student's role. These tasks varied in terms of planning time, number of elements, and familiarity of map location. Teacher production was analyzed to answer three research questions: (1) Does task complexity influence MV production (including types and tokens)? (2) Does it influence the amount of repair by the teacher (including student-initiated and teacher-initiated)? and (3) How do repairs shape the discourse within which motion, path, and location are expressed in the L2? Descriptive analyses indicated that while *go* was by far the most frequent MV, a range of others (e.g., *enter*, *walk*, *leave*) were also used. Nonparametric tests showed that complex task versions elicited significantly more MV tokens (but not types), with effects ranging from small to large ($d = 0.63$ to 2.08). Also, complex tasks resulted in significantly more teacher-initiated teacher-repair (but not student-initiated teacher-repair), showing small to medium ($d = 0.58$ to 1.02) effects. Further analysis of the teacher-initiated self-repairs indicated that trouble sources could often be attributed to the expression of motion (*you can take...you can go up the stairs*), path (*don't go through...between the tree and building*), and location (*go...across the corner uh across the road*). These results illustrate how repairs may provide information about the usage of MV constructions, while serving the teacher's goal of communicative effectiveness. In sum, this paper aims to link usage-based cognitive linguistic approaches and TBLT in order to illustrate the potential convergence of external (task design) and internal (teacher production) influences on discourse in future English as a foreign language classrooms.

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Effects of task procedural repetition on lexical diversity and clausal complexity in L2 written narrative production of motion events

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Keywords: motion events, second language acquisition, task repetition, writing, complexity

It is well known that task repetition, or repeated exposures to and performance on the same task or tasks with similar procedural contents promote the development of grammatical complexity (e.g., Nakamura, 2018; Bygate, 2001) in second language (L2) speech and written production. Yet, complexity is not a monolithic concept (Norris & Ortega, 2009), and as Robinson claims (e.g., Robinson, Cadierno, & Shirai, 2009), general performance measures such as dependent clauses per clause are not sufficient for capturing a complicated picture of L2 task performance and its resultant L2 development. He argues that "task-motivated", specific indices are necessary, and such specific measures of complexity in describing motion events (Berman & Slobin, 1994) in L2 have been employed for investigating the effects of task demands on "thinking for speaking" in L2 by Nakamura (2007; Robinson & Nakamura, 2009), and Robinson et al., (2009). However, in relation to task repetition, no studies have investigated its effects on L2 written narrative production of motion events, and thus the present study investigates whether repeating tasks with similar procedural contents, particularly narrative descriptions of the frog stories (e.g., Mayer, 1969) lead to increases in the variety and the amount of manner verbs (MVs), of path verbs (PVs), and of path adverbials (PADs) for describing motion events in English with typologically different, Japanese learners of English population. The study also considers whether task repetition promotes more clausal confluences of semantic elements (CAUSE, MANNER, and PATH). Twenty-eight Japanese learners wrote narratives of the frog stories once a month over a semester (thus three times in total). Their narratives were analysed by following measures (some of them were taken from Robinson et al., 2009): (1) MVs (types & tokens), (2) PVs (types & tokens), (3) PADs (types and tokens), (4) the number of motion clauses (MCs), (5) the number of semantic elements, and (6) the average number of semantic elements per MC. A series of Friedman ANOVAs showed that task repetition had significant effects on the tokens of MVs ($p = .006$) and PADs ($p = .000$) as well as the total number of words ($p = .016$), but not on the other dependent variables. Pairwise comparisons showed that learners produced less PADs at Time 2 (Time 1 > Time 2, Time 2 < Time 3, $ps = .000$) and less MVs at Time 3 (Time 2 > Time 3, $p = .016$), as well as more words at Time 2 (Time 1 < Time 2, $p = .013$). Task repetition had no significant effects on the number of the MCs and of semantic elements, nor on the average number of semantic elements per MC. Moreover, there were *always* positive correlations between the types and the tokens of MVs and those of PADs at each time point (all Kendall's $\tau_s < .369$) (and also those of PVs at Time 1 & 3), which means that those who produced a greater variety and amount of MVs also produced a greater variety and amount of PADs. This suggests potential individual differences in describing motion events in target-like ways. These results will be discussed with additional analyses.

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Event integration mechanisms across languages and their psychological reality

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Keywords: eye movements, motion event perception, ambient/focal attentional modes, language effect

Two different modes of visual attention are recognized in visual cognition research: (a) an early ambient mode of processing; and (b) a late focal mode –the former associated with bottom-up mechanisms guided by low-level perceptual saliency features (i.e. configuration), and the latter related to top-down processing, based on high-level (i.e. contextual) information and depending on knowledge-based features such as semantic schemas, content, co-occurrence of objects in a scene etc. (Pannasch & Velichkovsky 2009). Knowledge-based information can be related to the linguistic knowledge of the viewers. More specifically, in the domain of motion event encoding, speakers' knowledge depends on how available spatial components (e.g. Path, Manner) are in a language and how they combine into semantic schemas to form constrained spatial arrangements (Talmy 2006). Each language has a relatively closed set of 'pre-packaged' schemas and focuses differently on the core schema (i.e. the Path a Figure follows in a displacement): some (i.e. French) lexicalize the core schema in the main verb; others (i.e. English) express it in the periphery of the sentence.

Many psycholinguistic studies (e.g. Papafragou et al. 2008) suggest that such language differences are only surface differences that cannot influence visual processing of events (unless only momentarily). According to these authors, gaze behaviour can change due to momentary top-down language effects when people prepare to speak, but language interference, if any, occurs late in the viewing process and is therefore considered to be superficial. For others, language effects do not only occur in verbal behaviour but extend to non-verbal behaviours such as eye movements (cf. Soroli et al. 2019 for a review) and have an early effect on low-level processing (Meteyard et al. 2007).

Using verbal (production) and non-verbal measures (eye tracking), we investigated how speakers of two typologically different languages (English, French) perceive motion events visually and describe them verbally. Assuming that language can only have superficial effects that occur late during processing, no language differences should be found during the first stages of visual exploration. If, on the other hand, language has deeper psychological reality, then differences should be found not only during late exploration and verbalization but also during early/low-level scene viewing.

The verbal measures confirmed the typological differences across the groups: English speakers systematically encoded Path in peripheral devices and lexicalized Manner in the verb; French speakers preferred to lexicalize Path downplaying details related to Manner. With respect to eye movements, the participants of the two groups explored the scenes very differently: while both groups showed higher proportion of focal than ambient fixations, short saccades and long smooth pursuits were more frequent in the English data compared with the French participants who opted for ambient gazes with higher proportions of large saccade amplitudes at the earliest stages of visual exploration.

The findings suggest that both verbal encoding and event perception can be affected to a great extent by language-specific features. Typological properties are not just surface forms that merely emerge in verbal behavior: They leave traces at the earliest stages of cognitive processing and thus have a psychological reality that should not be ignored.

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Directional prepositions and the dynamics of motion event representation

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Keywords: language processing, mental representation, directional prepositions, motion event

Directional prepositions could affect the dynamics and richness of a motion event representation. The current study compares two Dutch directional prepositions, **naar** and **richting**. We hypothesize that the mental representation triggered by **naar** in a motion event description (e.g., *Hij loopt naar een huis* “he walks to a house”) is a point-to-point (e.g., from the moving figure *hij* to the destination *huis*) and comparatively more spatially circumscribed representation. **Richting**, however, evokes a more dynamic and richer representation with probably continuous lines/trajectories of motion and other relevant information on the trajectories (see Morrow, 1985, and Zwart, 2005 for similar assumptions about **to** and **towards**).

Two experiments will be conducted in this study. In Experiment 1, we will use a slider technique and ask participants to decide the distance between a figure in motion and a reference location when reading sentences (conscious comprehension). A pilot study (24 valid participants) has shown that participants dragged the slider significantly farther from the reference location in the **richting** condition than in the **naar** condition ($t(34) = 2.8357$, $p = 0.009$). In experiment 2, we will ask participants to hear sentences (unconscious comprehension) and to perform an irrelevant “same character or not” task. A pilot study (29 valid participants) has shown a tendency that the reaction time difference (of making Yes decisions: same character) between the **location-match** and **location-mismatch** condition was smaller in the **richting** condition than in the **naar** condition (estimate = -64.76 , SE = 33.24 , $t = -1.949$, $p = .052$). This implies that unmentioned locations along the trajectory were kept in the participants’ event representations in the **richting** condition but not in the **naar** condition.

To ensure enough power and a real effect, we decided to adopt Frick’s COAST method (Frick, 1998) to conduct flexible sequential testing for both experiments. We will run subjects in batches of 40. So if $p > .36$ or $p < .01$ after 40 (valid) subjects, we will stop testing participants. If p is within these boundaries, we will test another 40, determine p , and then decide if we need another 40. We will stop at $N=120$ no matter what p -value is. Computer simulation shows that the conventional alpha level of .05 is preserved in this procedure. This study is now preregistered at Open Science Framework (<https://osf.io/7y6mz/>) and is still in the process of data collection.

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Space, radial networks and prototypes: a cognitive approach to prepositions in Spanish/L2 pedagogy

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Keywords: Spanish, L2 pedagogy, applied linguistics, cognitive grammar, prepositions

Despite increasing efforts to approach the teaching of grammar in L2 instruction settings from a more meaningful perspective and with less of a focus on rules and exceptions, prepositions are frequently excluded from this challenge, and their uses are still perceived as largely arbitrary (Lam, 2009). Traditionally categorized as "function words", it is assumed that prepositions are linguistic units with little semantic value, used mostly to connect phrases and create periphrastic combinations. Explicit instruction at the elementary levels is also largely absent from textbooks, and yet, prepositions are highly meaningful and representational if they are approached from a cognitive perspective (Llopis-García, 2015).

As an example, prepositions in Spanish help encode motion events [*corrió hasta la meta (she ran up to the finish)*] and are responsible for indicating trajectories, not only for the literal expression of space, but also for the metaphorical construction of relationships between ideas in discourse [*hasta que no termine, no me iré (I won't go until it's over)*].

A cognitive pedagogical approach to their core meaning and the radial networks that arise from the identification of a prototype offers an effective instruction alternative. It gives students comprehension tools to operate in real-life communication (outside the classroom), taking advantage of cognitive strategies that are based on encyclopedic knowledge of the world that they already have (Mendo Murillo 2014). This paper posits that better learning can be achieved through: 1) the use of images as embodiment of abstract schemas during instruction; 2) the definition of "space" as a central notion in the identification of prototypes for each preposition; 3) building the metaphorical competence of learners by teaching them to apply key concepts (such as "profile", "base", "trajector" or "point of reference") to each prototype, and to also be able to extend the polysemy of each preposition through radial semantic networks.

It is the aim of this proposal to show a global vision of current approaches to the teaching of prepositions, and thus illustrate the greatest advantage of this cognitive didactic opportunity for L2 students: systemic and motivated learning, less arbitrariness in the presentation of rules, common ground with prepositions in English, and a Gestalt understanding. The ultimate objective is to enable students to learn language from an empowering perspective: their communicative intent in the target language and how to relay it effectively (Castañeda Castro, 2012).

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Aug. 7th (Wednesday)

8:20–9:00	COFFEE (near room 101 in Bldg. G)				
9:00–10:30	PLENARY 2: Jeannette Littlemore. Sources of Variation in 'Embodied' Metaphor: Theoretical and Real-world Consequences (Central Auditorium)				
10:30–10:50	BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)				
room #	101	103	104	105	108
category	THEME: Stance-stacking in language and multimodal communication (Organizers: B. Dancygier, S. Rice & T. Janzen)	construction (Chair: Russell Lee-Goldman)	grammar (Chair: Elizaveta Tarasova)	motion (Chair: Fuyin Th. Li)	categorization (Chair: Mariann Proos)
10:50–11:15	B. Dancygier et al. Introduction to the Theme Session	L. Sommerer & E. Zehentner A convent of sisters without a mother superior? – Discussing abstract nodes in the constructional network	Q. Cheng Trajector-object Variants in Chinese BA-construction—A Cognitive Approach		D. Glynn The meaning of <i>time</i> . Polysemy, usage and conceptual structure
11:20–11:45	T. Janzen When is an adjective not an adjective? Stance markers have to go somewhere!	Th. Herbst & P.Uhrig The "mini-construction" – a first step towards designing a Reference Construction of English	B. Zhu On the Chinese insubordinate conditional clause formed by the particle NE: A constructionist perspective	T. Molés-Cases & P. Cifuentes-Férez Some advances in the translation of Manner and boundary-crossing in motion events: An English-German/Spanish/Catalan experiment	D. Kosheleva A radial category model for future tense in Russian: when the future is not future
11:50–12:15	S. Rice Epistemics, evidentials, and other higher-order predicates in Dene Sųliné: Packing the post-verbal stance stack	A. Endresen et al. Building a Construction for Russian: How to identify families of constructions?	E. Tarasova & J. A. Sánchez Fajardo Exploring the evaluative nature of Adj+ie/y nominalisations in contemporary English	L. Stocker & R. Berthele The roles of language dominance and language mode in bilingual motion event encoding	A. Biryukova & D. Glynn Boredom is sad: A behavioural case study of near-synonyms in Russian
12:12–13:15	LUNCH (BIG PAPA or other locations)				
category	THEME (cont.)	frame (Chair: Tetsuya Kogusuri)	THEME: Macro-events, Grammaticalization, and Typology (Organizer: F. Th. Li)	motion and space (Chair: Kyoko Inoue)	categorization (Chair: Iraide Ibarretxe-Antuñano)
13:15–13:40	J. Hinnell & S. Rice The embodied marking of stance in North American English: Stacked and idiomatic	H-Ch. Lin What can a story do? – A frame semantic approach to constructing meanings on phrasal verbs	F. Th. Li Evolutionary Order of Macro-events in Mandarin	P. Prasertsom The Goal bias effects on frequencies of different path types and the (ir)relevance of animacy and literalness	Th. Van Hoey Radiant suns, burning fires and brilliant flowers: The onomasiology and radical support of Chinese literary LIGHT ideophones
13:45–14:10	B. Dancygier & A. Lou It's like if constructions and stance off-loading in multimodal artifacts	K. Sullivan Anti-Muslim framing in Australian social media	L. Zhang The difficulty gradient of change-of-state events for human construal demonstrated in the expansion of Chinese framing satellites	B. Palmer et al. Demographic diversity and variation in spatial behavior within language communities	K. Zurbuchen & M. Uusküla We do not talk much about smell here: A preliminary study of the semantics of olfaction in Estonian and German
14:15–14:40	B. Dancygier & J. Hinnell Communicative load-sharing: Stance construction in multimodal, multi-media contexts	T. Kogusuri A Frame-Constructional Approach to Emphatic Reflexives in Japanese	J. Du & F. (Th.) Li The Conceptual Boundary Among break, cut and open: A Diachronic Semantic Perspective	A. Alshehri Use and Understanding of Intrinsic Frames of Reference	M. Proos Letting meaning surface: a corpus-based study of Estonian perception verbs
14:45–15:10	C. Müller A recurrent gesture in multimodal stance-stacking: the "Negative-Assessment Construction"	K. E. Moore Coextension-path fictive motion and metaphor typology	L. Yu Beyond Typology: How Event Integration Works in Motion Events— A Case Study of "V + Dào" Constructions in Mandarin		J. Campbell-Larsen Verbs of visual perception and category violations
15:10–15:30	BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)				
15:30–16:50	POSTER SESSION (Learning Commons (Basement of Central Auditorium))				
16:50–17:00	BREAK				
17:00–18:30	PLENARY 3: Martin Hilpert. Causation, Culture, and Constructional Change (Central Auditorium)				
18:50–20:45	Board Meeting / Student Events (Kwansei Gakuin Hall)				

COFFEE (near room 101 in Bldg. G)

PLENARY 2: Jeannette Littlemore. Sources of Variation in 'Embodied' Metaphor: Theoretical and Real-world Consequences (Central Auditorium)

BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)

204	205	206	207	208	209
metaphor (Chair: Kevin E. Moore)	change (Chair: Lihong Huang)	corpus (Chair: Jane Klavan)	acquisition (Chair: Chiung-chih Huang)	THEME: Roles of gesture and body movement in communication (Organizers: H. Kobayashi & S. Kita)	Applied & Neuro Linguistics (Chair: Joseph Tomei)
Ch. Huang A Cognitive Approach to Translating Conceptual Metaphors in Legal Language	L. Huang & A. Tyler A Cognitive Linguistics Account of the Chinese Particle <i>Le</i>	Cy. Grandin et al. What makes us choose which modal? Putting semantic, syntactic and lexical factors in the balance	B. Juska-Bacher & L. Stocker Assessing vocabulary depth in school beginners	S. Aussems & S. Kita The role of seeing gestures in children's word learning and event memory	R. L. Peralta et al. Reading Journal Abstracts: An Eye-tracking Study of University EFL Students' Online Reading Behavior
I. Šeškauskienė Metaphor in legal translation: space as a source domain English and Lithuanian	Ph. H. Nguyen & K. Sullivan When a polysemous word grammaticalizes, does it stay polysemous? Evidence from Vietnamese path verbs	A. Ch-H. Chen Constituency, sequentiality, and prosody: A corpus-based analysis of phraseological sequences in Mandarin spontaneous speech production	S. de Pontonx & Ch. Parisse Children's acquisition of the notion of reference time: constructing a world within language	E. Yamamoto & K. Hiraki Does voluntary production of body movement have long-term effects on infants' learning about others' body movement?	H. Zhao & R. Wang Image Schemas in Second Language Learning of English Prepositions: An Event-Related Potential Study
P. Amarinthukrowh Utilizing the USAS semantic tagger to analyze metaphor: A case study of the US legalization of same-sex marriage discourse	S. Flach From <i>movement into action</i> to <i>manner of causation</i> : Changes in argument mapping in the <i>into-causative</i>	A. Baumann et al. Phonotactics is affected by statistical scaling laws less than the lexicon	Ch.-Ch. Huang An incremental approach to referential accessibility in mother-child conversation	Y. Ishizuka Gesture imitation increases reciprocal communication in children with autism spectrum disorder.	R. Hatchard Linguistic storage beyond the word level: The effect of multiword frequency on well-formedness of spoken utterances in aphasia

LUNCH (BIG PAPA or other locations)

metaphor (Chair: Kohei Suzuki)	metaphor (Chair: Dezheng Feng)	corpus (Chair: Keisuke Sanada)	pragmatics (Chair: Kuniyoshi Kataoka)	THEME (cont.)	Applied (Chair: Masahiro Takimoto)
H. Li Moving at the Speed of Life: How Life Pace Influences Temporal Reasoning	Sh. Huang Metaphor mixing and domain integration: A case study on BODY metaphors	V. Cvrček & M. Fidler "Up close and personal vs. birds-eye view" of discourse: a corpus study of perspective using Czech data	C. Cook Part of Your World: Linguistic Indicators of Immersion in Video Games	U. Liszkowski Ontogenetic origins of the human pointing gesture	L. Janda & F. M. Tyers Paradigms: cognitive plausibility and pedagogical application
Y. Cao & H. Li Planning for the Future: The Relationship between Conscientiousness, Temporal Focus and Implicit Space-Time Mappings	D. (W.) Feng Multimodal Metaphor in Chinese Dream Publicity Posters: Towards a Socio-functional Model of Analysis	A. Ch-H. Chen & H.-K. Su A usage-based constructionist approach to grammar: Semantic network analyses of words, constructions, and alternations	L. Manerko & A. Sharapkova Cognitive Dominance as a Driving Force of Concept Evolution in Arthurian Fiction	T. Yasuda Coordination of pointing and eye gaze in adult teaching whole/part object labels	R. Llopis-Garcia & I. Alonso-Aparicio Cognitive approaches to L2 pedagogy: challenges and shortcomings of empirical testing
	W-Y. Huang A Tale of Two Cities: A Multimodal Study of City Metaphors in Picture Books	R. Azemoto How gender is described: An insight from a spoken corpus	M. Okamoto Fictive interaction in prose text: An experiment on prose-to-dialogue conversion	H. Kobayashi Children's comprehension and production of different pointing gestures	M. Takimoto The effects of primary metaphor on the development of EFL learners' pragmatic proficiency
	J. Salzinger Black and green smells: Variation in synesthetic metaphors of smell		Ł. Wiraszka Viewpoint phenomena in academic discourse: A Cognitive Linguistics account	Discussion	

BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)

POSTER SESSION (Learning Commons (Basement of Central Auditorium))

BREAK

PLENARY 3: Martin Hilpert. Causation, Culture, and Constructional Change (Central Auditorium)

Board Meeting / Student Events (Kwansei Gakuin Hall)

Sources of Variation in 'Embodied' Metaphor: Theoretical and Real-world Consequences

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Our bodily interactions with the world provide a motivation for many of the metaphorical ways in which we talk about abstract concepts and emotions. For example, we often talk about moving through time as if it were moving through space, allowing us to 'look back in anger' or to 'move a meeting forward'. We talk about feeling 'down' when we are depressed, and we talk about emotional closeness as if it were physical closeness. Studies have shown that metaphors such as these have the ability to evoke physical (i.e. sensorimotor) responses in readers and listeners and for this reason, they are sometimes described as 'embodied'. Much of the work on embodied metaphor has tended to assume a single set of universal, shared bodily experiences that motivate our understanding of abstract concepts, and there has been relatively little investigation of the ways in which people's experiences of such metaphors might vary. Factors such as the shape and size of one's body, age, gender, physical or linguistic impairment, personality, ideology, political stance, religious beliefs, cultural and linguistic background all have the potential to impact on the way in which we use and interact with embodied metaphor. Furthermore, the nature of the metaphors themselves, their degree of novelty, the perspective from which they are presented and the contexts in which they are used have also been found to influence the extent to which they are experienced as 'embodied'. In this talk, I explore the different meanings of 'embodied metaphor' and discuss how they relate to one another. I then present findings from studies that we have conducted showing how individual differences and item-based differences shape people's experiences of embodied metaphor. I end with a discussion of how we have made use of theoretical and empirical work on embodied metaphor to address a range of 'real-world' needs, including the development of marketing campaigns, the improvement of care following pregnancy loss and child protection from faith-based abuse. By analysing the ways embodied metaphor varies across different individuals and contexts of use, in both academic and practical settings I aim to provide a deeper understanding of the nature of embodied metaphor itself.

Stance-stacking in language and multimodal communication

ICLC 15 Theme Session

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Keywords: stance, constructions, gesture, multimodality

Since the seminal work by DuBois, the concept of ‘stance’ has become an important term in a semanticist’s toolkit. While DuBois (2007) uses it in general terms, further work has proposed more specific types and expanded the enquiry into a range of linguistic phenomena. Stance thus now refers to a range of expressions, in language (verbs, adjectives, negation, constructions, etc.) and in multimodal and embodied communication (gesture, signed languages, eye-gaze, etc.). Broadly speaking, stance expressions align the speaker with a situation in evaluative, epistemic, or affective terms.

It has also been noticed that it is common for stance to appear in configurations which include multiple and hierarchically ordered expressions of stance. To refer to such structured patterns, Dancygier (2012) has introduced the term “stance-stacking” – a constructional phenomenon wherein multiple expressions of stance create a constructional cluster (for example, combining stance verbs with negation yields new, ‘stacked’, constructional effects). Linguistic constructions (morphological or sentential) thus often specialize in stance-stacking. Moreover, recent work on multimodality in interaction, gesture, and signed languages has also shown that embodied means of expression participate in complex construals involving multiple stances. Based on the general phenomenon of ‘body partitioning’ (Dudis 2004), studies have shown the embodied grounding of the need to express and organize multiple stances.

The session gathers presentations looking at various instances and effects of stance-stacking – for example, in constructions, signed language use, co-speech gesture, eye-gaze, grammar (especially of indigenous languages), internet memes, and other areas of communication. Such an overview should clarify the nature of stance as such, but also the need for multiple stances, and the conceptualizations underlying complex stance structures. Also, and perhaps more importantly, the studies to be presented will shed more light on the nature of multimodal constructions and the ways in which embodied, visual, and linguistic communicative modalities interact to yield complex hierarchical structures of meaning. The case studies to be presented will prompt a renewed consideration of the ‘division of semantic labor’ between multiple communicative modalities and refine the understanding of the concept of ‘multimodal constructions’.

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When is an adjective not an adjective? Stance markers have to go somewhere!

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Keywords: Expletives, noun phrase, stance marker, stress, semantics

Conversational English is frequently sprinkled with expletives occurring in various positions within utterances, or as complete utterances themselves, as evidenced in Bergen (2016) and in Bopp's (1992) essay. One notable case, not explored in Bergen, is the expletive *fucking* occurring in the adjective position in an NP, as in the following from the Santa Barbara Corpus of Spoken English (SBC) (Du Bois et al. 2000-2005):

- (1) This is a big fucking fish SBC003
- (2) I didn't have enough judgement to, ... to trade him that fucking machine SCB060

Other expletives can occur in this same position as in:

- (3) That's why nobody fixed up the damn lights outside SBC037

and, of course, regular descriptors occur as the adjective:

- (4) This is a big smelly fish.

In contrast to the descriptive adjective in (4), the expletive in (1) and (2) appears to have no semantic value within the NP whatsoever, meaning that *fucking* is in no way descriptive of *fish*. The questions, then, concern first what the expletive's function might be and second, why it is positioned in the NP. It is possible for an expletive to have at least some descriptive semantic value, as in:

- (5) That's why nobody fixed up the shitty lights outside

where *shitty* offers a descriptive quality to the lights.

Here I argue that the expletive adjective, and especially *fucking*, is a stance marker having wider scope than just the noun in that it is an indicator of the speaker's epistemic stance on the state or event as a whole. Additionally, at the utterance level, it has a focusing function, such that the speaker is commenting on that element of the event as opposed to another, when other positions are possible, for example pre-verbally in (2), so this may explain the adjective-noun positioning. Overall, there appears to be some variation in how these expletives indicate speaker perspective, stance-taking, and semantic value. In this study I take a corpus approach to explore the questions these examples lead to, specifically the Santa Barbara audio corpus and YouTube video recordings, which allow for examination of stance markers such as the expletive itself, its position in the utterance, where stress falls within the intonation phrase, and gestures as stance markers in a multimodal sense. In this way, the composite nature of stance marking illustrates stance-stacking in these utterances, and together build a sense of the relative strength of subjective speaker stance.

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Epistemics, evidentials, and other higher-order predicates in Dene Sų́líné: Packing the post-verbal stance stack

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Keywords: *stance, discourse particles, Athapaskan, subjectivity, univertation*

Being polysynthetic and often fusional, Dene (Athapaskan) languages, which at one time were widely spoken across western North America, are infamous for their complex verb morphology. The stem-final verb word has received extensive attention morphologically on account of the numerous posited prefix positions that can or must accompany the word-final verb stem (Li 1946, Kari 1989, Rice 2000). Indeed, the extensive inflectional and derivational marking that is obligatorily present in certain verbs requires a certain suspension of belief by cognitive linguists who might be forgiven for regarding the Dene verb as a precompiled, largely idiomatic construction due to the fact that it resists both standard conjugation and decompositionality by speakers.

By comparison, post-verbal material in Dene languages has largely been ignored since natural discourse has rarely formed the basis of data analysis in the Athapaskan literature. However, a plethora of material, both stanced and unstanced, shows up in the right periphery of spontaneous utterances to the point that further neglect of this rich (inter)subjective, post-verbal position is both unwarranted and counter to the cognitive linguistic ethos of analyzing real usage data. The post-verbal position is where one finds periphrastic TAM markers (TAM material is otherwise obligatorily marked within the verb word), question particles, as well as—at least in most Dene languages—negative particles. The few accounts of evidential particles in Dene languages (DeLancey 1990, de Reuse 2003) also place them squarely at the right periphery. A wide range of desiderative, epistemic, and assertive predicates also show up in the right periphery (having scope, of course, on the preceding material), some of which may have been the original lexical sources of now reduced “discourse particles” that signal a plethora of stanced categories.

Using personal field notes and a corpus of conversational and narrative data, I exemplify how various categories of stance are marked in Dene Sų́líné (ISO 639-3: chp) and how subjective and stanced elements tend to stack up in natural discourse (cf. Dancygier 2012, Fraser 2015, Lohmann & Koops 2016), as they do in other languages being investigated in this special theme session. In addition to exemplifying the many categories—sometimes of exceptional nuance—that appear in post-verbal positions, I discuss the frequency, preferred combinations (univertation), ordering tendencies, and possible lexical origins (decategorization) of some of these now highly reduced yet highly collocating “extra-propositional” particles.

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The embodied marking of stance in North American English: Stacked and idiomatic

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Cognitive linguistic (CL) research has long been at the forefront of investigations into the linguistic marking of subjectivity and intersubjectivity in language. Aligned with the CL commitment to natural, contextualized language data, recent studies have examined clusters of co-speech behaviours in the body that may serve pragmatic and evaluative functions (Debras 2017, Wehling 2017, Bressemer & Müller 2017). Many of these multimodal studies have specifically looked at the co-speech behaviours that accompany expressions of *stance* (cf. Debras & Cienki 2012, Schoonjans 2014, Jehoul et al. 2017). In a very real sense, the fact that the body is helping to articulate the expression of attitude, evaluation, or affect—that is to say, *stance*—across diverse verbal utterances gives us one reading of “stance-stacking” (cf. Dancygier 2012).

In this presentation, we investigate a second interpretation of stacked stance-marking: the use of *multiple* body articulators co-expressive with highly stanced utterances. We present preliminary evidence that suggests that the greater the “stancyness” of an utterance, the more likely that it will involve multiple verbal markers of stance, multiple bodily articulators, as well as very particular prosodies (in some cases, the prosodic melody is very unique to an expression and contributes to its overall idiomaticity). Using videos gathered from the Red Hen archive (Steen & Turner 2013), we investigate strings that we consider to be near lexico-syntactic neighbors. For example, we compare how speakers in unscripted situations enact the utterances *which is good* vs. *which is fine*, and *what can I do?* vs. *what can I say?*. The underlined segments differentiate the items in each pair from a stance perspective, with the first being more neutral.

This quantitative study investigates the multimodal enactment of a range of highly stanced, idiomatic expressions in English when compared with their more weakly stanced or neutral lexico-syntactic neighbors. Preliminary results show that highly fixed phrases such as *which is fine*, *which is great*, and *what can I say?* are accompanied by strategic movement of the eyebrows, mouth, head, and/or shoulders that unmistakably place these articulators at the locus of stance-marking (Rice & Hinnell 2017, Hinnell & Rice 2018). This work is part of a larger research agenda examining the conventionalization of co-speech bodily behaviors and supports the examination of stance as a constructional layering—or stacking, to use Dancygier’s term—in the linguistic and kinesic signals.

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***It's like if* constructions and stance off-loading in multimodal artifacts**

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Keywords: stance, constructions, multimodality, simile, counterfactuality

This paper analyzes the structure and meaning of the construction *It's like if X*, and also investigates its behavior in the context of multimodal (and multimedia) artifacts. It shows how the composite nature of the Simulative Conditional Construction (relying on two stance expressions, the conditional *if* and the simulative *like*) constitutes an example of stance stacking (constructionally determined configuration of multiple stance expressions, Dancygier 2012), while also showing how the stance structure is preserved in the context when one aspect of stance continues to be expressed linguistically, while the other is off-loaded to a different (visual or video) modality. Such patterns of multimodal stance off-loading provide crucial evidence of, on the one hand, the interaction between communicative modalities, and, on the other, of the hierarchical nature of stance-stacking.

We investigate two sets of examples, one linguistic, the other multimodal. Our language examples come from a database of about 500 expressions (gathered from COCA-Spoken and NOW corpora), while video and visual examples (about 20 altogether) have been gathered manually from late-night talk shows. The linguistic examples, which appear primarily in spoken discourse (the examples in the journalistic corpus NOW all come from interviews and other speech events), comment on a target situation by presenting it as similar (*like*) to an imaginary situation with clear emotional consequences (*if*). For example, an interviewee explains her reluctance by saying: *I swear to God, this isn't self pity -- it's like if you have a broken bone and you don't want to touch it*. Depending on the nature of the imaginary scenario, the construction additionally uses verb markers of counterfactuality (as per typical patterns found in conditionals, see Dancygier 1998). The combination of simulative and conditional stance may be additionally complemented by further stance and hedging devices (e.g. *it's very much like if X*, *it's sort of like if X*, *it's just/almost like if X*) or by negation (*it's not like if X*).

Late-night talk shows typically comment on current events and their impact. Often the hosts use the construction in combination with images or videos. For example, John Oliver comments on the blatant act of collusion by Trump staffers by comparing it to a fictional incident during Watergate and adding fake images of an email chain. In playing a report on a Trump campaign supervisor saying, *"I would encourage you to pursue contacts with Russian... great work,"* Oliver responds, *"It's like if, during Watergate, we had an email chain of Howard Hunt, saying 'about to break in,' and Nixon replying, 'NOICE!'"* We refer to such cases as Multimodal Simulative Counterfactuals. We consider them in the context of earlier work on multimodal simile (Lou 2017), represented by so-called *when*-memes, which use a simulative construal without explicitly using the word *like*. We further show how the imaginary nature of the multimodal artifacts affects the ways in which linguistic signals of stance are put together in the linguistic construction. While there are instances where the image merely supplements the verbal statement, we also discuss examples where the image takes over the role of the counterfactual conditional, whose markers are then missing from the construction. We interpret it to mean that in multimodal contexts aspects of constructional meaning can be off-loaded onto the non-linguistic part of the artifact. Importantly, though, we argue further that simulative meaning lies at the core of such constructions. We show the role of simulative expressions in these stance-stacking constructions and we unpack the stance hierarchies simulative meanings participate in, clarifying the differences between text-only and multimodal usage.

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Communicative load-sharing: Stance construction in multimodal, multi-media contexts

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Previous work on stance has primarily examined the linguistic resources (e.g. Biber & Finegan 1989, DuBois 2007) and more recently, multimodal enactments (i.e. gesture, gaze, etc.) that accompany the marking of stance (Debras 2017, Schoonjans 2014, Jehoul et al. 2017). However, the complexity of stance expression in contemporary discourse requires an approach that includes a broader account of more of the modalities involved, including language, and gesture, but also media and images. In this investigation of 'stance stacking' (Dancygier & Sweetser 2012), we examine talk-show discourse in which the host critiques the stance of an original remark by a public figure. The communicative and stance pattern is structured as follows: A politician says or tweets something that is emotionally disturbing and expresses an undesirable emotional stance. The host then creates a scenario which is a reconstructed historical or cultural frame and overlays the original dissonant remark. These humorous critical pieces rely on an integration of multi-media, textual, and multimodal means, and, we argue, point to the need for a re-consideration of the nature of multimodality.

We examine 25 counterfactual scenarios from broadcast media captured from online sources, including YouTube and the Red Hen multimedia archive. The multimodal behaviours that we investigate include gesture, eye-gaze, head and shoulder movement, facial expression and intonation. The multimedia artifacts are annotated for type of artifact or modality used (e.g. video footage vs. still image), discourse type (e.g. tweet vs. radio commentary), and the frame that is evoked and distorted (e.g. historical vs. cultural reference).

Multimodal behaviours for the counterfactual scenarios are, unexpectedly, characterized by veridical delivery styles, i.e. the hosts do not signal the ironic tone of their commentary in their bodily behavior, and frequently include shrugs and PUOH gestures – both of which have been shown to express epistemic stance (Jehoul et al. 2017, and Müller 2004, respectively). Preliminary results suggest that the multimodal and multimedia modes co-construct the complex stance marking through a complementary deployment. That is, there is a 'load-sharing' between these levels. This is not surprising given that the phenomenon of load sharing has been shown to factor into the distribution across modes of speech and co-speech behavior (Rice & Hinnell 2015). By focusing on the combination of multimodal enactment by the host (gesture, posture, eye gaze, tone of voice) and the multi-media construction of a counterfactual scenario, we uncover the mechanisms behind the emergence of these counterfactual forms. We propose that attention to levels of 'multimodal expression' is the only way to explain their impact and meaning. At the same time, we show how the numerous expressive modalities involved 'share the load' of stance construction in these cases.

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A recurrent gesture in multimodal stance-stacking: the “Negative-Assessment Construction”

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recurrent gestures – stance stacking – multimodal constructions

The goal of this talk is theoretical and methodological: Theoretically, it argues for multimodal stance-stacking as a dynamic, scalar, and temporally orchestrated phenomenon. Methodologically, it pursues a ‘gesture-first’ approach to the analysis of multimodal phenomena. Research usually starts from verbal expressions of stance and only considers gestures in a second analytic step. The same holds for multimodal construction research (Schoonjans 2014; Zima 2014). The alternative offered, applies a linguistic, form-based approach to gesture (Bresse & Müller 2017). Dancygier’s (2012) theoretical concept of stance-stacking resonates with positions of a dynamic and scalar nature of multimodal metaphoricity (Müller 2008, 2017b; Müller & Tag 2010). It directs our attention to the scalar dimension of meaning, that becomes so obvious, once language is studied in its natural habitat: multimodal language in use.

The talk illustrates these theoretical and methodological positions with an analysis of stance-stacking as it occurs with the multimodal “Negative-Assessment Construction” in German naturalistic discourse. Here the recurrent ‘Throwing-Away’ gesture (‘acting as-if throwing away a crumpled sheet of paper’) is the starting point of the analysis. We were able to show that recurrent gestures such as the Throwing-Away gesture (Bresse & Müller 2014) may build multimodal constructions with evaluative functions that we have characterized as negative assessment (Bresse & Müller 2017). Recurrent gestures come with a stable form-meaning pairing (Ladewig 2014; Müller 2017a) and many of them are evaluative, affective, or epistemic expressions of stance. In the “Negative-Assessment Construction”, the ‘Throwing-Away’ gesture is used with nouns, verbs, and adverbs (“the tendency”, “had”, “always”), with expressions of Negation (“forget”, “gone”, “none”), with verbal modal expressions (such as “well”, “yet”, “never mind”), with interjections (“alas”, “ah”, “oh”, “well”), and the gesture is also used without co-occurring lexical item (Bresse & Müller 2017: 4). The analysis shows that the ‘Throwing-Away’ gesture comes with different forms and grades of stance and connects this with a similar phenomenon, the attentional foregrounding of metaphoricity. It, thus, supports, the idea of a gradience of multimodal forms of stance-stacking.

It is concluded and offered for discussion that: (1) a gesture-first account reveals different forms and grades of stance-taking in the use of the “Negative-Assessment Construction”; (2) this scalar dimension of meaning is what Dancygier’s notion of stance-stacking attempts to describe; and (3) particular forms and grades result from the interactive flow of attention on meaning-making and the shared communicative effort that a specific dimension of meaning receives from the interlocutors.

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A convent of sisters without a mother superior? – Discussing abstract nodes in the constructional network

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Keywords: usage-based cognitive construction grammar, abstract schema, constructional network, higher-level generalisations, psychological reality

In this paper, we question the need to postulate extremely abstract generalisations (grammatical schemas) in the constructional network. We discuss different types of highly abstract constructions and investigate methodological problems in identifying them.

With regard to theoretical modelling, the paper revisits some core principles of usage-based, cognitive CxG: Constructions are defined as form-meaning pairings, entrenched in speaker minds through repeated usage. Initially (e.g. in first language acquisition) speakers start from substantive, fully specified constructions, but later are capable of generalising over elements perceived as similar. This leads to an intricate, complex network of constructions on different levels of schematicity or abstractness, which are vertically linked. In this hierarchical network, the lower-level constructions instantiate the higher-level constructions; for example, a construct like *my birthday* is licensed by the semispecific [*my* CN]_{NPdef} construction, which is a daughter of the more schematic construction [POSS CN]_{NPdef} which in turn is linked to a more abstract ‘definite NP construction’ [DETdefCN]_{NPdef}. It can even be argued that this construction is vertically linked to a referential super-DP [DET CN]_{NP} which subsumes all kinds of referential NPs (definite, indefinite, ...). Recently it has also been suggested that speakers abstract over structurally different yet semantically overlapping constructions such as the two members of the English dative alternation. Viewed as ‘allostructions’, these patterns are taken to be linked to an underspecified, higher-level generalisation over the features common to both constructions, the ‘constructeme’.

However, the postulation of such abstract templates can be criticised: One main tenet of usage-based cognitive CxG is that it aims to present a “psychologically plausible [...] theory of human language” which implies that such highly general schemas do in fact constitute part of speakers’ mental knowledge (Hoffmann & Trousdale 2013: 3). The question is how likely it is that speakers abstract and entrench such extremely general schemas in a bottom-up acquisition process? We agree with Lieven & Tomasello (2008: 186), who point out that “higher-level schemas may only be weakly represented and, indeed, they may sometimes only exist in the formalized grammars of linguists!”. In a similar vein, Blumenthal-Dramé (2012: 29) states that “the most schematic constructions in the constructional hierarchy only represent potential (rather than actual) abstractions in the mental representation of speakers”, while Hilpert (2014: 57) maintains that “purely formal generalizations, that is constructions without meaning, have no natural place in the construct-i-con”.

Although we do not want to dismiss the existence of abstract templates altogether, we argue that empirical evidence is needed to corroborate the psychological reality of superconstructions. We discuss the insights that can be gained from diachronic corpus data by drawing on case studies such as the history of the English dative alternation or the development of the English article system. Ultimately, we believe that it is often not feasible to posit abstract nodes. The linguistic knowledge of speakers can in many cases be described equally well by staying on the lower levels, via horizontal links between sister nodes. This calls into doubt the need for a ‘mother node’ (Jackendoff & Audring 2018).

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The “mini-constructicon” – a first step towards designing a Reference Constructicon of English

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Keywords: Constructicon, Construction Grammar, FrameNet, Valency, Reference Works

It is one of the central convictions of most usage-based grammarians that any sharp distinction between lexis and grammar is inappropriate (e.g. Langacker 2008), yet this insight has not yet been put into practice in terms of reference works, where the traditional distinction between grammars (in the sense of grammar books) and (various types of) dictionaries is still maintained.

The reference constructicon we have in mind has to be imagined as an all-comprehensive electronic reference tool containing all the information we imagine speakers of a language to have, i.e. a network of constructions ranging from very small constructions such as words or morphemes to very abstract ones like the passive construction or argument structure constructions, recognizing the central role of collocations or constructions such as the *the X-er the Y-er* construction (Fillmore, Kay & O'Connor 1988).

To the best of our knowledge, no such all-comprehensive reference tool exists – neither for English nor for any other language. All present constructica and constructicon projects seem to focus on particular spheres of language description (often the ones that have fallen between the stools of traditional grammars and dictionaries). For very obvious (financial) reasons, our project is no exception, but intended as a first step towards a more comprehensive reference tool.

Building on the *Valency Dictionary of English* (Herbst et al. 2004) and the *Valency Patternbank*, (Herbst & Uhrig 2009) one focus of the present project will lie on the description of argument structure constructions of verbs (Goldberg 1995, 2006), adjectives and nouns. One of the aims of the project is to determine what extent the items identified as occurring in particular valency patterns can be easily subsumed under generalized constructions (compare Herbst 2014).

In this paper, we wish to outline the basic principles of this “mini-constructicon”. In particular, it will be shown how the description of more abstract constructions will entail a collo-profile, i.e. a frequency-ranked list of words occurring in the construction.

We will also outline how our approach differs from FrameNet (which in its present form probably comes closest to the ideal of a comprehensive reference constructicon) – namely that we put a stronger focus on the way that the meaning of an utterance (and its parts) is negotiated between the meanings of constructions. Thus we would consider the differences in meaning between (1) *Her pilot flew her to Paris*, (2) *We flew to Atlanta* and (3) *Lufthansa flies to Tokyo* as the result of different constellations of the semantic roles or frame and not to different senses of the verb *fly* as in FrameNet, where *fly* is attributed to five different frames with five different senses. For this purpose, a systematic comparison between FrameNet and the Valency Dictionary of English will be presented.

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Building a Constructicon for Russian: How to identify families of constructions?

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Keywords: Construction Grammar, Russian, families of constructions, linguistic pedagogy, typology

Construction Grammar (Croft 2001; Goldberg 2006) has recently developed a new sub-discipline termed constructicography (Lyngfelt et al. 2018), which unites linguists who are building electronic searchable databases of constructions called constructicons. The Swedish Constructicon (<https://spraakbanken.gu.se/eng/sweccn>) launched this movement, and today comparable projects are underway for other languages including German, Spanish, Brazilian Portuguese, Korean, Japanese, and Russian.

In this talk, we report on a large-scale group project of building a Constructicon for Russian (<https://spraakbanken.gu.se/karp/#?mode=konstruktikon-rus>), focusing on methodological challenges and our strategies and solutions. More specifically, we will focus on how to identify families of constructions that are related in terms of semantics, morphology, and syntax. We will further show how such families of constructions can be represented in the Constructicon. The Russian Constructicon is a free open-access electronic database of Russian constructions accompanied with thorough descriptions of their properties and illustrative examples from the Russian National Corpus (www.ruscorpora.ru). Descriptions are provided by linguists and translated into English and Norwegian. The architecture of the Russian Constructicon is built in parallel with the Swedish Constructicon. However, we are working on additional properties of the interface that will make the Constructicon more user-friendly.

The Russian Constructicon is designed to be a useful research-based linguistic and pedagogical tool for both linguists and L2 learners of Russian. Its current version contains 670 constructions, and more items are constantly being added. One of the challenges that we face is the choice of linguistic material. We collect multi-word constructions of a particular type, namely those constructions that have been termed “partially schematic” (Ehrlemark et al. 2018). Such constructions lie between the two extremes of fully idiomatic expressions on the one hand and fully compositional syntactic sequences on the other hand (Janda et al. 2018). These constructions are difficult to account for in terms of either lexicon or grammar alone. They have both open slots and constraints on the fillers. For example, the *NP čto nado* (lit. ‘NP what needs’, as in *prazdnik čto nado* ‘the holiday is super-duper’) is a construction that has an open slot for a noun phrase (*NP*) restricted to nouns signifying an event, an object, or a person that can be positively evaluated, and a fixed part *čto nado*. Another example is the construction *net-net da i VP-Perf* (lit. ‘no-no and VP-Perf’) used for referring to irregular events, as in *eto slovo net-net da i proskol’znet v razgovore* ‘this word can sometimes appear in a conversation’. Such constructions are more frequent than idioms and present L2 learners with a greater challenge: they are ubiquitous in spoken and written language, but underrepresented in descriptive grammars of Russian.

Having chosen “partially schematic” constructions, we still have to face their diversity and multidimensionality. They are different in terms of their internal structure, degree of idiomaticity, syntactic roles and semantics. Moreover, the initial format of the database represented the collected constructions as a list of unrelated units. In this talk, we will discuss our strategies for turning this list into a structured network of constructions, following the example of Goldberg (2006) and her analysis of the English Subject Auxiliary Inversion family of constructions. In particular, we will present the methodology of how we elaborate a multi-level syntactic and semantic classification of constructions that subdivides our items into meaningful classes and smaller groups and eventually facilitates the identification of constructional families.

What can a story do? –A frame semantic approach to constructing meanings on phrasal verbs

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Keywords: *frame semantics, meaning constructions, phrasal verbs, metaphor, EFL*

Phrasal verbs, such as *come across*, often involve multiple meanings. Understanding polysemous meanings of phrasal verbs is one of the difficulties faced by EFL learners. Recent studies in cognitive linguistics highlight the importance of metaphorical concepts embraced by prepositions in phrasal verbs via Conceptual Metaphor Theory (Lu & Sun, 2017; Yasuda, 2010). However, far too little attention has been paid to the application of frame semantics (Fillmore, 1976; Fillmore & Atkins, 1992) to understanding phrasal verbs. This paper attempts to identify the similar and unique patterns of meanings of phrasal verbs constructed between native English speakers and Mandarin Chinese EFL learners. In the service of contributing to such understanding, this study then seeks to assess the usefulness of frame semantics in terms of the acquisition of phrasal verbs.

The research data in this study is drawn from four main sources: a pre-test, a series of video-recorded training sessions, a set of recorded linguistic output, and a post-test. 30 target phrasal verbs, a combination of 5 root verbs ('come', 'go', 'get', 'put', and 'take') with 6 prepositions ('in', 'out', 'on', 'off', 'up', and 'down') were selected from *Collins Free Online Dictionary* (retrieved from: <https://www.collinsdictionary.com/>) and *The Free Dictionary's* idiom dictionary (retrieved from: <http://idioms.thefreedictionary.com/>), along with some sample sentences. Firstly, participants were asked to complete a pre-test in a written form of a gap-filling task with a Chinese translation concerning their pre-existing linguistic knowledge of target phrasal verbs. Next, participants attended three one-hour training sessions, using a set of worksheets as teaching and learning materials. A worksheet was designed on the basis of the theory of frame semantics and it consisted of four sections: (1) a list of 10 target phrasal verbs, (2) two frame semantic tables, (3) a table of sample sentences; (4) two in-class tasks. All three training sessions were video recorded and linguistic output produced for in-class tasks was also collected. All the data collected from the training sessions were used to identify the similar and unique constructions on phrasal verbs shared between English and Mandarin Chinese users. Finally, participants were asked to fill in a post-test that had the same test content as in the pre-test but with the re-arranged order. The results emerging from the pre-test and post-test were used to analyse the effect of a frame semantic approach that could exert on helping Chinese EFL learners' acquisition of phrasal verbs. The data collected from the above sources were analysed and the findings would be presented in the conference.

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Anti-Muslim framing in Australian social media

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Keywords: frame semantics; corpus linguistics; metaphor & metonymy; categorization; racism

Sets of derogatory words evoke a particular *frame* in the FrameNet sense (Ruppenhofer et al. 2010). For example, *stupid* and *dumb* frame a person as having a particular mental property, whereas *dog* and *pig* metaphorically frame a human as an animal. However, not all derogatory frames are racist. The current study sets out to identify which frames (and therefore which words) tend to indicate racism.

The study examines how the public Australian Facebook group ‘Stop the Mosque in Bendigo’ frames Muslims and other segments of society. All 4,533 adjectives and nouns referring to human beings were collected from sixty-three consecutive posts and their comments on the group’s page. Nouns and adjectives were selected because it was easier to determine whether they described a human, etc., than it was for other parts of speech. Items were then screened for membership in sixteen semantic categories based on WordNet associations with *racist*, *evil*, *parasite*, and other words involved in derogatory framing (Hoffman and Modi 2012; Hülse and Spencer 2008; Mulsoff 2007, 2015; Spencer 2012; Santa Ana 2002). FrameNet did not include enough relevant words, so WordNet Synsets were taken as an approximation of the sets of words that evoke a frame.

The frames describing Muslim referents were first compared with those describing other groups in the ‘Stop the Mosque’ corpus. Muslims were the main target of particular frames, accounting for 94% of word tokens evoking the ‘disease’ frame, 91% of tokens evoking ‘parasite’, and 62% of those evoking ‘domestic animal’, for example. Frames were then compared with those found in previous framing studies analysing immigration discourse in the US and the UK, German news reports on terrorist groups, and Hitler’s *Mein Kampf*, in order to assess the levels of racism in the framing of target groups.

Based on the comparison of this and previous studies, the complexity and type of the frames in the studies are argued to suggest three general levels of perceived threats. Firstly, the frames in non-racist discourse, such as ‘Stop the Mosque’ group members describing non-Muslim Australians, may be insulting but rarely frame the targets as dangerous to non-group members. The second threat level appears in the frames that the members of ‘Stop the Mosque in Bendigo’ employ to describe Muslims. Frames at this threat level are more systematic than those at the lower threat level, and include the ‘parasite’ and ‘criminal’ frames. The frames that Germans use to describe Al-Qaida and the frames Britons and Americans apply to immigrants also indicate this level of threat. I concluded that the final, highest threat level is demonstrated by Hitler’s *Mein Kampf*, as analysed in Musolff’s 2007 study.

At the time I initially submitted this abstract, I concluded that the ‘Stop the Mosque in Bendigo’ language lacked some of the cognitive structures associated with the most extreme level of racism as found in *Mein Kampf*. However, following the 15 March 2019 attack in Christchurch, ‘Stop the Mosque in Bendigo’ was taken down, but data from the related group ‘Stop the Mosques Australia’ show an increase in extremist framing as compared to the 2018 data, suggesting a rise in extremist thinking.

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A Frame-Constructional Approach to Emphatic Reflexives in Japanese

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Keywords: emphatic reflexive, frame semantics, frame elements, construction morphology

This study provides a frame-based, construction-morphology account of the morpho-syntax and semantics of the Japanese reflexives *zibun-kara* and *zibun-de*, the so-called *emphatic reflexives*. It is claimed that these are idioms marking the volition or agency of the subject (e.g., Kishida 2011), as exemplified in (1):

- (1) John-wa {*zibun-kara* / *zibun-de*} kita.
John-TOP self-from / self-by came
“John came {volitionally / by himself}.”

Data from the Balanced Corpus of Contemporary Written Japanese (BCCWJ), however, reveal that these expressions can occur with non-volitional subjects that designate inanimate or non-sentient entities.

In this study, I propose that the reflexives in (1) can be analyzed as constructions in terms of construction morphology (Booij 2010). That is, they have holistic properties that cannot be derived from those of their constituents: (i) their emphatic readings are not fully reducible to the properties of *zibun* + the case markers; and (ii) *zibun* cannot be replaced in them with another personal noun (e.g., **Taro-wa* {*kare-kara/kare-de*} *kita*. “(lit.) Taro came {from him/by him}”). Moreover, these two expressions differ in whether an intervening element, such as the plural marker *-tachi*, can appear between *zibun* and the case marker (e.g., *Gakusei-ga* {**zibun-tachi-kara/zibun-tachi-de*} *kita* “(lit.) The students came {from selves / by selves}”); this can be understood as a difference in the inheritance relation with more abstract schemas.

Additionally, the emphatic function of *zibun-kara* and *zibun-de* can be accounted for in terms of the frame semantic notion of a *frame element* (FE): they act as emphatic reflexives if they profile *extra-thematic* FEs and introduce information that is not a necessary part of a description of a verbal frame but instead elaborates it, as with the sentence adjunct *yesterday* (Fillmore and Baker 2010). *Zibun-kara* in the emphatic use encodes the self, which refers back to the subject, as the source of the occurrence of an event. With *zibun-de*, the self is metonymically understood as an abstract means that helps cause an event, i.e., the subject’s own force. Even without the reflexives it would be evident that the agent is the source of the event and that the agent makes use of his/her own force, so the reflexives emphasize the agent’s role. This pragmatically implicates that the agent acts volitionally, but the implication is cancellable insofar as the subject is construed as the entity causing and manipulating the event that may be inanimate. This analysis accounts for data of possibly non-animate subjects with the two emphatic reflexives. It also explains different behaviors of the two reflexives, for example, how they interact with negation. In contrast, if the reflexives profile *peripheral* FEs, which involve a verbal frame, they must be non-emphatic, ordinary reflexives. Examples of *zibun-kara* and *zibun-de* with non-emphatic readings are attested in the BCCWJ.

Thus, a frame-based, construction-grammar approach is supported by an examination of Japanese emphatic reflexives. This line of analysis confirms the hypothesis proposed by Gast and Siemund (2006) that, unlike those in English, Japanese emphatic reflexives are derived from a reflexive marker with a postposition (see also König and Siemund 2000). It will also be revealed that emphatic functions of Japanese reflexives differ from one another according to what extra-thematic FE they profile. Also, I will touch on how my analysis can be applied to another type of emphatic reflexives in Japanese, such as *zibun-zishin* and *zibun-dake*, case-less, intensified forms of *zibun*.

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Coextension-path fictive motion and metaphor typology

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Keywords: frame semantics, metaphor, fictive motion.

A central concern of cognitive science is how speakers modify concepts that are directly based on sensorimotor experience in order to create concepts that are not directly grounded in that way. Relevant phenomena include Primary Metaphors (PM) such as PURPOSFUL ACTIVITY IS GOAL-DIRECTED MOTION (Example 1: We're approaching the final stage of the project [Lakoff & Johnson 1999]), and Coextension-path FM (fictive motion) (2: The mountain range goes from Mexico to Canada [Blomberg 2015; Talmy 2000a]). Coextension-path FM (CFM) has been assumed to be a metaphor (e.g. Matlock 2017) and also claimed to not be a metaphor (Fauconnier 1997:177). The reasons why one scholar would say that CFM is a metaphor while another says it is not need to be made explicit in order for the community of scholars to understand each other well. The discrepancy is resolved by analyzing the conceptual mapping of Coextension-path FM as having properties of both Primary and Resemblance Based metaphor (cf. Grady 1999), thus serving the general purpose of clarifying our understanding of metaphor and fictivity.

Primary Metaphors systematically map inferences between distinct frames such as those involved in arriving at a location and achieving a purpose in (1). The frames (Fillmore & Baker 2010) in the mapping are distinct in that they do not share any elements. For example, achieving a purpose does not have a Location as a frame element. Primary metaphors are motivated by experiential correlations (Lakoff & Johnson 1999).

Resemblance-based metaphors (3: a hair-line fracture), by contrast, are motivated by resemblance such as the resemblance in a SHAPE frame between a human hair and the shape of a kind of fracture in a bone as in (3). This type of metaphor does not systematically map inferences (Dancygier & Sweetser 2014). An image metaphor is tightly constrained by the resemblance that motivates it.

CFM consists in depicting a stationary object in terms of a Path over the object's extent (Talmy 2000a:138). (Example 4 (LE = Located Entity): Pipes [LE] went through the roof). In other words, CFM portrays the Site of a stationary object as the Path of a moving object. Site is the frame-specific name for the relation between the Figure and the Ground in a LOCATION frame, while Path is the frame-specific name for the relation between Figure and Ground in a MOTION frame (Talmy 2000b:218). Crucially, the concept of Ground is exactly the same in both frames. Since LOCATION and MOTION share an element (the Ground), a mapping between the two frames does not qualify as primary metaphor.

The contrast between CFM as a mapping between frames that share an element and PM as a mapping across distinct frames can be seen in a comparison of example (4) above with examples (5) and (6): (5: Rats went through the roof. 6: Prices went through the roof.) In (5) a canonical Mover in place of the fictive Mover of (4) depicts an event of motion involving the same concept of the roof as in (4). This is because the LOCATION and MOTION frames share the Ground element relative to which the figural LE or Mover is located or moving. By contrast, in PM as in (6), a different frame is involved in which the Ground element evoked by the roof is distinct from that concept of the roof which is evoked in (4) and (5).

The sharing of the Ground frame element in CFM between the fictive construal and the non-fictive situation, as suggested by the comparison of (4) and (5), constitutes a resemblance which constrains what a CFM expression can depict (cf. Matsumoto 1996). At the same time, because motion is involved, the inferences of motion schemas are applicable. Here are some examples of inferences relevant to an interpretation of (4) in which the long axis of the pipe is perpendicular to the plane of the roof, and the roof is one of the outer surfaces of a building: a) Part of the pipe is inside the building and part of the pipe is outside; b) Part of the pipe is contiguous with the roof. c) There is a hole in the roof (i.e. a gap in the continuity of the material that constitutes the roof); d) There is a potential for interchange between the inside and the outside of the building.

In sum, Coextension-path (and probably other types of fictive motion as well) is constrained by resemblance due to a frame element which is shared between the fictive construal and the non-fictive situation — but CFM also yields relatively rich inferences. Thus it has properties of both Resemblance-based and Primary metaphor. A scholar can say that CFM is a kind of metaphor in the sense that something which is really believed to be stationary is depicted as moving. A statement that CFM is not a kind of metaphor can be reasonably understood to mean that CFM is not a mapping between distinct frames.

Trajector-object Variants in Chinese BA-construction—A Cognitive Approach

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Keywords: cognitive semantics, Chinese BA-construction, force-dynamics, Cognitive Event Frame, colostruational analysis

Following Talmy's (1988a, 2000) force-dynamics theory, the trajector-object (meaning-function) in BA-constructions is understood as the agonist involved in an interaction with other entities of the same force-dynamic event frame. The agonist is realised as the grammatical object (BA-marked). The trajector suggests that the entity is possibly involved in a change. Various trajector-object can occur with the same verb in BA-construction. I name these trajector-object variants.

The choice of trajector-object in BA-constructions has surprisingly larger coverage than that of in English causative constructions. The former includes acted, the place where the action happens, an instrument, actor, time and etc. Talmy's (2000) event frame excluding "peripheral" elements (such as place, instrument, time and etc), I argue, is too narrow for the trajector-object variants in BA-constructions. To account for this, I propose the Cognitive Event Frame (CEF) which is richer than Talmy's (2000) event frame. CEF includes not only the core frame elements but the peripheral, extended frame elements, and gapped elements. All the CEF elements including peripheral and extended are possible to be the agonist, realised as the trajector-objects in BA-constructions. Besides, CEF consists of several sub-events with logical linkage to maintain the semantic coherence. A single CEF covering the variants indicates that the CEF is an economic model.

The trajector-objects have different distribution with different verbs. I assume the distribution is associated with the semantics of co-occurring verb. The colostruational analysis, investigating two groups, the wrap group [*guo* (wrap), *gai* (cover), *bao* (wrap)] and the load group [*tian* (fill), *zhuang* (load), and *sai* (stuff)] supports my assumption. I draw out the BA-examples with these verbs from the CNC (Balanced National Corpus of Modern Chinese). The trajector-object functions as (M)aterial or the acted-upon (O)bject/final goal. In terms of motion, they are marked as either (Th)eme or a patient (Pt). I calculate their token frequencies with the investigated verbs respectively and run the distinctive collexeme analysis (Gries and Stefanowitsch 2004) in R software. The analysis yields the results indicate that *wrapping* verbs and *tian* (fill) are more attracted to the resultative BA-construction with the O-Pt trajector-object; while the rest (*sai* (stuff), *zhuang* (load)) to caused-motion BA-construction with M-th trajector-object. These attractions match with the verb meanings—i.e., the former four verbs emphasis more on the change in state of the acted-upon entity/final goal; while the latter two are more focusing on expressing the motion of the involved material/media.

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On the Chinese in subordinate conditional clause formed by the particle *NE* A constructionist perspective

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Keywords: insubordination, conditional, dispreferred response, Construction Grammar, Chinese

Insubordination is generally defined as “the conventionalized main clause use of what, on prima facie grounds, appear to be formally subordinate clauses” (Evans 2007: 367). As illustrated in (1), the isolated *if*-conditional clause can be used to make a request without the apodosis.

(1) *If you could give me a couple of 39c stamps please.* (Evans 2007: 380)

Recently, such in subordinate clauses have attracted considerable interest and been associated with various discourse/interactional functions cross-linguistically (e.g., Evans 2007, Van linden & Van de Velde 2014, Evans & Watanabe 2016, Lindström et al. 2016, D'hertefelt 2018).

The current study focuses on a certain type of in subordinate interrogative clause in Chinese ended with the particle *NE* of rising intonation, i.e. [VP+ *NE*?]. Previous studies have pointed that *NE* can function as a topic marker (Fang 2016). Similar to many conditionals that function as topics in discourse (Chao 1968, Haiman 1978), this kind of clause simultaneously involves a conditional meaning, i.e. ‘If VP, what would you do/what will happen?’. Crucially, such in subordinate conditional clause formed by *NE* (henceforth ICN clause) is often marked by a typical conditional connective such as *yàoshi*, *rúguǒ*, *wányī* as well, as in (2).

(2) *Yàoshi tā bù lái né?*
if he NEG come NE
‘If he doesn’t come (what would you do)?’

Therefore, structurally the ICN clause can be regarded as an in subordinate conditional clause, with the conventionalized ellipsis of the main clause (e.g., *nǐ zěnméibàn* “what would you do”, *huì zěnmeyàng* “what will happen”). Functionally, this clause is self-sufficient and is usually used to modify preceding discourse, i.e. to add a new condition according to the interlocutor’s prior utterance and ask for his/her opinion, as in (2). Furthermore, as illustrated in (3), the ICN clause may also be used to raise an objection or reject the interlocutor’s request in a conversation. Either way, the ICN clause seems to function as a dispreferred response to the interlocutor’s prior utterance (i.e. to add a new task or threaten the interlocutor’s face).

(3) A: *Nǐ bǎ wǒde jiànglǔsǎn huán gěi wǒ!*
you PREP my parachute return PREP me
‘Give me back my parachute!’
B: *Wǒ yàoshi bù huán né?*
I if NEG return NE
(lit.) ‘If I don’t give it back to you (what will happen)?’ (i.e. ‘No, I won’t give it back to you!’)

Previous studies have mainly focused on the functions of *NE* in various contexts. However, as illustrated above, the ICN clause as a whole has acquired some specific discourse functions of its own. Therefore, from a constructionist perspective (Goldberg 1995, 2006; Croft 2001), we recognize it as a conventionalized in subordinate construction in its own right. The ICN construction can be located within a constructional network (Figure 1) linked with related constructions of different levels of schematicity, through formal or functional analogy (cf. Kaltenböck 2016).

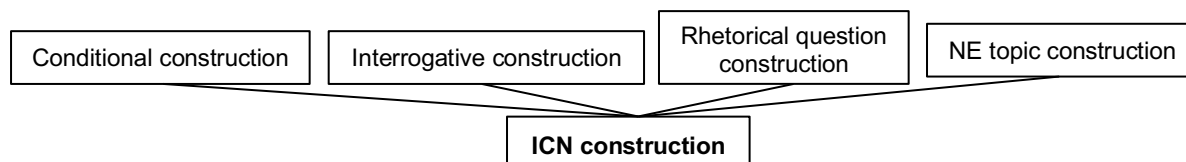


Figure 1 The constructional network for ICN construction

The current study contributes to the typological analysis of insubordination by providing an interesting case of Chinese in which in subordinate conditional construction emerges in an interrogative form and functions as a dispreferred response in a conversation.

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Exploring the evaluative nature of Adj+*ie/y* nominalisations in contemporary English

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Keywords: Adj+*ie* nominalisations, diminutive, evaluation, iconicity, cognitive model

The form and function of *-ie/y* derivatives in English are extensively discussed in literature (e.g. Bauer *et al.* 2015; Mattiello 2013; Schneider 2003; etc.), but not much attention is given to these units in Cognitive Linguistics, though some publications (e.g. Besedina 2012; Hamawand 2011) demonstrate that affixes belonging to the evaluative domain open a wide range of questions for cognitive analysis. This study focuses on the nominalising function of the *-ie/y* suffix and Adj+*ie/y* nominalisations (e.g. *softie*, *brownie*) in particular, with the purpose of investigating how the changes in the semantics of the output units are connected to the conceptual processes that employ evaluative morphological forms.

Adj+*ie/y* nominalisations are interesting for the analysis in the cognitive framework because they fall into the denominal domain of evaluation and may have positive (*brownie* – attractive female of Asian or Latin descent), negative (*fattie* – an overweight person), and neutral (*frenchie* – a French pull-up) connotations. At the same time, irrespective of the quality of connotations, the use of the evaluative suffix results in marginalization of the value of the referent due to the strong association of the suffix with the function of diminution. The formation of such units where an adjectival phrase (a syntactic structure) is reduced to a nominalisation unit by means of both ellipsis and suffixation (e.g. *dutchie* and *blackie* are reduced derivatives of Dutchman and black person respectively) requires more in-depth study that would account for the semantic changes of the output lexemes.

In our research we assume usage-based approach and argue that the meanings realized by the suffix *-ie* in nominalisations of this kind are informed by the semantics of the paradigms of adjectival bases (occasionally clipped), the semantic content of ellipsed nouns, and the use of the *-ie* suffixed forms in reference to similar concepts. This all is believed to contribute to the developing iconicity of the suffix in terms of its strong association with meanings of appreciation and, especially, depreciation and may be connected with the analogical correspondence between this word-formation process and the social function and meaning of embellished suffixes of this kind.

This study reports on the qualitative analysis of 54 examples of Adj+*ie* nominalisations collected from a range of printed prescriptive and descriptive dictionaries of English, as well as reference sources available online. The analysis of the data employs the main tenets of two theoretical frameworks: Fauconnier and Turner's (2008) conceptual blending theory and Besedina's (2012) cognitive model of morphology. Our findings show that the morphological expression of these units reflects a shared cognitive model in a given speech community. Such cognitive model is generally expressed through the gradable property of iconicity, i.e. the iconic value of the suffix can be accounted for by means of the application of the pejoration-endearment scale within the category of 'diminution'.

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Summary of theme session: Macro-events, Grammaticalization, and Typology

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Keywords: Macro-event; Macro-event Hypothesis; Talmy; directional complements; grammaticalization; Typology

A “macro-event” is a fundamental concept on the basis of which Talmy proposes his two-way typology, verb-framed languages and satellite-framed languages. In this typology, languages characteristically adopt either verb roots or satellites to encode the core schema of a macro-event (Talmy 2000). Talmy has identified five types of macro-events, including motion, temporal contouring, change of state, action correlating, and realization, as illustrated in the five examples correspondingly (Talmy 2000:214).

- a. The ball rolled *in*. (Motion event)
- b. They talked *on*. (Event of temporal contouring)
- c. The candle blew *out*. (Event of state change)
- d. She sang *along*. (Event of action correlating)
- e. The police hunted the fugitive *down*. (Event of realization)

The past few decades have witnessed a huge amount of literature focusing on various aspects of this typology. The majority of the literature studies the verb-framed and satellite framed nature of particular languages, with only a few studies revising the theory. Unfortunately, though, relatively little research has focused on the foundations of the theory, in particular, on the nature and **diachronic** basis of the macro-event. The majority of the resulting literature has predominantly focused on the macro-event of motion, while other types of macro-event draw little attention. A range of variables mainly involving PATH and MANNER has been explored, but an expansion ranging from the nuanced study of these elements to a study of construction is required. While a new perspective of **diachrony** was introduced (Slobin 2017), a full range of detailed study is otherwise scarce. An expansion from the original bipartite typological categorization into a broader area of general typology is necessary. The three key words contained in the theme session title, representing three important areas of linguistic pursuit, may at first seem to share no common denominator. But Li (2018) has shown that the three areas have mutually influenced each other, with the macro-event as an overarching term linking the others. This theme session aims to bring together research on the overlap of **macro-events, grammaticalization, and typology**, with a focus on the family of “verb + satellite” constructions.

This theme session contains 10 presentations. Each presentation is expected to focus on a specific area of the three with implications for the other two. The topics are as follows: *Evolutionary order of Macro-events in Mandarin* (Thomas Li); *The difficulty gradient of change-of-state events for human construal demonstrated in the expansion of Chinese framing satellites* (Liulin Zhang); *The conceptual boundary among break, cut and open: a diachronic semantic perspective* (Jing Du and Fuyin Li); *Beyond typology: how event integration works in motion events* (Lin Yu); *From lexical meaning to functional role: the case of complex noun-verb phrases* (Sabine De Knop and Manon Hermann); *Typology of English and Mandarin: taking spatial stationary events as examples* (Longbo Ren); *The grammaticalization of Chinese directional verb KAI: a constructional approach* (Na Liu); *Macro-events in verb-verb compounds from the perspective of baseline and elaboration: iconicity in typology and grammaticalization* (Yiting Chen); *The grammaticalization of Pleonastic negation: a case study of CHADIANMEI in Mandarin Chinese* (Guannan Zhao); *Typological differences influence motion event perception: evidence from similarity-judgment tasks and eye tracking* (Eva Soroli).

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Abstract for theme session: Macro-events, Grammaticalization, and Typology

Evolutionary Order of Macro-events in Mandarin

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Keywords: Macro-event; Macro-event Hypothesis; Talmy; directional complements; grammaticalization; Mandarin; Typology

A “macro-event” is a fundamental concept on the basis of which Talmy proposes his two-way typology. In this typology, languages characteristically adopt either verb roots or satellites to encode the core schema of a macro-event (Talmy 2000). Talmy has identified five types of macro-events, including motion, temporal contouring, change of state, action correlating, and realization. The macro-event is mainly realized by “verb + complement” construction (“V + C”) in Mandarin, which includes two further types: “verb + directional complement” and “verb + resultant complement”. Li (2018) argues that the grammaticalization of directional complements caused the typological shift of Mandarin from verb-framed to satellite-framed, but the diachronic order of the five macro-events is only hypothesized, not empirically supported. That is, when and how the typological shift happened are not addressed in Li (2018). Aiming to locate the evolutionary order of the five types of macro-events, this article traces through five historical stages of the evolution of the eleven simplex directional complements, when they started as independent verbs expressing solely “motion + Path” in the earliest stage. As a methodology, a closed corpus is set up for each stage: Stage I, ancient Chinese, BC1600-24; Stage II, middle Chinese, 25-618; Stage III, pre-modern Chinese, 619-1279; Stage IV, post-modern Chinese, 1280-1911; and the last stage, Stage V, modern Chinese, 1912-present. The data are elicited from the most representative works for each stage. It is concluded: 1) The “V+C” constructions started to appear from Stage III and continued to be used until the present stage; 2) “V+C” constructions can only represent four out of five Talmy’s macro-events, action correlating is not systematically represented; 3) The four types of macro-events appeared at relatively similar time period, the proportion is as follows: Motion > State change > temporal > Realization; 4) The PATH verbs in the V2 position is prone to grammaticalization than in the V1 position in the serial verb construction “V1+V2”. This research is significant in bridging the areas of event structure, grammaticalization and typology, and might have implications for other languages as well.

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The difficulty gradient of change-of-state events for human construal demonstrated in the expansion of Chinese framing satellites

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Keywords: prototype and categorization, language evolution, Chinese, change of state

Based on Talmy's (2000) two-way typology of event integration, Chinese is categorized as a satellite-framed language, in which the core schema is characteristically mapped on the satellite, instead of the main verb. However, throughout Chinese history, systematic use of framing satellites, particularly verb complements, is a relatively recent phenomenon that did not occur on a large scale until Middle Chinese. Focusing on the expression of change-of-state events in different historical periods, this study traces the evolution of framing satellites in Chinese.

Croft (1994) and Levin & Rappaport Hovav (2005) proposed the complex event structure involved with a change-of-state event:

(1) *Harry broke the vase*. Modelled with a three-segment causal chain:

- (i) Harry acts on the vase
- (ii) the vase changes state
- (iii) the vase is in a result state (i.e., broken)

Such a complex event structure can be represented by the following diagram:



Based on the nature of the result state, three subtypes of change-of-state events can be identified:

Subtype 1: The result state is an ongoing process of change (e.g., 沉 *chen* 'sink', 摇 *yao* 'shake', 晃 *huang* 'sway', 摆 *bai* 'swing', 升 *sheng* 'rise', 转 *zhuan* 'turn' and 动 *dong* 'move').

Subtype 2: The theme results in a discrete state (e.g., 完 *wan* 'finish', 醒 *xing* 'wake up', 来 *lai* 'come', 去 *qu* 'go', 破 *po* 'break', 败 *bai* 'defeat', 变 *bian* 'change', 改 *gai* 'change', and 出 *chu* 'exit').

Subtype 3: The theme results in a continuous state (e.g., 好 *hao* 'good', 坏 *huai* 'bad', 红 *hong* 'red', 白 *bai* 'white', 湿 *shi* 'wet', 干 *gan* 'dry' and 累 *lei* 'tired').

In Old Chinese, change-of-state events were mainly expressed by single morphemes; rare cases of framing satellites were seen for subtype 3 and subtype 2. In Middle Chinese, subtype 3 was more likely to be denoted by framing satellites occurring after the themes; subtype 2 could be expressed by single morphemes, and framing satellites occurring before or after the themes; subtype 1 was still primarily expressed by single morphemes. In Early Mandarin, subtype 3 was sometimes expressed by framing satellites and sometimes expressed by complex verbal constructions; subtype 2 was more likely to be expressed by framing satellites realized as verb complements; whereas framing satellites remained uncommon for subtype 1. This diachronic finding echoes the frequency of framing-satellite use for three subtypes in Modern Mandarin. Diachronically, the use of framing satellites has been expanding from subtype 3 to subtype 1, and meanwhile, the meaning of each morpheme has been increasingly atomic. In Modern Mandarin, framing satellites reached the highest level of grammaticalization for subtype 2, and subtype 3 has a growing tendency to be expressed by complex constructions.

This finding suggests that change of state is not a homogeneous category in human conceptualization. "Subtype 1 – subtype 2- subtype 3" represents a continuum differing in the mental distance between the framing event and the co-event, with subtype 1 the simplest, and subtype 3 the most complex, for human construal.

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The Conceptual Boundary Among *break*, *cut* and *open*: A Diachronic Semantic Perspective

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Keywords: break verbs, conceptual boundary, diachronic prototype semantics, conceptual variables, conceptual reorganization

Break verbs, exemplified by verbs like *break*, *snap*, *tear* and *cut* etc., refer to actions that bring about complete or incomplete separation in the material integrity of entities (Guerssel et al. 1985, Levin 1993: 241-242 etc.). The conceptual boundary that demarcates *break*, *cut* and *open* aroused contentious discussions among generative semantic and cognitive typological studies in the past decades. Generative semantic studies resorted to causative alternation as diagnostic and supported that *break* and *open* belong to the same verb class and are different from *cut*, because *break* and *open* allow causative alternation while *cut* does not (Guerssel et al. 1985). In contrast, cognitive typological studies, with evidences from cross-linguistic data, argued that reversibility is a perceptual variable that distinguishes *open* (reversible) from *break* and *cut* (irreversible) and the interactive variable of separation point predictability tells *cut* apart from *break* (Majid et al. 2007). This is because when cutting rather than breaking objects, it's easy to predict the locus of separation.

To further investigate the conceptual boundary that demarcates these three verbs, this study traces the diachronic development of Chinese *pò* (break), *qiē* (cut) and *kāi* (open) with corpus-based multivariate statistical methods. The corpus we resort to is CCL corpus (Center for Chinese Linguistics PKU) which is composed of ancient Chinese and modern Chinese with varying genres. The multivariate methods we make use of include both Correspondence Analysis (CA) and Multiple Correspondence Analysis (MCA). With CA, we first address the diachronic referential variation of *pò* by attending to the distribution of the diverse usages of *pò* across the four targeted chronological stages (Early Middle Chinese, Late Middle Chinese, Early Mandarin, and Modern Mandarin). The usages of *pò* are identified in terms of conceptual variables like spatial configuration, material composition, functional change and endstate. Then with MCA, we investigate how the conceptual boundary among the three verbs varied diachronically by taking into consideration additional variables including locus predictability, causation, reversibility, incrementality as well as substate.

Framed under diachronic prototype semantics (Geeraerts 1997), our preliminary findings are: 1) The referential range of *pò* underwent a specialization trajectory. It refers to cutting, opening and breaking events in ancient Chinese but is confined to destructive breaking events in Mandarin. 2) Although the conceptual boundary among the three verbs significantly overlapped in ancient Chinese, it gradually becomes clear cut in Mandarin. 3) As for the underlying driving force of boundary variation, MCA reveals that the referential range of the three verbs underwent diachronic conceptual reorganization, through which the prototypical core of *pò* is more approximate to variable values like unpredictable, messy, and irreversible, *kāi* is more close to predictable, clean, reversible while *qiē* is more closely associated with predictable, clean and irreversible. 4) Moreover, the referential labor division among the three verbs becomes more discrete, with *pò* describing destructive separation, *kāi* reversible clean separation and *qiē* irreversible clean separation.

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Beyond Typology: How Event Integration Works in Motion Events

– A Case Study of “V + Dào” Constructions in Mandarin

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Keywords: Event Integration; “V + Dào” Constructions; Conceptual Conflation; Conceptual Mapping; Conceptual Overlap

Mandarin is considered as a “strongly satellite-framed language” (Talmy 2000: 272). However, some linguists contend that Mandarin is a verb-framed language (Tai 2003) or an equipollently-framed language (Slobin 2004, 2006). This paper argues that these different claims of Mandarin’s typology hinge on the process of event integration.

Event integration refers to the cognitive process of reconceptualization that involves the conceptual integration or conflation of events (Talmy 2000: 216). However, Talmy (1985, 1991, 2000) only discussed the event integration occurring either in the main verb or in the satellite, but this paper claims that the event integration also occurs between the main verb and the satellite. For this reason, we propose that the internal event integration describes the process in which the main verb or the satellite per se can conflate two or more conceptual components or subevents, and the external event integration designates the process in which two or more conceptual components or subevents are integrated between the main verb and the satellite.

As a typical verb complex that consists of the main verb and the satellite, the “V + Dào” construction is pervasive in Chinese, and it is also a hot topic with controversies in different perspectives, such as the word class of “Dào” in the “V + Dào” construction, the syntactic properties of “Dào” in the “V + Dào + X” construction, and the verb-complement variations of the “V + Dào” construction, etc. Moreover, motion events are the most characteristic expressions across languages (Talmy 2000: 27). Therefore, we collected 611 sentences of “V + Dào” constructions as motion events from a closed corpus of spoken Chinese, aiming to answer the following questions from the perspective of event integration: (1) What possible event integration patterns are involved in the motion events of “V + Dào” constructions? (2) How does event integration work in the motion events of “V + Dào” constructions? (3) What are the underlying principles that constrain the event integration between “V” and “Dào”?

As a result, we preliminarily find that:

(1) “V + Dào” constructions contain 12 event integration patterns, including “(motion+manner) + (motion+path)”, “(motion+path) + (motion+path)”, “(motion+cause) + (motion+path)”, “(motion+concomitance) + (motion+path)”, “(motion+subsequence) + (motion+path)”, “(stationariness+cause) + (stationariness+site)”, “(stationariness+manner) + (stationariness+site)”, “(stationariness+subsequence) + (stationariness+site)”, “(motion+cause+path) + (motion+path)”, “(motion+path+path) + (motion+path)”, “(motion+manner+path) + (motion+path)”, “(motion+figure+manner) + (motion+path)”.

(2) Based on the event integration patterns, the internal event integration relates to the conceptual conflation (Talmy 2000) either in “V” or in “Dào”, and the external event integration involves the conceptual mapping (Fauconnier & Turner 1998, 2002) and conceptual overlap (Langacker 1987, 2005, 2008) between “V” and “Dào”. For instance, the event integration pattern of 飞到 (fly and arrive) is represented by “(motion+manner) + (motion+path)”. In the internal event integration, 飞 (fly) conflates the subevents of “motion” and “manner”, and 到 (arrive) conflates the subevents of “motion” and “path”. In the external event integration, the subevent of “motion” is the common-shared basis for the conceptual mapping between 飞 (fly) and 到 (arrive), and the “manner” of 飞 (fly) and the “path” of 到 (arrive) can be conceptually overlapped together for providing elaboration-sites to each other.

(3) The internal and external event integration observe some principles. Firstly, the participant role(s)-sharing principle requires that the subevents between “V” and “Dào” can share one or more participant roles. Secondly, the event topology principle enables the integration between the subevents of “V” and “Dào” to obtain an event gestalt, such as the relations of “cause and effect”, “part and whole”, and so forth. Finally, the event completion principle can activate the peripheral subevents of “V” or “Dào” so as to enrich the whole event gestalt.

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Some advances in the translation of Manner and boundary-crossing in motion events: An English-German/Spanish/Catalan experiment

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Keywords: translation of motion events; Manner; boundary-crossing; student-based experiment; cross-linguistic experiment.

The study of cross-linguistic influence in the translation of motion events has been generally approached from the Thinking-for-translating framework (Slobin, 1996), based on Talmy's (1985, 2000) theory of lexicalization patterns (e.g. Ibarretxe-Antuñano & Filipović, 2013; Cifuentes-Férez & Rojo, 2015; Molés-Cases, 2016). In our contribution we analyse the translation of boundary-crossing events including Manner from English (a satellite-framed language) into German (also a satellite-framed language) and Spanish and Catalan (both verb-framed languages) to investigate whether student translators interpret correctly this specific type of motion events or otherwise they omit (or modulate) the information regarding Manner and/or boundary-crossing. For this purpose, three groups of student translators (having correspondingly German, Spanish and Catalan as their mother tongues) were asked to translate a series of excerpts from English narrative texts into their respective first languages. We compare the results of this experiment with the results of a previous pilot study focusing on boundary-crossing events with the preposition *into* + a bounded-space in the linguistic combinations English-German/Spanish (Cifuentes-Férez & Molés-Cases, 2018) and the results of some previous research on the topic (Alonso, 2016). Our results suggest that the way student translators deal with the translation of boundary-crossing events is influenced by their mother tongues and the nature of the event itself.

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The roles of language dominance and language mode in bilingual motion event encoding

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Patterns of cross-linguistic influence can be traced in bilingual speakers' speech. If a speaker is bilingual in two typologically different languages, his or her lexicalization patterns can show convergence of two distinct systems for different linguistic aspects. Drawing on previous studies, the extent of cross-linguistic influence can depend on factors such as dominance configurations between the languages and the state of language activation (i.e. the language mode). Cross-linguistic differences between French and (Swiss-)German have been documented extensively in the domain of motion. These differences go beyond the lexical and grammatical levels and concern semantic-structural aspects of language. A striking semantic-structural difference between the languages can be found in manner and path of motion, i.e. the way a figure moves and the path he or she covers. In French, a Verb-framed language, the path of a motion event tends to be expressed in the verb, the manner of motion is typically expressed in adverbial elements. In (Swiss-)German, a Satellite-framed language, the description of motion events usually shows the mapping of the manner component on the verb and the mapping of the path component on verb-external elements. Patterns of semantic convergence manifest in, for instance, an increasing number of manner verbs in French constructions or an increasing use of path verbs in German.

This paper sets out to combine a set of interrelated questions on the role of dominance constellation between a person's languages, the role of language mode and how these factors can have an effect on cross-linguistic influence in motion event descriptions. In this way, the study aims to connect fundamental questions of bilingual production with questions on semantic convergence and variation within motion event description.

To this end, oral descriptions of motion events from 154 bilingual speakers have been elicited by means of video clips showing self-propelled motion events. The speakers show varying degrees of language dominance, which is assessed via an online questionnaire. They were asked to describe 60 animated video clips, 30 critical items (translational motion events) and 30 filler items (caused motion events) in four conditions: a monolingual mode in German, a monolingual mode in French, a bilingual mode once with critical items in French and filler items in German and a bilingual mode with critical items in German and filler items in French. The results indicate that — in line with previous studies — dominance configurations show an effect on certain variables, but do not influence both languages to the same degree. The manipulation of language mode, however, does not lead to the predicted patterns. In sum, the findings partially support the impact of dominance, but in particular with respect to language mode, they do not support our hypotheses. These partially inconclusive findings both enrich and complicate the understanding of crucial factors in bilingual production and certainly leave room for future research.

The Goal bias effects on frequencies of different path types and the (ir)relevance of animacy and literalness

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Keywords: motion and space, corpus linguistics, goal bias, animacy, literalness

Humans have a bias towards the Goal (endpoint) of a motion event, known as the Goal bias (e.g. Papafragou 2010). This manifests in, for example, better ability to visually detect changes of Goal than Source objects (Lakusta 2005). Experiments suggested that in non-linguistic cognition, the bias is present only when the Figure is animate thanks to its roots in intentionality, while in language, the bias is absolute, with Goal paths (*to the moon*) being produced more frequently than Source paths (*from the earth*) regardless of Figure animacy (Lakusta & Landau 2012). Corpus analyses appear to contradict this result, however, showing that the bias varies according to the orientation of each verb. For example, Goal-oriented verbs (*go*) attracts Goal paths, while Source-oriented verbs (*escape*) attracts Source paths (Stefanowitsch & Rohde 2004; Stefanowitsch 2018; henceforth S&R and S).

However, since S&R and S did not explore the effects of Figure animacy in detail, the present study performed three corpus analyses that aimed to examine the relationship between Figure animacy and the Goal bias more thoroughly. The role of literalness (whether the motion event is literal), also unexplored, was examined as well. Using a list of all English intransitive motion verbs compiled from FrameNet, the three analyses examined the effects of Figure animacy and event literalness on the frequency distribution of types of path arguments/adjuncts (Source, Trajectory, Goal) at three levels: overall (all verbs), specific verbs (ten most frequent from the Overall analysis), and the way construction (e.g. Goldberg 1995). The Overall analysis used data from five English Universal Dependencies Treebanks, while the latter two drew data from the British National Corpus.

The key results are as follows: 1) Goal paths are more frequent than Source/Trajectory paths among motion verbs in general (Source 10.3% Trajectory 5.2% Goal 35.8% Others 48.6%) and in 9/10 most frequent motion verbs, but not with the way construction; 2) Figure animacy significantly affects path frequency distribution across all levels (all $p < 0.05$); 3) Figure animacy effects cut across literalness categories, boosting path types (not necessarily Goal) associated with particular verb frames; and 4) literalness appears to have a bias-strengthening effect only in some cases. Moreover, these effects can be attributed to different frames of literal/figurative senses and to Figure animacy in those frames.

The results show that although choice of path biases depends on particular frames, the overall linguistic bias towards Goal exists (in line with S&R and S). It is also clear that in language, Figure animacy has a general role and strengthens path biases overall and across frames, while literalness as a category in itself has virtually no effect. Interestingly, when considered together with the concept of Goal in psychology, both previous and current findings suggest that the homology between non-linguistic and linguistic Goal bias may be stronger than previously thought (contra Lakusta & Landau 2012): frame-specific biases correspond to psychological goals, i.e. loci of intention (Lakusta 2005: 13) and the bias-strengthening effect of linguistic Figure animacy corresponds to that of animacy/agentivity in memory and perception (Lakusta & Landau 2012; Lakusta & DiFabrizio 2016).

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Demographic diversity and variation in spatial behaviour within language communities

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Considerable diversity in linguistic and non-linguistic spatial behaviour is well established (Levinson 2003). However, much research treats languages as individual data points, typologizing them on preferred Frame of Reference (FoR). For Majid et al (2004), for example, Mopan Mayan, is an “intrinsic language”, providing intrinsic and absolute FoR, with intrinsic preferred and absolute used in restricted contexts. Conversely, Tzeltal Mayan provides the same two FoRs, but is an “absolute language”, with absolute preferred and intrinsic dispreferred. Yucatec Mayan is a “relative language”, despite providing all three FoRs, with intrinsic and relative equally preferred. This approach fails to address several key issues. With multiple strategies available, what governs speaker choice of one strategy over another? When and why is a dispreferred or restricted strategy used? Crucially, it does not allow for variation in strategy preference among speakers of one language. A handful of studies have found that individuals use multiple strategies (Bohnenmeyer 2011), but strategy preferences vary (Palmer et al. 2017). In Yucatec, all speakers use intrinsic extensively, and absolute and relative are used, but rarely by women (Bohnenmeyer 2006:307-309). In Mopan, women and men use intrinsic and egocentric strategies (Danziger 1999), but women show a two to one preference for intrinsic over egocentric, while men show the opposite. Diversity has been observed on the basis of occupation (Ancash Quechua, Shapero 2016), and age (Gurindji, Meakins & Algy 2016). In Ancash and Yucatec, occupation and gender are proxies for nature of interaction with environment. These studies point the way, but variation in strategy choice between individuals, and the extent of and basis for that variation, remains largely uninvestigated.

This paper focusses on diversity in spatial language and non-linguistic behaviour *within* languages. We present findings from a recent large-scale study of spatial behaviour in the Marshallese (Marshall Islands) and Dhivehi (Maldives) communities. Following our study of variation based on location (Palmer et al. 2017), here we model the spatial strategy preferences of individual speakers. Using a set of systematically applied experimental tasks we find that all speakers employ multiple strategies, but significant variation occurs between speakers in strategy preferences. We correlate these preference with individual demographic factors including occupation, gender, age, education, literacy, and English bilingualism, along with group-level cultural practices (e.g. dominant subsistence mode) and environment (e.g. urban density). We find that individual strategy preferences pattern with each factor. We synthesise our findings with those of previous studies showing intra-community variation, and apply Sociotopography (Palmer et al. 2017) to model the interaction of individual demography with language, environment, and cultural practice. Our model reveals spatial behaviour that is considerably more flexible and nuanced than previously recognized, in a way that enables humans to respond effectively to diverse spatial communicative demands. We conclude that variation within languages is as important as diversity between languages, but is significantly under-investigated, and that any attempt to model human spatial cognition must account for diversity within as well as between communities, and for the role of the environmental, individual, and community-level factors that correlate with that diversity.

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Use and Understanding of Intrinsic Frames of Reference

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Keywords: *Spatial cognition, Frames of reference, Spatial semantics, Semantic typology*

In this research, I investigate the cross-linguistic use and understanding of intrinsic frames of reference with non-canonically orientated ground objects. Frames of reference are conceptual coordinate systems that are projected onto 'figures' and 'grounds' (Talmy, 2000, p.312) in order to orient the former and locate it with respect to the latter. In intrinsic frames of reference, the ground object is the anchor that the axes are derived from. Levelt (1984) proposed that there is a restriction on the use of intrinsic frames of reference depending on the orientation of the entity that the intrinsic frames is derived from. This restriction stems from the disalignment of the vertical axes of the ground object and the figure's perceptual frame of reference. Thus, his claim predicts that speakers would not produce descriptions such as (1) below to describe a ball sitting at the top of a chair laying on its right side. This exemplifies DISALIGNED intrinsic (DIS) use. Using cross-linguistic data collected with a referential communication design, Alshehri et al (2018) shows that there exists a cross-linguistic variation in terms of the degree to which Levelt's constraint is violated.

- (1) The ball is above the chair.
- (2) The ball is right of the chair.

Alshehri et al's work noted another type of intrinsic use that is found with noncanonical grounds: DYNAMIC intrinsic (DYN). This intrinsic type does not use vertical relators and so is not a violation of Levelt's constraint. Speakers are found to use horizontal instead to describe the same scene: A non-canonically oriented of vertical relators as in (2). The study shows that use of DYN is significantly higher than DIS use with noncanonical grounds. The present research aims at investigating factors affecting use of these two types of intrinsic with noncanonical grounds cross-linguistically. Ad hoc analysis of Alshehri et al's data suggest that distance and type of relator (front/back vs. right/left) have an effect on whether DIS or DYN is used. To probe this further, I designed four comprehension and production experiments in which I manipulated the above factors along with two additional factors which are expected to have an effect, specifically dynamicity and type of ground object. The test populations include: Arabic, English, K'iche', Spanish and Yucatec speakers. The findings of this study contribute to the ongoing debate regarding the role of linguistic, sociocultural and environmental factors as determinants of frames of reference selection in cognitive tasks.

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The meaning of *time*. Polysemy, usage and conceptual structure

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Keywords: behavioural profile approach, corpus linguistics, polysemy, prototype set theory

In contrast to the foundational theories of Cognitive Linguistics, Evans (2005) argues that lexical senses are discrete and that context dependent readings should be distinguished from semasiological structure *per se*. This study seeks to refute this claim by demonstrating empirically that a usage-based (Langacker 1987) and prototype-based (Lakoff 1987) approach adequately and parsimoniously accounts for polysemy. Cognitive Linguistics holds that repeated context-dependent uses result in an emergent semantic structure that varies dynamically for individual competences (Geeraerts 1993). This model elegantly integrates the role of context and variation in structure. Moreover, its accuracy can be empirically determined using corpus data and quantitative tools. With a sample of 1000 occurrences taken from the Corpus of Contemporary American English, the study examines the semasiological variation / structure of the lexeme *time* in contemporary American English. Using the Behavioural Profile Approach (Geeraerts *et al.* 1994; Gries 2003), the study compares the descriptive and predictive accuracy of Cognitive Linguistics' theory and Evans' theory of Principled Polysemy.

The premise tested is that an entirely bottom-up approach to semantic structure, where said structure is operationalised as the clustering of multidimensional characteristics of use, will produce a descriptively accurate account of the lexical semantics. Firstly, in order to compare the approaches, the semantic categories derived from the criteria proposed by the Principled Approach will be applied to the corpus data. These "sense" categories are discrete and so the first step will be to discern if all natural contextualised occurrences are accounted for by the senses proposed in Evans (2005). Following this, the criteria proposed by Evans will be applied to the examples, producing a set of metadata based on the principles used to propose the semantic model of the lexeme. If the combination of these criteria accurately predicts the discrete sense categorisation of the examples produced through their direct analysis, then the model demonstrates internal cohesion. The second step involves the multifactorial usage feature analysis. This will be based on Talmy's (2000) model of *Plexity* and Langacker's (1987) work on conceived and processed time as well as the profiling of summary and sequential scanning. A combination of these semantic features will represent the behavioural profile of the lexeme. Discriminatory statistical techniques will then be used to cluster these features, "automatically" identifying distinctive patterns that are interpreted as lexical senses. Importantly, these senses are not discrete and their relationship to each other will reflect centrality and periphery relations based on the number of shared versus distinctive features. In other words, prototype effects are inherent in the results.

Since we have no gold standard (accepted semasiological structure) against which to compare the predictive results of the two approaches, it is not possible to calculate which method better explains the semantic structure. However, we can compare and judge the two descriptions for their coherence and parsimony. If the usage-based (bottom-up) approach produces clear patterns and those patterns can be used to accurately predict categories of usage, then we can be confident that the approach is coherent. If those categories and their relations are at least as simple as the semantic model produced by the Principled Approach, then we can say that the usage-based approach produces parsimonious results. Ultimately, however, deciding whether the usage-based prototype-based theory of semantic structure or the discrete context-independent theory better explains how we structure meaning will be open to discussion and interpretation.

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A radial category model for future tense in Russian: when the future is not future

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Keywords: Russian, future tense, aspect, radial category, polysemy

There are numerous contexts in which Russian verb forms that “normally” express future, don’t express future. This phenomenon was mentioned in the literature before; however, it did not receive enough attention. Already in the 1970s, before the era of linguistic corpora, the amount of non-future uses was estimated at around 1/3 of the perfective future verbforms (Forsyth 1970:120). A corpus-based grammar of Russian (rusgram.ru) provides a detailed description of different categories (order, prohibition, instruction, permission, performative use, near-modal use, opportunity, habituals etc.) of non-future use of future. Stojnova (2017) analyzed a dataset of 100 examples from the corpus.

The future meaning is prototypical for perfective non-past verb forms, and the additional meanings are extensions that are motivated by this central subcategory (Lakoff 1987: 91). Together the meanings form a radial category that will be shown during the talk. Future in this talk is defined with respect to Langacker’s (2008: 301) model of tense, where he considers future to be a projection from the view of immediate reality. Non-future uses are deviations from the future.

My study shows that Russian perfective non-past is polysemous, with as many as 40% of forms expressing something other than the future. These non-future meanings could be viewed as “gnomic” constructions, “general personal (as opposed to impersonal) expressions”, “performatives”, “conditionals”, “imperatives” etc. In the case of conditionals and imperatives we are not dealing with the standard grammatical forms for conditional and imperative. The perfective non-past, which usually expresses future, in these sentences expresses conditional and imperative, respectively.

Russian verbs can be said to exist in aspectual pairs consisting of a perfective and an imperfective verb with the same lexical meaning (Timberlake 2004: 409). As shown in Table 1, both aspects are possible in the past tense, which does not express person. Verb forms that express person are restricted to the present and future tense. In the present tense, only imperfective conjugated verb forms can describe ongoing actions. The future is expressed either by a non-past conjugated verb form of a perfective verb or by a periphrastic future consisting of the auxiliary verb *byt’* ‘be’ and an imperfective infinitive. However, although both aspects are very common in the past tense, there is a large difference between the attestation of perfective and imperfective future forms, which appear with a ratio of about 10 to 1 in the Russian National Corpus (RNC, ruscorpora.ru). However, my study shows that the perfective “future” forms only express future actions about 60% of the time.

In this talk, we draw attention to the contexts that make the non-future construals of perfective non-past verb forms possible in Russian. A preliminary study of 200 instances of perfective future verb forms from the RNC shows similar results confirming Stojnova’s claim that the categories are not discrete. It would be fair to say that all the meanings of the future connect to form a radial category.

	Imperfective	Perfective
Past	<i>pisal</i> ‘he wrote’	<i>napisal</i> ‘he wrote’
Present	<i>pišet</i> ‘s/he writes’ (non-past conjugated form)	–
Future	<i>budet pisat</i> ‘s/he will write’ (periphrastic)	<i>napišet</i> ‘s/he will write’ (non-past conjugated form)

Table 1. Aspectual contrasts in Russian: perfective future tense is bold-faced.

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Boredom is sad: A behavioural case study of near-synonyms in Russian

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Keywords: Behavioural Profile Approach, grammatical constructions, lexical semantics, near-synonymy, Russian

This study is a corpus-based investigation of two near-synonyms that represent a conceptual overlap between BOREDOM and SADNESS in Russian: *скука* (*skuka*) and *тоска* (*toska*). It attempts to empirically establish their semantic relations and understand the onomasiological choice between them. These lexical choices interact in a complex way with the grammatical profiling of their formal context. More specifically, the study tests three descriptive hypotheses: firstly, regardless of part-of-speech, the concept associated with the lemma of *тоска* holds a hyperonymic relation with other concepts; secondly, that conceptual specificity of the lemma *скука* relates to boredom caused by idleness; and thirdly, relative to the cause of idle boredom, this relationship will form a cline of specificity depended on part-of-speech where nominal instantiations of each concept will be more abstract than verbal ones. The theoretical implications of this final hypothesis for the role of grammatical semantics in lexical onomasiology are important and will be discussed relative to Langacker's (1987) and Wierzbicka's (1988) fundamental research in the question.

Following previous studies on near-synonymy in Cognitive Semantics such as Divjak (2006) and Glynn (2010) (*inter alia*) this study aims to identify patterns of similar and distinctive uses and, thus, to map semantic and pragmatic constraints that motivate the choice between these forms employing the Behavioural Profile Approach (Geeraerts *et al.* 1994; Gries 2003). The data come from the stylistically homogenous LiveJournal Corpus (Speelman & Glynn, 2005/2012). The sample is based on an even number of observations per form, making a total of approximately 600 contextualised examples. These occurrences are analysed and coded manually for a range of formal (part-of speech, person), semantic and pragmatic factors, such as intensity of boredom evaluated using a 9-point Likert-scale, cause of the BOREDOM-SADNESS event (absence of cause, idleness, unattainability), co-occurring emotion event (anxiety, depression, sadness, etc.), patient animacy, patient plexity (uniplex, multiplex). The sample will be analysed by a second coder in order to assess the validity of the annotation results and to measure inter-rater agreement using Cohen's kappa score.

The obtained behavioural profile will be submitted to exploratory and confirmatory modelling, namely the multiple correspondence analysis will be used to identify association and dissociation patterns of usage that speakers employ in natural production. These patterns will be tested with multinomial logistic regression and random decision trees. It is expected that the statistically significant usage patterns will confirm the hyperonymic conceptual relations between the lemmata and explain the speakers' lexico-grammatical choices. These expected descriptive results will be used to challenge assumptions about the role of deverbalisation and conceptual schematicity proposed in the cognitive tradition.

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Radiant suns, burning fires and brilliant flowers: The onomasiology and radical support of Chinese literary LIGHT ideophones

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Keywords: *ideophones, Chinese, onomasiology, diachronic, skipgram, polysemy*

Once relegated to the margins of linguistics, iconicity (Haiman 1985) and ideophones (Voeltz & Kilian-Hatz 2001; Dingemans 2012; 2018) have slowly reclaimed their place as linguistic phenomena worthy of study. Most work has been synchronic and elicited in nature. However, in the past few years, diachronic approaches have started to take hold as well (e.g. Akita et al. 2014; Van Hoey & Lu 2019). This study is conducted along similar lines, but focuses on onomasiology through computational methodology.

Van Hoey & Lu (2018) found that Premodern Chinese literary ideophones in the semantic domain matrix of LIGHT (1) exhibit a prototypical polysemous structure as to their semantic preference, similar to Geeraerts's (1997) study of *vergrijpen*. This study, then, first replicates that analysis, using skipgrams as the foundation of the computational methodology. After this it is possible to enlarge the scope of the lexical items under investigation, i.e. LIGHT ideophones. This quantification provides a firmer empirical basis for arguing that many different frames (see Kövecses 2017) are involved with LIGHT ideophones, such as (but not limited to) LIGHT, FIRE, SUN, MOON, STARS, RED, FLOWERS, and GOLD.

- (1) a. huīhuī 暉暉 'bright' with SUN radical 日
b. huīhuī 輝輝 'bright' with FIRE radical 火
c. huīhuī 輝輝 'bright' with LIGHT radical 光

If these frames are then taken as the source of exploration, it is possible to reverse the perspective from a semasiological ('meaning' of a lexical item) to an onomasiological one ('names' of a certain meaning). This allows a statistically normalized comparison between the different ideophones for different times per frame — effectively displaying the dynamicity of the system. They also form a basis for comparison with the ideophones that 'survived' into Modern Mandarin Chinese (and other Sinitic languages).

Lastly, this quantified and onomasiological road leads to a comparison of the above-mentioned frames to the radicals ('semantic indices') often present in Chinese characters, it can be seen that for SUN (日 in 1a), FIRE (火 in 1b) and LIGHT (光 in 1c) there are differing tendencies of 'radical attraction' throughout time, unlike what one intuitively would expect, namely LIGHT ideophones having a statistically significant preference for LIGHT radicals. On the contrary, they tend to have a greater affinity for the metonymy FIRE FOR LIGHT or SUN FOR LIGHT, rather than the non-metonymous LIGHT itself.

These important findings provide further evidence for the variationist nature of ideophones, both diachronic as well as synchronic (in a given time period), as well as their the prototypicality of their structure – an aspect of their meaning and usage that is often overlooked by formal approaches that only focus on their morphology and autonomous syntax.

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We don't talk much about smell here: A preliminary study of the semantics of olfaction in Estonian and German

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Keywords: prototype and categorization, perception, olfaction, odor naming, cultural factors

Humans can distinguish more than one trillion different olfactory stimuli (Bushdid et al., 2014). Yet people struggle when asked to name specific smells, and the description of odors remains elusive. A number of studies have confirmed that in urbanized Western societies smells are not particularly codable in languages (de Val, Huisman, Wnuk, & Majid, 2017; Majid, 2015; Majid & Burenhult, 2014). It has been reported that in some non-Western cultures odors play a larger role and the participants of indigenous hunter-gatherer communities have a greater variety of lexical items in their disposal to speak about smells (e.g. Burenhult & Majid, 2011; Wnuk & Majid, 2012; Majid & Burenhult, 2014).

Our empirical study provides evidence that odors are difficult to express both in Estonian and in German. The data was collected from 20 Estonian native speakers (7 male, mean age 37,62) and 20 German native speakers (10 male, mean age 28,49). The field method of Davies and Corbett (1995) was adapted from a similar empirical study carried out on Estonian some decades ago (Sutrop 2002). We report on commonalities and distinctions in odor naming in Estonian and German and identify whether there are basic odor terms by applying basic colour criteria to olfactory domain (Berlin & Kay 1969). We hypothesise that there is only one basic word in olfaction domain for both languages — Estonian *lõhn* 'odor' and German *Geruch* 'odor'. In addition, native speakers of both Estonian and German are creative in describing odors more comprehensively than expected. This might be due to cultural similarities between Estonian and German or other factors. In both languages native speakers tend to use basic descriptive adjectives (e.g. in Estonian *meeldiv* 'pleasant', *ebameeldiv* 'unpleasant', in German *angenehm* 'pleasant', *unangenehm* 'unpleasant') and adjectives from taste domain (e.g. in Estonian *magus* 'sweet', *soolane* 'salty', in German *süß* 'sweet', *salzig* 'salty') and temperature domain (e.g. in German *feucht* 'humid').

Thanks to Sutrop's study, we are able to add diachronic perspective to our study. This reveals that presently the speakers are prone to use more adjectives from the taste domain as nearly 20 years ago (e.g. in Estonian 20 years ago the smell were described as: *magus* 'sweet', *terav* 'spicy', *imal* 'tasteless', and in 2017: *magus* 'sweet', *kirbe* 'rank', *terav* 'spicy', *kibe* 'acerbic' *hapu* 'sour'). It can be only conjectured that cuisine and gastronomic culture have become an inseparable part of everyday life in both language communities and tends to play its part on odor naming.

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Letting meaning surface: a corpus-based study of Estonian perception verbs

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Keywords: corpus linguistics, cognitive semantics, polysemy, multiple correspondence analysis, Estonian

Corpus-based methods of language research enable us to make use of large sets of language data we have at our command. However, studying meaning from a corpus can be an elusive task. One method that has been successfully used for both polysemy as well as synonymy research is behavioural profile analysis (e.g. Proos, 2019, Divjak & Fieller, 2014; Divjak & Gries, 2006). This method is based on the idea that meaning can be derived from and accessed through information about co-occurrences with other language items. In a corpus sample, each sentence is annotated for a number of both morpho-syntactic as well as semantic information. For polysemy, this annotation also includes, for every sentence, designating a specific meaning to the polysemous item that is under analysis. However, annotating meaning is questionable for quite a few reasons. As the sense of the language element is not something visible, it is left to the researcher to “assign” senses to all of the tokens. This can only be done with taking into account the context of the specific token. Thus, this process can become circular – the dependent variable is influenced by the independent variables from the start, creating a bias. Moreover, in this way, senses are treated as discrete language units, but following the theory of polysemy in cognitive and usage-based semantics, this is not the case (Geeraerts, 2010).

To escape this fallacy, Glynn (2016) has proposed to study meaning bottom-up: letting the meanings surface from the data. One way to do this is using multiple correspondence analysis (MCA). Glynn (2016) has demonstrated an analysis of *to annoy* with MCA as a proof-of-concept. In this paper, the method is extended to 14 Estonian perception verbs on large-scale (14000 sentences) bottom-up meaning study. The aim is twofold – showcasing multiple correspondence analysis as a valid method for polysemy research, and making conclusions about the polysemy of Estonian perception verbs. Preliminary results with the perception verb *nägema* ‘to see’ show that multiple correspondence analysis allows for a meaningful representation of the polysemy. Using MCA, it was possible to show a potential structure of polysemy of *nägema* ‘to see’, as well as determine which factors/variables account for the meaning variation. Quantitative meaning research is an important direction in current linguistics. The kind of bottom-up research fleshed out above has not yet reached the same popularity as behavioural profile analysis. Although strides are being made towards using newer methods, like machine learning technologies (e.g. Beekhuizen et al., 2018) for studying meaning, this line of analysis, while promising, is still in its infancy (Desagulier, 2018). Bottom-up corpus research is a source of valuable information about the possibilities of quantitative semantics, but at the moment there is a lack of in-depth research. This paper starts to fill that gap by offering results from a large-scale meaning study of a specific selection of verbs – the main perception verbs of Estonian.

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Verbs of visual perception and category violations

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This presentation investigates three verbs of visual perception in English, *see*, *look* and *watch* and reports on difficulties that native speakers have in defining and differentiating them. It is proposed that these difficulties stem from violations of binary schema such as internal versus external, dynamic versus static, durative versus non-durative and telic versus non-telic.

The English language lexicalizes visual perception around three core verbs: *see*, *look*, and *watch* and all three words are highly polysemous. Despite the high frequency of these verbs in everyday English, the different meanings of these words can be extremely difficult to tease apart. English language learners who make mistakes such as 'I went to the Louvre and watched the Mona Lisa' or 'I saw out of the window' inadvertently draw attention to the complexities of these verbs.

In research carried out by the author through questionnaires listing verb groups such as *run/walk*, *eat/drink/take* and the like, native English speakers consistently rated *see*, *look* and *watch* as being among the most difficult verbs to define and differentiate. When asked to attempt to define the words and account for the differences in meaning and usage of the words, the explanations were usually hesitant, fragmentary, circular and contradictory. One regularity which was observed in videos of these explication attempts was the systematic use of gestures, namely gesturing towards the self for the verb *see* or away from the self for *look* and *watch*. This seems to be in keeping with findings by Winer et al (2002) that detail the persistence of extramission-based folk theories of visual perception despite the scientific evidence of intromission-based visual perception. The folk conceptualization of these verbs seems to orient towards an intromission (external to internal) schema for the verb *see* and an extramission (internal to external) based schema for *look* and *watch*.

The internal/external binary categorization may be just one such categorization schema that pertains to visual perception verbs. It is suggested here that other possibly relevant schemas are; dynamic versus static, durative versus non-durative and telic versus non-telic. Category violations are deeply felt by humans (see Douglas, 2003) and the verbs of visual perception violate these proposed category boundaries in such ways as crossing the internal/external boundary in opposite directions, (E.g. intromissive *see* versus extramissive *look*), flipping between static and dynamic (*look* for static objects of attention and *watch* for dynamic objects of attention), and conceptualizing the same verb as both durative and non-durative, (e.g. *look at something* referring to fixing attention on something over a period of time or *look at something* meaning switch attention instantaneously to something), or telic versus non-telic (E.g. *watch a movie* versus *see a movie*). These category violations are, it is suggested, at the heart of the difficulties encountered when trying to analyze the semantics of the verbs of visual perception even though the words are used unproblematically by speakers in daily discourse.

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A Cognitive Approach to Translating Conceptual Metaphors in Legal languages

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Keywords: conceptual metaphor; legal language; cognitive translation hypothesis; university and variation; response time

Conceptual metaphor refers to the understanding of one abstract idea (the target domain) in terms of another concrete one (the source domain). The attributes of source domain are systemically mapped onto the target domain. According to Zoltán Kövecses (2005), universal bodily experience produces universal primary metaphors, while variation in metaphors is as common as university in metaphors because of differential experience and differential cognitive preferences and styles. Thus, in the process of doing metaphor translation, not all individual manifestations of a conceptual metaphor in a source language (SL) are explained in the target language (TL) by using the same cognitive domain.

Mandelblit (1995) proposes “Cognitive Translation Hypothesis”, in which he proposes two schemes of cognitive mapping conditions, i.e. Similar Mapping Condition and Different Mapping Condition. This paper discusses translation of conceptual metaphors with reference to these two mappings. And it is intended to examine the universality and variation of conceptual metaphors in legal languages, i.e. English and Chinese. We conducted a 2 (mapping condition: similar /different) x 3 (conceptual metaphor type: structural /orientational/ontological) within-- subjects repeated--measure ANOVA for the response time (RTs) and error rates, respectively. This design yielded six experimental conditions. A total of 120 English sentences were selected from legal English texts as source data with 20 sentences for each experimental condition. Fifty Chinese-English subjects who majored in English and took legal English translation as a compulsory course were recruited to participate in the experiment. Subjects were required to make verbal translation of the critical word in the English sentence. Response time (RTs) and accuracies were collected by using E-prime 2.0 and Serial Response Box (SRBox, model 200a, Psychology Software Tools Inc., Pittsburgh, PA, USA). We hypothesized that translation would be faster in similar mapping condition than in different mapping condition independent of conceptual metaphor type. The findings will provide evidence in favor of Cognitive Translation Hypothesis in legal context.

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Metaphor in legal translation: space as a source domain in English and Lithuanian

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Space is an established source domain for metaphors in English and other languages and cultures (Yu 2016). It is particularly productive in conceptualising time, morality and other psychological and social states (see Haspelmath 1997; Casasanto & Boroditsky 2008; Duffy & Feist 2016).

Starting with Talmy (1973/2000: 237), many scholars have admitted that languages carve up space in idiosyncratic ways. Apparently, those idiosyncrasies are preserved in spatial expressions conceptualising abstract domains.

Legal discourse is extremely abstract and, despite its rigor and formulaicity, also metaphorical; genres where legal opinion is expressed are more likely to involve metaphor (Richard 2014). Legal discourse also employs a number of spatiality markers used in their abstract senses, e.g. *under/above the law, higher courts, beyond the contention, etc.*

This paper focuses on some metaphorically used spatiality markers, namely, the prepositions *over, above, under, below, behind, beyond, before, along*, the adjectives *high* and *low, long* and *short*. The aim of the investigation is to identify metaphors employing space as a source domain and verify if spatially motivated metaphorical senses have been preserved in translation into Lithuanian.

The data includes 18 opinions of advocates general of the Court of Justice of the European Union (CJEU) drawn from *InfoCuria*, a database of the CJEU. The corpus covers the period between 2011 and 2015 and contains over 203,180 words in total (EN subcorpus: 116,540 words; LT (translation) subcorpus: 86,640 words). To search for utterances in question, the AntConc (Anthony 2015) software was used. For metaphor identification, the principles of MIP (Steen et al. 2010) have been employed. To identify tendencies of translation, the model of Abdullah & Shuttleworth (2013) was adhered to.

The results show that in English, verticality markers are employed to render abstract meanings mostly through the preposition *under*, used in numerous patterns rendering the POWER IS UP metaphor. Other metaphors include TIME IS SPACE, MORE IS UP, UNACCEPTABLE IS CROSSING THE BOUNDARIES.

In translation, an established English verticality schema identifiable in the POWER IS UP metaphor is preserved in some cases with *high* and *low*. The pattern with *under* (*under the law*) in Lithuanian is rendered through a metaphor based on a horizontal (*pagal įstatymą* ‘along the law’) or container (EN *under the case-law*—LT *teismo praktikoje* ‘in the case-law’) schema. The metaphor MORE IS UP is mostly lost. The metaphor UNACCEPTABLE IS CROSSING THE BOUNDARIES based on a horizontal schema (*beyond the scope of the parties’ action*) in Lithuanian is rendered through a vertical schema: *ne-galima viršyti šalių ieškinio apimties* (‘you shall not go over the top of the scope of the parties’ action’).

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Utilizing the USAS semantic tagger to analyze metaphor: A case study of the US legalization of same-sex marriage discourse

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Keywords: metaphor, blending, semantic tagger, corpus linguistics, same-sex marriage

Since the 1980s, the debate over marriages for people of the same sex has emerged. However, it was until June 26, 2015 that the US Supreme Court pronounced same-sex marriage to be legal nationwide. Although this landmark ruling is one of the most important social movements of our generation, it should be widely accepted that this legalization is controversial in terms of culture, politics, and religion. Since this matter is controversial, it should be examined through the lens of metaphor as metaphor is not merely a phenomenon whereby we talk and think about one thing in terms of another, but it is also a means to create the “viewpointed” reality of the target concept. In this regard, I aim to investigate metaphorical patterns in the US legalization of same-sex marriage discourse to shed light on how metaphor is employed to conceptualize same-sex marriage controversies.

To this end, I first compiled a specialized corpus based on the more general News on the Web (NOW) corpus which gathers online news articles from 20 English-speaking countries from 2010 to the present time (Davies 2013). My purpose-built corpus contains 254 news articles (approximately 200,000 words) which were published in 2015 – the year of the legalization. This corpus was uploaded to Wmatrix (Rayson 2008), so that it could be annotated at the semantic level with the USAS tagger. Subsequently, I compared my corpus to the BNC sampler written informative corpus with the log-likelihood cut-off of 15.13 (99.99%, $p < 0.0001$; 1 d.f.) to find the statistically significant domains belonging to the observed corpus.

Having gained the significant domains, I went through the wordlist of each domain and exported the concordance lines of the words and expressions referred to as “potential metaphorical pointers”. Potential metaphorical pointers are either (a) words and expressions which have tendencies to express metaphorical senses in a particular context, or (b) words and expressions which should not but somehow occur in the corpus. In search of metaphorical expressions, I analyzed all of the potential metaphorical pointers based on the Pragglejaz (2007)’s MIP. Crucially, a cursory glance at the identified metaphorical expressions revealed to me that same-sex marriage controversies can be conceptualized by means of both conventional and novel metaphors. In light of this, I employed a mixed, adaptive method of analysis which combines “Conceptual Metaphor Theory” (CMT) with “Conceptual Blending Theory” (CBT) to cover not simply the pedestrian uses of metaphor, but also the wild and creative expressions. Specifically, while conventional metaphors were analyzed following the CMT traditions, novel metaphors were analyzed through the lens of blending.

The results of this study show that the same-sex marriage controversy is construed primarily by 10 types of metaphor, namely War/Combat, Building/Construction, Force, Object/Person/Living Organism/Location/Container, Religion and the Supernatural, Journey and Obstacles, Sports and Games, Crime, Light and Darkness, and Disease/Illness metaphors. Interestingly, the War/Combat metaphor is the most prevalent one and seems to reflect some conceptual links to other types of metaphor. Also, the metaphors in this specific type of discourse are normally used to either construct or reinforce the same-sex marriage controversy. Their function in attenuating the issue however can hardly be observed.

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Moving at the Speed of Life: How Life Pace Influences Temporal

Reasoning

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Abstract: The Moving Time metaphor and the Moving Ego metaphor are common in English speakers' conceptualization of time (Clark 1973; Lakoff and Johnson 1999). Previous research has suggested a broad range of factors influencing people's perspectives on the movement of events in time (e.g., Boroditsky and Ramscar 2002; Matlock et al. 2005; Duffy and Feist 2014). In the current study, we investigated whether the pace of life, a previously unexplored factor, influences people's interpretations of the ambiguous temporal statement "*Next Wednesday's meeting has been moved forward two days. What day is the meeting on now?*". As demonstrated previously, bigger cities tend to have more tempos regardless of the cultural setting (Bornstein & Bornstein 1976). Thus, we use population as a standard to choose our research sites. In Study 1, we compared the preferred responses of residents in New York City, the most densely populated city in the United States, to the ambiguous *Next Wednesday's meeting* question with residents living in Albuquerque, a less populous city. In Study 2, we attempted to conceptually replicate these findings in a new sample and a different cultural context by examining time representations in UK participants. Moving beyond the macro level differences in pace of life between cities, in Study 3 we measure these concepts at an individual level. Specifically, Study 3 investigated whether the individual pace of life predicts people's temporal perspective adopted in response to the *Next Wednesday's meeting* disambiguation. Results showed that participants with slow pace of life tended to adopt the Moving Ego perspective than participants with fast pace of life. The current research offers a new perspective that individual differences such as the pace of life may also influence the resolution of temporally ambiguous language.

Keywords: Moving Time; Moving Ego; temporal perspective; ambiguity; pace of life

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Planning for the Future: The Relationship between Conscientiousness, Temporal Focus and Implicit Space-Time Mappings

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Keywords: Space-time mappings; Temporal Focus Hypothesis; Conceptual metaphor; Conscientiousness; Personality

Abstract: In a broad range of cultures, people implicitly associate the past and future with the back and front in their minds. According to the Temporal Focus Hypothesis (TFS), the metaphoric associations between front-back space and time are shaped by their attentional focus on temporal events (de la Fuente et al., 2014). Recent research demonstrates that people's temporal focus and their resulting implicit space-time mappings are malleable and result from a complex of factor (e.g., de la Fuente et al., 2014; Li & Cao 2018). In the current research, we examine conscientiousness as a potential contributor. Conscientiousness is a fundamental personality trait of being goal-oriented which is characterized as regularly thinking about future consequences before making a decision (Zimbardo & Boyd, 2008). In Study 1, we investigated the relationship between self-reported conscientiousness scores and implicit space-time mappings by Time Diagram Task and Temporal Focus Scale. In Study 2 and 3, we examined the role of conscientiousness in affecting students' and non-students' implicit space-time mappings by measuring individuals' punctuality, which is one of the most important behaviors associated with conscientiousness (Duffy, Feist, & McCarthy 2014). Results from these studies showed that participants who conceptualized the future as in front of them evidenced a higher level of conscientiousness trait than those who conceptualized the past as in front of them. These findings shed new light on the TFS by extending the range of individual differences that may influence people's spatial conceptions of time.

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A Cognitive Linguistics Account of the Chinese Particle *Le*

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Keywords: corpus-based, polysemy, grammaticalization, semantic network, Chinese particle

Over many years of investigations of the Mandarin Chinese language, *le* (了) has proven to be one of the most puzzling linguistic items for linguists to describe. This is largely due to the fact that *le* is highly polysemous. Previous studies have made important descriptive findings on the semantics of *le*, identifying at least ten different meanings, such as denoting perfective aspect, a 'past' event, a new situation (i.e. 'now'), an excessive degree, Currently Relevant State, and correcting a wrong assumption, among others (Chao, 1968; Li & Thompson, 1981; Huang & Davis, 1989; Smith, 1997; Chu, 1998; van den Berg & Wu, 2006). Grammatically *le* marks perfective aspect, temporal relations (i.e. 'after'), conditional relations (i.e. 'if'), adjectival/degree relations, and a peak event. Despite descriptive advances, no satisfying, unified account of this polysemy has been offered. Most of the previous studies assumed the aspectual meaning of *le* as its central sense and the starting point of their analyses. This paper argues that this focus has resulted in analyses which tend to remain at the surface-level and with the many meanings of *le* represented by a list of seemingly unrelated, even contradictory senses.

Different from the previous studies, the present corpus-based study seeks to explore the semantics of *le* from a cognitive, usage-based approach (e.g., Langacker, 1987, 2008; Bybee & Hopper, 2001). Taking a diachronic approach, the corpus data employed in the study involve eleven books and the Corpus of the Center for Chinese Linguistics of Peking University, covering a history of 3,000 years from the early Western Zhou (1046-771 BCE) to modern times. 1,026 tokens of *liao*¹/*le* were examined, and over 30 senses associated with *liao/le* were identified. The study provides strong evidence of the semantic development and grammaticalization paths of *le* (e.g., Kuryłowicz, 1965; Heine, Claudi & Hünemeyer 1991; Hopper & Traugott, 1993; Bybee, Perkins & Pagliuca, 1994; Traugott & Dasher, 2002). Adopting Principled Polysemy Methodology (PPM, Tyler & Evans, 2003), the analysis begins with the earliest attested meaning, i.e. the proto-scene, and establishes a semantic network organized around the proto-scene. The network systematically represents all the meanings of *le* identified in the corpus data. It illustrates how the senses and functions of *le* are connected and extended from one another in systematic and motivated ways. Moreover, the semantic network is able to represent the diachronic evolution of the senses and functions of *le*.

The shift of starting point from the aspectual meaning of *le* to its earliest meaning is not trivial. The proto-scene (as represented in *Shuowen Jiezi* [Explaining Graphs and Analyzing Characters]) is 'a newborn baby without arms'. When we consider the formidable living conditions two thousand years ago, when the character first arose, this image invites the inference that the child's life is finished or will soon to be finished. Once the sense of 'finish' became entrenched in *le*'s semantics, *le* began to evolve into a perfective aspect marker indicating that an event is viewed as an integral whole. In sum, the present study establishes a persuasive, integrated account which takes social-historical contextual aspects into account. The meaning development of *le* in conjunction with the emergence of various grammatical functions provides concrete evidence that semantic extension is often grounded in our non-linguistic knowledge, e.g., our knowledge of the world, our socio-cultural context and our experience with the world and language, to which words facilitate access (Evans, 2015).

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¹ *Liao* is the earliest attested pronunciation of the Chinese character 了 (*le*).

When a polysemous word grammaticalizes, does it stay polysemous? Evidence from Vietnamese path verbs.

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Keywords: language change and grammaticalization; metaphor and metonymy; motion and space

Semantic extensions usually happen one at a time. For example, in Middle English, *dog* ‘domesticated canine’ metaphorically extended to indicate ‘worthless person’. Around 1900 the ‘canine’ sense extended image-metaphorically to mean ‘sausage’. When the ‘canine’ sense led to ‘sausage’, the ‘worthless person’ sense didn’t extend along with it (perhaps to denote some kind of human-shaped sausage). Previous extensions were unaffected by the new one.

Word meanings also extend via grammaticalization, which can simultaneously change a word’s grammatical category and its meaning. But does this kind of semantic change affect one word sense, like other semantic change, or can it affect multiple senses at once?

Evidence from Vietnamese path verbs suggests that several related senses can undergo grammaticalization together. Ten Vietnamese path verbs have grammaticalized into prepositions, which are now syntactically and phonologically distinct from their verbal counterparts (first author, 2018). Each of these path verbs has several senses that have carried over into their new prepositional uses.

For example, the path verb *ra* ‘go out/to’ has five distinct senses that were preserved by the preposition *ra* ‘out/to’: indicating motion to an outside area, a wider area, a distant goal location, a position to the front or the back of a region, or a goal location to the North. An example of the ‘distant goal’ sense of *ra* is in (1).

- (1) Cách nào *ra* đảo nhanh nhất?
way what V. go out far island fast most
‘What is the fastest way to get out to the island?’

When *ra* ‘go out/to’ grammaticalized into prepositional *ra* ‘out/to’, these five senses were maintained by the preposition. Example (2) shows the ‘distant goal’ sense of prepositional *ra*.

- (2) Đưa điện vượt biển *ra* đảo xa
bring electricity cross sea PREP.to island far
‘Bring electricity across the sea all the way to the island’

All the grammaticalized path verb senses previously occurred in contexts where they could be interpreted as either a preposition or a verb, as shown for *vào* ‘to enter’/‘into’ in (3).

- (3) Tôi rơi vào một cái lỗ
I fall enter one CL hole
‘I fall into a hole’ (Pace 2009: 56)

Since all the senses of the path verbs occurred in ambiguous contexts as in (3), in theory any of these senses could have undergone grammaticalization independently. But why, in this case, would all of the senses have grammaticalized at the same time? Surely the grammaticalization of one sense facilitated that of the others. Vietnamese path verbs suggest that when one sense of a word grammaticalizes, other senses may be dragged along into the new grammatical category – resulting, in Vietnamese, in verbal and prepositional polysemy networks that are almost identical.

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From *movement into action* to *manner of causation*: Changes in argument mapping in the *into-causative*

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Keywords: *into-causative*, DCxG, constructional change, corpus linguistics, association plots

Over the last 300 years, the *into-causative* (*he talked his father into giving him money; they fooled Congress into passing the bill*) increased considerably in frequency and lexical diversity. Such changes are often interpreted as semantic or functional expansion, which has also been suggested for the *into-causative* (Davies & Kim 2018; Rudanko 2011). On the other hand, after its emergence from the caused-motion construction (*They moved the army into France; we were baptized into suffering*) in the late 17th century, there is no apparent morphosyntactic change and the types of matrix verbs that characterize its modern use have also remained stable (verbs of force, deception, etc.; Flach accepted).

This paper argues that what appears to be a loss of restrictions on the *into-causative*'s verbal slot is the result of subtle changes in argument mapping between semantics (CAUSER, CAUSEE RESULT) and syntax (subject, object, and oblique) (cf. Stefanowitsch 2014; Rudanko 2011; Gries & Stefanowitsch 2004). Over time, the pattern [SUBJ V OBJ OBL_{ing}] became a more reliable cue for causative meaning: stronger mapping links increasingly facilitated the use of verbs that are semantically and syntactically atypical. Hence, over its history, the *into-causative* shifted from profiling *movement into action* (cf. origin in, and relation to, the caused-motion construction) to specifying *manner of causation* ('Y CAUSES X TO DO Z by means of V').

Data from COHA confirm two predictions of this claim with respect to changes in (i) the semantic classes of the matrix verbs and (ii) the verbs' argument structure profiles outside the construction. Residual-based association plots show a preference of the *into-causative* for typical verbs in the 19th century (i.e., verbs encoding cause-effect relationships with an animate patient) and a relatively stronger preference for atypical verbs in the 20th century (i.e., verbs with inanimate patient/themes). While it is mostly indirect evidence of a relative shift, it supports the assumption that the construction increases in ability to license semantically and syntactically incompatible verbs (cf. *I talk him into giving me money* vs. **I talk him*) that facilitated its rise in frequency and lexical diversity.

The results have implications for models of grammatical change in Diachronic Construction Grammar (DCxG). Using the *into-causative*'s development as an example of a relative shift, we critically assess the distinction between *constructionalization* and *constructional change* (Traugott & Trousdale 2013; Hilpert 2018) and argue that the notion of *constructionalization* is difficult to maintain conceptually and empirically.

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Metaphor mixing and domain integration: A case study on BODY metaphors

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Keywords: metaphor mixing, corpus linguistics, BODY metaphors, domain

Metaphor mixing, the combination of metaphorical uses of different ontologies, has been a phenomenon widely-investigated in various work (Kimmel, 2010; Sullivan, 2018). Instead of looking for the motivations of mixing metaphors, the current study focuses on the contingency of certain metaphors when employed to describe the same topic.

Online news reports about health issues are collected and managed by AntConc, with a total of 522 texts, amounting to 449232 Chinese characters. Metaphors are manually identified and coded with regard to their source and target domain. Although previous studies have identified the frequent source employed to talk about BODY as REPUBLIC, MACHINE, FACTORY, ECONOMIC ENTERPRISE, BATTLEFIELD, FORTRESS, TEMPLE, and LAND (Sontag 1990; O'Neill 1985; Giblett 2008). In our corpus, some of these metaphors are actually scarce. In the same text, the same conceptual metaphor is rarely used solely and consistently. We found that MACHINE FACTORY, COMPUTER, and BATTLEFIELD metaphors have a high chance of co-occurring. On the other hand, organic metaphors such as PLANT and INSTITUTION have the high contingency. Metaphor scenarios (Musolff 2009) and metaphor clustering (Cameron & Stelma 2004) will be employed to explain the mixing of metaphors.

The syntagmatic manifestation of metaphors in discourse provides functional insights instead of the cognitive exploration of metaphors at a paradigmatic level (Kövecses 2017), which certainly deserves further investigation.

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Multimodal Metaphor in Chinese Dream Publicity Posters: Towards a Socio-functional Model of Analysis

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Keywords: multimodal metaphor; socio-functional model; political communication; Chinese dream

This study presents a socio-functional model of multimodal metaphor analysis based on the semiotic strata in social semiotics (e.g. Halliday, 1978), as illustrated in the Table below. It includes comparison with Charteris-Black's (2004) model of critical metaphor analysis and Fairclough's (1992) model of critical discourse analysis. and applies to analyzing 75 Chinese Dream Publicity Posters which contain metaphors. The model enables us to analyze metaphors systematically in terms of semantic choices, multimodal realizations and contexts. In particular, it provides a comprehensive framework for analyzing context by stratifying it into context of situation and context of culture. It clarifies that multimodality only refers to level of the realization of meaning. The analysis of the Chinese Dream posters shows that the metaphors serve to conceptualize essential aspects of pursuing the Chinese Dream to mobilize the Chinese people and to cultivate patriotism. The source domains are mostly familiar things with rich cultural elements, such as journey, animals and plants. All the metaphors are realized in both language and images, creating multimodal metaphors, and the images mainly illustrate the source domain. At the level of context of situation, the posters reflect the new features of the discursive practice which include the medium and the genre of PSA posters (Mode), the activities of promoting and entertaining (Field), and the close and equal author-audience relations (Tenor). These patterns are further explained by the socio-political context of the changing media environment and the changing mode of political communication in contemporary China.

Charteris-Black (2004)	The socio-functional model			Fairclough (1992)
	Context of culture	Visible socio-cultural events and phenomena	Invisible values, ideology and power	Analysis of social practice
Metaphor explanation	Context of situation	First order -Field: authorial activity -Tenor: author/text-reader relation -Mode: medium of communication	Second order -Field: subject matter -Tenor: character relation in text -Mode: genre	Analysis of discursive practice
Metaphor interpretation	Discourse semantics	Conceptual metaphors	Semantic features mapped	Text analysis
Metaphor identification	Semiotic resources	Realizations of metaphors in language, images and other semiotic resources		

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A Tale of Two Cities: A Multimodal Study of City Metaphors in Picture Books

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Keywords: multimodal metaphor, cognition, city, picture books, solitude, alienation, magic surrealism

This research aims to explore cognitive characteristics reflected by multimodal metaphorical depiction of city through assaying 266 data collected from 32 picture books composed by the Taiwanese writer/illustrator Jimmy Liao, who has gained international acclaim and recognition for his figural imagery on global urbanization. Although city metaphors can be found in earlier studies regarding literature, architecture, and sociology (e.g., Borer, 2013; Lynch, 1960; Wagner-Tsukamoto, 2013), they are rarely taken under cognitive investigation. These city metaphors not only encapsulate a figurative wealth of human emotions toward urbanization but are deep-rooted in the human conceptual system (Kövecses, 2010; Lakoff & Johnson, 1980) frequently manifested through multimodal media in the modern age (Forceville & Urios-Aparisi, 2009). This study thus undertakes to examine how the imagery of city can be conceptualized through multimodal metaphors in picture books and what messages of human psyche and cognitive beauty can be observed therefrom.

Our findings show that city can be realized via eight major kinds of multimodal metaphors: CITY IS A VIRTUAL WORLD, CITY IS A CONFINED SPACE, CITY IS A DENSELY COVERED LAND, CITY IS A COMPLEX NETWORK, CITY IS TOYS, CITY IS A WIDE AND PLANE AREA, CITY IS AN AQUATIC AREA, and CITY IS A PERSON. These multimodal metaphors are argued to reflect not only the wild imaginations in the human thought but also 'individual solitude and interpersonal alienation' in the metaphorical sketch of the city, the latter revealing the experience of collective trauma shared by today's city dwellers. Interestingly, these metaphors seem to be a harmonious fusion of both bizarre and ordinary elements. Therefore, we propose the 'city magic surrealism' as a cognitive approach to understanding the illogical human subconscious based on the dynamics of multimodal simile and oxymoron (see Teng & Sun, 2002). In a nutshell, this research sheds new light on the urban imagery from a multimodal-figurative perspective, in hopes of making interdisciplinary contributions to the studies of metaphor, cognition, literature, arts, culture, and psychology.

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Black and green smells: Variation in synesthetic metaphors of smell

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Keywords: synesthetic metaphors, smell, sensory perception, conceptual metaphors, senses

Synesthetic metaphors are often seen as one phenomenon, generally including all phrases that contain two different sense experiences (e.g. *sweet sound* → taste&hearing). These metaphors are looked at from an all-inclusive perspective, trying to find patterns that work for all senses rather than for individual ones. However, such an all-inclusive view does not do justice to the different senses, perceptions based on them and underlying cognitive processes. Furthermore, it hides micro-variations that are specific to each individual sense and is not even accurate for all instances that contain two senses (Strik Lievers 2018).

My research focusses on the sense of smell as this particular sense seems to receive very little attention – not just in everyday life, but also in linguistic research. It has only recently been discovered as a worthwhile topic (Majid et al. 2018, Majid, Burenholt 2014, Winter 2016, 2018) and still requires a lot of further research.

My study investigates the differences in synesthetic metaphors that have *smell* in the target domain. I argue that such ADJ&*smell* constructions display diverse levels of metaphoricity from being entirely non-metaphoric all the way to transferring such a phrase onto a completely metaphorical level where no physical sense perception is involved any longer. The lowest level displays phrases that cannot be categorized as metaphors, because they only refer to two sense perceptions that coincidentally occur at the same time (1) and are only ordered in the respective way in language due to semantic restrictions that would not allow them to be reversed.

(1) *The **black smell** of smoke mixed with the strong odors of melted chocolate* (COCA 2003 FIC)

The second level contains a broad array of different expressions that rank from non-metaphorical (2) to metonymic (3) and metaphorical (4). This depends on whether the second sense impression is imagined, remembered (2), extended (3), or mapped (4). In neither case is the second sense perception an actual physical impression co-occurring at the same time.

(2) *tomato vines, bringing with it the **green smell** of their leaves* (COCA 2009 FIC)

(3) *Soon the **sweet smell** of cake baking floated from Rabbit's oven* (COCA 2011 FIC)

(4) *we went out on the pier, into a **loud fish smell*** (COCA 2005 ACAD)

The last level is rather limited and seems to be restricted to combinations of taste&smell. In those no physical sense perception is present (5), but the whole expression is extended onto a metaphorical level.

(5) *French bakery in Virginia Beach has the **sweet smell** of success* (COCA 2017 NEWS)

I argue that it is necessary to look for more individual instances within the broad field of sensory expression, especially when they center around the sense of smell. My data shows that not all instances of two co-occurring sense words qualify as metaphors, thus, such an assumption would be too superficial. It is not enough to look at synesthetic metaphors as one all-inclusive category, because we make perceptual differences and those differences can give us an inside view into underlying cognitive processes.

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What makes us choose which modal? Putting semantic, syntactic and lexical factors in the balance

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Keywords: corpus linguistics, modal verbs, multifactorial analysis, usage-based linguistics, entrenchment

One of the key properties humans possess is their ability to communicate states of affairs that are not straightforward facts but that *should* or *could* be the case. The words and constructions that allow people to verbalize non-factual meanings belong to modality, a domain that is central to grammar and that, accordingly, has spawned a voluminous literature. Despite the wide attention given to this familiar area, we still do not know which linguistic features exactly allow speakers to choose one modal expression over another. Why, for instance, does one tend to say, “Sometimes you need to choose your battles” (rather than “... you should choose...”) but “It should be noted that...” (rather than “It needs to be...”)”? We here report interim findings from an ongoing extensive corpus-based study that aims at exploring this issue, by simultaneously measuring the impact of semantic, syntactic and lexical factors on speakers’ choices of modal verbs.

From the Corpus of Contemporary American English, we randomly extracted 5000 occurrences with English modal expressions in 150-word contexts, equally balanced across six core modal auxiliaries (*may*, *might*, *can*, *could*, *should*, and *must*), three semi-modals (*have to*, *need to*, *ought to*), and a periphrastic construction (*be able to*). These are being annotated for 35 variables that previous smaller-scale theoretical and empirical studies argued to be relevant to modal verb selection. Some of the variables are primarily semantic in nature, pertaining, for example, to whether or not the modal verb expresses epistemic modality (e.g., *I must have been confused* vs. *What needs to be done?*), narrow-scope or wide-scope modality (e.g., *You should try this* vs. *There must be blood*), and subject-internal-source or subject-external-source modality (e.g., *Well, if you must know, ...* vs. *You must work hard to succeed*). Other variables are tied to formally more easily detectable features, such as the presence/absence of a negator, or the use or not of subject-auxiliary inversion. To model variation between the modal expressions, we use logistic regression techniques. With about two thirds of the 175,000 coding decisions completed and an interrater reliability for the relatively hard-to-code variables reaching at least 85%, we are in a position to confirm that many, though not all, of the previously proposed variables play a significant role in a speaker’s selection of a particular modal expression.

However, while most of the literature on modality has stressed the usefulness (supported in our research) of binary categorical distinctions such as those mentioned above, we argue that a model of speakers’ choices should take into account insights from recent theoretical developments in linguistics. In particular, the frameworks of Cognitive Construction Grammar and usage-based linguistics predict that modal expressions and their surrounding lexical context can form entrenched chunks (Hilpert 2016, Cappelle and Depraetere 2016, Cappelle, Depraetere and Lesuisse forthcoming). For instance, language users frequently encounter sequences such as *all you need to know* (rather than *all you should know*) and *perhaps you should...* (rather than *perhaps you need to...*). We argue that this lexical knowledge should be incorporated into the model and demonstrate how this can be done.

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Constituency, sequentiality, and prosody: A corpus-based analysis of phraseological sequences in Mandarin spontaneous speech production

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Keywords: Multiword sequences, phraseology, prosody, spontaneous speech, usage-based

This study examines the prosodic realization of phraseological sequences in spontaneous speech production of Taiwan Mandarin. Phraseology is defined as the recurrent multiword sequence (RMS) identified in a large corpus. This study used the Mandarin Conversational Dialogue Corpus (MCDC) as a reference corpus to generate a list of RMS. We identified the shared RMS used in the Sinica Phone-aligned Chinese Conversational Speech Database (SPCCSD) to investigate the articulatory characteristics of these RMS. In particular, we investigate whether the prosodic structures of the RMS correlate with their formulaicity and/or syntactic configurations.

To determine the RMS list, recurrent three-word to five-word sequences in MCDC were extracted. We used a directional measure, Delta P (DP) (Ellis, 2006; Gries, 2013) to assess the “glueyness” of the sub-units for each RMS. DP measured a proficient speaker’s likelihood to select a word given a neighboring context of a variable size as a cue. This contingency-based metric allowed us to assess RMS formulaicity in two directions. Cut-off values for the raw frequency and dispersion of the RMS were used to exclude hapax legomena sequences. All RMSs were then ranked by the DP-based “glueyness”. On the other hand, we defined a series of variables to characterize RMS syntactic and prosodic properties. The syntactic properties included (1) the phrasal cohesiveness of the sequence (i.e., whether the sequence is structurally complete), and (2) the (intended) structural type of the sequence (i.e., NP-based, Clause/VP-based, PP-based). Prosodic properties included: co-occurrence with pausing, alignment with intonation units (IUs), and durational reduction. Linear mixed-effect models were used to analyze the relationships between formulaicity scores and syntactic properties of the RMSs on the one hand, and each prosodic property on the other.

Our results suggest that the higher the formulaicity, the more likely the RMS will be aligned with pauses and IUs, and the average syllable duration of the RMS will be shorter. The former prosodic behavior suggests a holistic processing of the RMS and the latter instantiates the common acoustic correlates of frequency effects (Bybee, 2002). A significant interaction between formulaicity and syntactic configuration is also observed. That is, syntactic integrity will have little/strong effect on the prosodic realization of the RMS if the RMS is high/low in formulaicity. This study provides support from speech production for the claim shared by usage-based linguists that constituency is not a fixed categorical attribute of linguistic units, but an emergent property motivated by language use.

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Phonotactics is affected by statistical scaling laws less than the lexicon

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Keywords: complex systems, Heaps' law, Zipf's law, phonotactics, diversity, inventory size

Lexical systems have been shown to follow statistical laws characteristic of many complex systems (Corominas-Murtra & Solé 2010; Ferrer-i-Cancho 2016). Most prominently, Zipf's law models the inverse relationship between word frequency and rank (Zipf 1949). The law is hypothesized to be related to several other statistical patterns that one can observe in language such as the inverse relationship between word frequency and word length (Baayen, 2001). Another prominent law potentially linked to Zipf's law is Heaps' law (Heaps, 1978). It is a model of a system's complexity (e.g. the number of word types) depending on the number of tokens in it, i.e. corpus size. According to Heaps' law, complexity grows sublinearly with the number of tokens in a corpus. These statistical scaling laws have been hypothesized to be a consequence of many factors, among others cognitive determinants such as limited memory, communicative efficiency, and semantic organization (Piantadosi 2014).

Zipf's law applies less strongly to phonology. For many languages it has been shown that the relationship between phoneme frequency and phoneme rank is only roughly modeled by Zipf's law (Tambovtsev & Martindale 2007), although it still applies to the relationship between phoneme duration and frequency (Kuperman, Ernestus & Baayen 2008). In this paper, we focus on the domain of phonotactics, i.e. sequences of sounds, which is – put into simplified terms – located between phonology and the lexicon. Phonotactics covers longer items than phonology, but phonotactic items (or n-phones) carry much less meaning than lexical items do (although phonotactic items can have sound-symbolic properties and/or fulfil functional roles). Research done on statistical laws in phonotactics is relatively limited (but see e.g. Ha, Hanna, Ming, & Smith, 2009; Kuperman et al., 2008). We provide a systematic analysis of Zipf's law and Heaps' law in phonotactic systems. Based on a corpus of spoken English (Buckeye), we estimate scaling-law exponents for phonotactic items of different length and in two different conditions (within-word and within-and-across word phonotactics). We measure phonotactic complexity both in terms of inventory size and with frequency-based diversity measures (Hill 1973).

We find that phonotactics is less strongly affected by the inspected scaling laws than this is the case for the lexicon. Furthermore, we show that phonotactic length has a crucial impact on Heaps' law in phonotactics. For phonotactic sequences of length 6 (which roughly equals the average phonological length of words), Heaps' exponent is about 0.8 (which approximates lexical estimates of Heaps' exponent). In contrast, Zipf's law is not significantly affected by the length of phonotactic items. We suggest that cognitive constraints apply less to the phonotactic domain, partially because phonotactic items carry much less meaning, which in turn affects cognitive constraints related to memory and semantic organization (Piantadosi 2014).

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“Up close and personal vs. birds-eye view” of discourse:

a corpus study of perspective using Czech data

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Keywords: cognitive grammar, perspective-conceptualizer, discourse, corpus linguistics, Czech

Perspective, one of the essential building blocks in Cognitive grammar, affects how the perceived situation is represented; a perceived situation is rendered more prominent as perspective is positioned further away (Langacker 2002: 315-318). This paper provides corpus-based quantitative data to explore perspective on the level of discourse: i.e., how a text is perceived from differently-located points of perspective.

The study uses the corpus linguistic method of keyword analysis (KWA). It compares the target text (Ttxt) against the background of a reference corpus (RefC), and thereby identifies prominent words (keywords, KWs) that distinguish the Ttxt from the RefC (Scott 1999). KWA is used to probe various aspects of a Ttxt (cf. Culpeper 2002, Baker 2009), but it has been found that RefCs used in KWA can serve to represent different reader viewpoints (Fidler & Cvrček 2015).

In this paper KWA is applied to Ttxts of specialized genres and registers (e.g. medicine textbook). To our knowledge, this is the first study using KWA to explore perspectives of contemporary readers exposed to different genres. The Ttxts are contrasted against the background of several RefCs drawn from SYN2015, a general corpus of written contemporary Czech. These RefCs represent different reader viewpoints, e.g.: a corpus of fiction (prose) and corpora of non-fiction texts; the latter may be parceled out according to characteristics such as (a) basic research vs. application and (b) specialization (natural science, agriculture, and medicine). The fiction corpus is associated with the reader who is least exposed to the medical genre, while the corpora on medical research and its application are associated with the reader who is most familiar to the medical genre. The intuitive perception of register closeness can be objectivized by multi-dimensional model of register variation of Czech (Cvrček et al. 2018). The KWAs based on RefCs with closer proximity to the medical genre not only result in lower numbers of KWs but more importantly, they yield lower values of Difference Index to KWs. The results provide the discourse correlate of the role played by perspective observed in the grammatical construal: the reader familiar with the genre does not find the Ttxts to be unusual or striking from what s/he routinely encounters, while the reader inexperienced with the genre finds them unusual with a number of unfamiliar words that may become stumbling blocks in comprehension. The study uses several RefCs of different degrees of similarity to the Ttxt to illustrate the scalar nature of prominence in discourse as perspective moves further away from the genre in which the text is written.

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A usage-based constructionist approach to grammar: Semantic network analyses of words, constructions, and alternations

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Keywords: network analysis, usage-based, construction grammar, contingency learning

Grammatical competence features a development of native intuition in “predicting the linguistic constructions that are most likely to be relevant in the ongoing discourse context” (Gries & Ellis, 2015, p. 236). Choosing a proper construction from a set of notionally equivalent constructions is essential to one’s grammatical competence. This study provides a case study on the functional variations of three near-synonymous space particle constructions (SPC) encoding CONTAINMENT in Chinese: [*zai* NP *li/nei/zhong*] and presents semantic network analyses on the inter-relationships between these partially schematic constructions (i.e., SPC) and the words occupying the NP position of the SPC (i.e., their co-occurring landmark, LM). We first extracted all relevant SPC tokens from Academia Sinica Balanced Corpus of Mandarin Chinese. We determined two types of relationships: (1) LM-SPC, and (2) LM-LM. The former specifies the faithfulness of the contingency between a word serving as the LM of the SPC and the SPC; the latter specifies the semantic similarity between words occupying the LM position of the SPC. The LM-SPC association was identified using the “distinctiveness” of the distinctive collexeme analyses (Gilquin, 2006; Gries & Stefanowitsch, 2004); the LM-LM association was determined based on the cosine similarity of the effective statistical learning of the word-embedding modeling (Pennington, Socher, & Manning, 2014). We utilized these metrics to build semantic networks in which the nodes represent symbolic units (e.g., LM words and SPC constructions) and the edges strong LM-SPC and LM-LM associations. We ask three questions: (1) For each LM, how prototypical is it of the meaning of the SPC? (2) For each SPC, how semantically cohesive are its LM exemplars? (3) What are the functional differences of these three SPCs? Network algorithms of betweenness centrality and detection of communities were used to find the patterns underlying the semantic networks. Our results suggest that LI is a more unmarked SPC in encoding CONTAINMENT, co-occurring with more heterogeneous LMs. NEI shows a strong preference for LMs denoting temporal concepts. This metaphorical use often implies a preplanned objective in the proposition, with the LM as an intended deadline. Finally, ZHONG shows a strong connection to LMs denoting high-dynamicity events. This extended use often comes with a marked aspectual reading of the LM. Our network analyses bring to the foreground the importance of repeated language experiences in the shaping and entrenchment of linguistic knowledge. Mental grammar represents rich implicit knowledge of the contingency learning of these distributions in language use (Ellis & Ogden, 2017).

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How gender is described: An insight from a spoken corpus

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Keywords: gender, corpus, USAS, Spoken BNC2014, semantic analysis

1. Motivation

Gender is currently a subject of great research interest, and numerous attempts have been made by scholars to show the relationship between language and gender. For example, Pearce (2008) discovered that the collocates of the noun lemmas “man” and “woman” represent gender stereotypes. Schmid (2003) showed the gender difference regarding the tendency to use certain words. What seems to be lacking, however, is an examination of the difference in attitude toward each gender by females and males.

2. Purpose

The purposes of this study are 1) to reveal the differences between females and males in terms of how they describe gender and 2) to show which gender displays a larger discrepancy in describing “she” and “he”.

3. Methodology

To consider how females and males describe each gender, first, the word she was searched for Spoken BNC 2014, using a restricted query to select only female speakers. Second, we searched for she’s adjective collocations (e.g. mad, cute, and etc.). Third, the collocations were annotated using University Centre for Computer Corpus Research on Language Semantic Analysis System (USAS) tag sets. Fourth, the collocations were classified according to the tag. In this study, this procedure is called “female-she” (how FEMALES describe SHE) analysis. Therefore, after “female-she” analysis, the same procedure was applied to “male-she”, “female-he”, and “male-he” analysis. After that, the result of the “female-she” analysis was compared with that of the “male-she” analysis, whilst the result of the “female-he” analysis with that of the “male-he” analysis. Building on these results, we examined the degree to which females and males use the same adjectives when they describe different genders.

4. Result

By comparing the collocations of she and he in terms of the speakers’ gender, it became evident that males tend to describe gender using a narrow variety of innocuous words, whereas females tend to use words that express a negative judgment towards a person’s nature. By looking at the expressions females and males use to describe each respective gender, it is clear that females use distinct words between when they describe men and women.

5. Conclusion and Discussion

We may, therefore, reasonably conclude that while males identify people in a relatively neutral way, females tend to identify people differently on the basis of sex and they tend to be more judgmental.

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Assessing vocabulary depth in school beginners

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Keywords: FLA, vocabulary knowledge, vocabulary depth, vocabulary measurement, definition skills

Vocabulary knowledge comprises two dimensions: vocabulary breadth and vocabulary depth. Although these components show a tendency to correlate, their relationship depends on how the constructs are conceptualized and measured (Schmitt 2014). Vocabulary breadth – commonly defined as the number of words stored in one’s mental lexicon (Hadley & Dickinson 2018) – is estimated in small pre-school children from e.g. parental questionnaires or audio recordings; in school children it is usually assessed on the basis of a sample and subsequent extrapolation to the size of the child’s lexicon.

Being a woolly and multidimensional construct, operationalizing and measuring vocabulary depth is far more complicated and far less investigated. In comparison to vocabulary breadth, depth cannot be evaluated by a dichotomous assignment of “known” vs. “unknown”, but forms a continuum of knowledge that calls for a gradual evaluation.

Furthermore, the multidimensionality of the construct (e.g. Richards 1976) impedes capturing depth as a whole by a single test or even battery of tests (Schmitt 2014). For the present purposes, we thus define vocabulary depth in narrower terms as “precision of meaning (semantic knowledge)”.

In most studies reviewed, vocabulary depth in this sense is measured by explanations of word meaning, which children give in an interview. However, the measurement is demanding at the beginning of school because children still lack the (meta-)linguistic skills to give differentiated explanations of meaning. Their definitions are still quite concrete, subjective and contextualized; they learn to give more abstract and decontextualized definitions only later in school (Anglin 2005).

Our project entitled "Development of vocabulary and reading. An investigation in primary school", investigates the mutual influence of a range of vocabulary and reading skills from 1st to 3rd grade, among others vocabulary depth. In the absence of a German-language test adapted for this purpose, we used the vocabulary subtest from the German edition of the "Wechsler Intelligence Scale for Children". This test can be used across different years, takes into account different word types, and can be carried out in a reasonable time. However, it is part of an IQ test and provides a value for the calculation of IQ, but no detailed information about vocabulary depth.

The aim of the present paper is twofold. On the one hand, we present our method of vocabulary depth assessment. In order to use this test as an objective, valid and reliable measurement tool of vocabulary depth, evaluation categories were created for each word with the help of dictionaries, comparison to adult definitions and team discussions. The oral responses from 348 1st graders to 15 items, taking into account multiple word types (nouns, adjectives, verbs) as well as polysemous words were rated accordingly.

On the other hand, we discuss the relationship of this measure of vocabulary depth to vocabulary breadth (assessed via the PPVT) as well as links to reading skills, further factors such as phonological awareness, non-verbal cognitive skills and socio-demographic variables.

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Children's acquisition of the notion of reference time: constructing a world within language

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Keywords: Language Acquisition, Time, Tense, Semantics, Displacement, Spontaneous Language

Weist (1986) suggests that the development of the concept of time in the course of child language acquisition goes through several main stages, organized according to the principles of Reichenbach's model (1947). In the final stage of this model, children develop the concept of reference time. They thus become capable of manipulating reference time separately from speech time and event time and to produce speech, from the point of view of someone who would be in the past, or in the future. In parallel, they develop the ability to tell stories or talk about imaginary people, objects or events.

This final stage in the ability to use the concept of time raises a fundamental issue: how do children learn to speak about what does not exist in the real world and only exists through language? This is fundamentally different from what they do in their first years. During that time, they speak either about things that they perceive in the here and now or about things that they do not perceive in the here and now (see Bronckart and Sinclair, 1973), but that they have perceived before and have thus memorized (see Weist, 1986). During their first years, children use linguistic forms to refer to objects or situations they have experienced in their daily lives. To manipulate reference time, children have to learn concepts, that they can create through language only. They learn that linguistic forms can be used to refer to meanings that are only experienced through language and have no perceivable referents in the outside world. Specific linguistic forms must thus exist and be used to express a switch of reference time.

Our proposal is that there are indeed such forms, and that children find them in their input. They are used for displacements of reference time. Children will remember these uses (their forms and their functions), and reproduce them later on. One of those forms in French is the *imparfait*. This tense marks a displacement between the speaker and the here and now (Patard, 2007), and is not frequently used before age three (see Parisse, Pontonx & Morgenstern, 2018). It can have several functions, but most of those functions, including in children's own productions, correspond to a change in reference time (see Parisse et al., 2018, a fine-grained analysis of 10 one-hour sessions with two children).

Our proposal is that children hear the *imparfait* in their input mostly in situations that are clearly associated with displacements of reference time. When they produce the *imparfait* themselves, they will reproduce the adult use.

We tested this hypothesis on the longitudinal data of seven French-speaking children videotaped monthly in spontaneous interactions with their parents (Paris corpus: Morgenstern & Parisse, 2012), representing 229 hours of speech and 1.3 million words. We coded the sequences as corresponding to several genres: book reading or manipulation, narratives without books, play, pretend play, and all other situations. These genres were targeted because they are either displaced and are good candidates for switches of reference time, or are non-fiction (all others) and correspond to situations that are grounded in the here and now. The results showed that for some genres such as narratives without books, the *imparfait* was used twice more than in other situations. This trend was even stronger when talking about memories (narratives). It was the case both for adults and for children. In another situation, pretend play, in our recorded sessions, only the children used the *imparfait*, which could suggest that children now have the ability to generalize the use of the *imparfait*. Following this study, our proposal is that children can find exemplars of language use in specific situations with specific forms (such as the *imparfait*). Those forms do not only have a function associated with a switch of reference time, but they also serve as reference forms that do not refer to specific objects of the world but refer to concepts only expressed through language.

An incremental approach to referential accessibility in mother-child conversation

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Keywords: referential expression, accessibility feature, incremental effect, mother-child conversation, Mandarin Chinese

Previous studies have shown that young children are sensitive to a variety of accessibility features of referents (e.g., whether the referent has been mentioned in prior discourse) when using referential expressions in spontaneous interaction (e.g., Allen, 2000; Guerriero, et al., 2006). However, most of these studies focused on the effect of these features in isolation, without taking into account the circumstances that these features may interact with each other and that children may attend to the effect of this interaction. While a few recent studies (e.g., Hughes and Allen, 2015) have begun to address this issue, more systematic studies of typologically different languages are needed. The purpose of this study is to investigate whether an incremental effect of accessibility can be observed in the speech of Mandarin-speaking children and mothers.

The data consisted of eight hours of natural conversation of two Mandarin-speaking mother-child dyads, collected when the children were between the ages of 2;2 and 3;1. The subject and object arguments of the children's and the mothers' utterances were coded for the categories of referential forms (null, pronominal, and nominal) and accessibility features (absence, newness, query, contrast, differentiation in context, differentiation in discourse, inanimacy, third person, and joint attention). The degree of incremental accessibility was determined by accessibility scores, which were calculated according to the numbers of features accessible for the referents mentioned.

The results showed that both the children and the mothers were influenced by the degree of incremental accessibility when choosing referential forms. They used an increasing number of informative forms (i.e., nominal forms) as the referents became less accessible, and vice versa. In other words, the Mandarin-speaking mothers and their children (since they were as young as 2;2) demonstrated the sensitivity to the incremental effects of accessibility. The results extend previous findings about incremental sensitivity in Inuktitut and English to Mandarin Chinese, a language of a very different typology. The results are further discussed in relation to the role of communicative informativeness and the development of Theory of Mind in children's acquisition of reference.

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Part of Your World: Linguistic Indicators of Immersion in Video Games

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Keywords: Immersion, Conceptual Blending, reference, video games

Immersion is a highly sought-after goal within the video games industry. Current measures of immersion are often invasive (e.g. Geelan, 2017), take specialist equipment (eye tracking) (e.g. Streicher et al., 2018), or rely on subjective measures (or a combination of these) (e.g. Johnson et al., 2018). In this paper, I intend to demonstrate that language is the key to measuring immersion real time without the need for special equipment or for participants to do any more than they would during a normal play session.

Using discourse analysis alongside mental space (Fauconnier, 1994), cognitive domain (Sweetser and Fauconnier, 1996) and conceptual blending theories (Fauconnier and Turner, 1998), I explore the language use of a group of Canadian Let's Players active on YouTube as they play through comparable games in the action adventure genre (Uncharted, Tomb Raider). I explore how the conceptualisation of character or avatar as an extension of the self can show player interest in the narrative of the game, loss of distinction between real and play worlds and thus their overall enjoyment and immersion in the game experience.

Preliminary analysis of the data shows that, where a player has a higher rate of immersion in a game, they are more likely to refer to a character in the first person, to use the character as the deictic centre for spatial reference, and to use expressions that treat character rather than player as Ego. This will be a direct result of a conceptual blend between the player and the character, as already seen in earlier research (Tea and Lee, 2004). It is further hypothesised that, in instances where immersion is broken, the pattern of reference will change to take on a more character-as-other standpoint.

It is hoped that this research is not only a benefit to an industry that is continuing to grow as a way to test and assess their games prior to release, but also to show the practical applications of cognitive linguistic research outside the discipline. This research can also add to our understanding of cognitive focus, interest and enjoyment in general, and how language is used to express our conceptual understandings of the real, digital and intermingled worlds in adult pretend play.

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Cognitive Dominance as a Driving Force of Concept Evolution in Arthurian Fiction

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Keywords: Cognitive Semantics, cognitive dominance, conceptual domains, linguistic means development.

The complex multilevel concepts of a particular socio-cultural and historical importance evolve embracing new knowledge and restructuring the old one. The integrative cognitive analysis embracing cognitive semiotics and semantics as well as discourse analysis establishes that the stable elements of these conceptual entities form the core, while the variable ones – the periphery. This structure is repeated on the linguistic level with the core elements usually more prominent and frequent. However, after completing the cognitive analysis of a particular concept the question of concept identity in different periods as well as the driving forces behind its evolution arises. We aim to show how the concept develops and how its content could be operationalized through linguistic means.

In our presentation we analyze several works of fiction (T. Malory “King Arthur”, M. Twain “A Connecticut Yankee...”, B. Cornwall “Excalibur”) featuring King Arthur – the legendary mythological hero. The analysis of adjectives, the balance between verbs of action and cognitive processes, the possessive case and other linguistic means portraying the main character are used in the key scenes, and allowed to come up with a set of major characteristics of this concept. The basic characteristics comprising this image (power, heroism, ability of being the ruler, bravery, and ability to fight) remain at the core and are stable in all three works. No matter the constituent parts of King Arthur description seem to be rather close yet verbalized by various linguistic means; we subconsciously perceive each new interpretation as a novel one. We suggest looking for the answer in the general cognitive mechanisms mapping new knowledge of the world into the already established structures.

In our research we devise the notion of a “conceptual dominant” based on the fundamental dichotomy of human processing of information: some features acquire particular significance, while the others serve as the conceptual background. The same notion or situation could be perceived differently giving rise to systematically different linguistic coverage. This has been advanced in cognitive linguistic studies in the concept of *salience* useful for semantics and syntax (Geeraerts, 2006), *reference point* (Langacker 1991), and *figure* (Talmy, 1983).

Particularly, differentiating the profiled figure and its background as a fundamental process of meaning construction over the continuum of language means development - turn out to be applicable. We show how the conceptual dominant gets formed in a socio-cultural system, orchestrating the semantic and syntactic means to verbalize a concept. The patterns of cognitive dominance are revealed in longer stretches of discourse. Our analysis of the fiction works of different periods indicates that the medieval mindset represented by romance discourse in Malory developed the image of King Arthur into its full and glory force with *nobility* as the salient feature (based on its frequency and semantic complexity in the text). Twain minimized the concept structure as much as possible since Arthur is certainly not the major focus of his attention. He reconceptualized *heroism* of Arthur displayed in an unusual way – in the ‘fighting’ against smallpox and death described through language of combat. Language of Cornwall makes Arthur archaic through semantic characterisation of all relational features in the conceptual domains, yet the dualism of profiling two qualities brought to the fore seem to be very modern, pertaining to *loneliness* of a strong and responsible ruler. The core qualities in the analysed novels distant in time remain to a substantial extent the same. The contrast is brought by the conceptual dominant as it profiles the relationship between the core and periphery.

Thus, the linguistic and cognitive construct of the conceptual dominant in the conceptual domains brings to the limelight only those semantic features that are based on facets of knowledge making them salient for the particular period of time and against the core - background. In conclusion, we suggest that the dominant mechanism is universal for any system keeping up with the dynamism of human consciousness.

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Fictive interaction in prose text: An experiment on prose-to-dialogue conversion

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Keywords: narrative, fictive interaction, open communication, stance triangle, cognitive pragmatics

Prose essay is intrinsically considered to be a type of 'narrative' that designates unspecified readers as its addressees. The idea that narrative as a monologue potentially has the dialogic nature has been developed since a series of theoretical research by Bakhtin (Bakhtin, 1986), but the mechanism under which prose text can be dialogic remains not clear.

The aim of this research is to clarify the cognitive characteristics of 'fictive interaction' (Pascual, 2014) in prose text, examining an experiment on converting a prose essay to dialogue, based on the concept of "open communication" (Okamoto et al., 2008), the communication format where integrated information is conveyed by a dialogue between two participants.

The experiment was conducted annually as part of the university lesson during fiscal 2013 to 2016. As participants, a total of 72 students took part in this study. They were given a short academic essay written in Japanese (approximately 1,400 characters) and were required to convert its content to a dialogue of two characters. The instruction is as follows:

- 1) To convey the contents in an easy-to-understand manner, conscious of its possible audience.
- 2) To make the characters and the scene settings clearly specified.
- 3) To avoid the full translation of the original text and extract its message.

As a result of the experiment, 73 prose-to-dialogue conversion data were acquired for the analysis data. The average number of turns in a dialogue is 19.27, while the maximum is 48 and the minimum is 6. The key concept in the original essay is explicitly mentioned in 42 dialogues and not in the other 31 dialogues. The relationship between the two characters is symmetrical (e.g. friends, couples, colleagues) in 58% and asymmetrical (e.g. parent vs. daughter/son, expert vs. non-expert, boss vs. subordinate) in 42%.

As a result of the analysis, in the case of two participants with asymmetrical relationships, the stance of 'evaluation' (DuBois, 2007; Sakita, 2017) is clearly distinguished between the two. The information provision is biased towards one participant, while the other tends to 'ask' for the motivation of preceding utterances of his/her interlocutor or to 'agree' as approval of preceding utterance contents. On the other hand, individual information and conceptualization (i.e. generalization, categorization, embodiment, extension, deduction, etc.) found in the original text tend to be shared by both participants, regardless of the relationship between them. At this time, the participant's stance is oriented not only toward the information conveyed by his/her interlocutor, but also toward the interlocutor's conceptualization of topics.

In conclusion, it is suggested that the fictive interaction in prose text is based on implicit motivations for individual assertions and conceptualization of topics, which the prose-to-dialogue conversion can make explicit. Since multiple participants can bring the writer's thought in prose text into shape with a different stance to it, we found that the stance alignment is needed for creating a dialogue in the open-communication style.

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Viewpoint phenomena in academic discourse: A Cognitive Linguistics account

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Keywords: viewpoint, academic discourse, cognitive grammar, subjectivity, cognitive semantics

This paper is concerned with the linguistic expression of viewpoint in academic writing. Traditionally regarded as a highly impersonal type of discourse, academic prose has, in the last two decades, increasingly drawn the attention of researchers exploring manifestations of author subjectivity, and a growing body of linguistic research has demonstrated that research articles, monographs, university textbooks, etc. are far from objective or "faceless" acts of communication (Hyland 2005). Although this should be hardly surprising in view of the perspectival nature of meaning posited as one of the fundamental tenets of Cognitive Linguistics (Geeraerts & Cuyckens 2007: 5), there has been little CL research into the subjective aspects of meaning in academic writing, with the existing studies mostly focusing on metaphor and metonymy. Yet, as noted by Dancygier (2016: 287), "viewpoint becomes a concept as indispensable as the cognitive linguistic reliance on the body." Therefore, since CL is particularly well suited to the study of viewpoint-related aspects of linguistic meaning, my paper seeks to redress this situation by proposing a CL account of several types of viewpoint phenomena typical of academic writing.

Apart from the already much-discussed issues of epistemic modality and evaluation, the paper will address, *inter alia*, the use and semantic structure of the so-called abstract rhetors (Halloran 1984), as in *The analysis shows that...* or *This paper investigates the problem of...*, and manifestations of authorial presence in the text, along with the various grammatical means of giving it more or less prominence. The discussion will be based on the conceptual framework offered by Cognitive Grammar, including such notions as perspective, prominence, subject-setting construction, subjectivity and subjectification (Langacker 1987, 1991, 2002).

The semantic phenomena subsumed under the model of viewpoint delineated in the talk will be illustrated with authentic language material from English articles and monographs in linguistics. Where pertinent, examples will also be provided from Polish translations of English texts to show the significance of the topic for CL-inspired research on viewpoint shifts in translation.

The discussion will, hopefully, demonstrate the relevance of CL research into viewpoint phenomena in academic discourse in general, spark greater interest in this area of study and suggest possible lines of investigation.

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Theme Session

Roles of gesture and body movement in communication

Organizers: Harumi Kobayashi (Tokyo Denki University) and Sotaro Kita (University of Warwick)

Gesture and body movement often play a central role in human ostensive communication. For example, the sentence “This melon is good” can convey a certain meaning in its own right, but it conveys completely different meanings when it is uttered by a customer in a shop, who points at the referent fruit with a glance to the store owner and conversely, the store owner’s pointing or reaching to the referent with a glance to the customer. The former may mean “I want this melon, because it looks delicious.” and the latter may mean “I recommend this melon, because it is delicious.” Thus, gesture and body movement are an essential part of human communication.

This theme session focuses on the fundamental functions of gesture and body movement in human communication and explore the relationships between these and language. In particular, as one of Evolving linguistics sessions, this theme session pays special attention to possible relationships between emergence of language and gesture/body movements. Deictic gestures such as pointing is claimed to play an important role for human intention sharing both in the past when humans acquired language and the present when children acquire language.

Sotaro Kita will first give an overview of different types of gestures and body movements as well as the roles of these in human communication. Then, he will discuss his experimental studies, showing that children’s seeing iconic gestures have various communicative effects and lead to better performance in the memory and word learning. Eriko Yamamoto will present data on infants’ understanding the body movements and discuss the importance of infants’ experience of own body movements in understanding others’ body movements. Yuka Ishizuka will present her work on children with autism spectrum disorder and will show that gesture imitation training encouraged both the expression of gesture and the linguistic comprehension and production of it. Ulf Liszkowski will discuss the studies on ontogenesis of pointing gestures, and show that one-year-old infants communicate using attention-directing gestures and vocalizations before acquiring language. He will also report their recent cross-cultural and longitudinal findings on infant pointing and show that infant pointing is an outcome of social-interactive practices in the first year of life. Tetsuya Yasuda examined whether adults use different gestures and eye gaze according to whether they are teaching labels for the whole object or a part of the object. He will show that adults certainly provide appropriate nonverbal cues. Finally, Harumi Kobayashi discusses the roles of pointing gesture in language development and show that young children are sensitive to different pointing gestures and preschool children spontaneously produce these.

Speakers & Titles

1. Sotaro Kita (University of Warwick)
The role of seeing gestures in children’s word learning and event memory
2. Eriko Yamamoto (The University of Tokyo)
How do infants perceive and understand the body movements of others?
3. Yuka Ishizuka (Japan Society for Promotion of Science, University of Tsukuba)
Gesture imitation increases reciprocal communication in children with autism spectrum disorder.
4. Ulf Liszkowski (Universität Hamburg)
Ontogenetic origins of the human pointing gesture
5. Tetsuya Yasuda (Tokyo Denki University)
Coordination of pointing and eye gaze in adult teaching whole/part object labels
6. Harumi Kobayashi (Tokyo Denki University)
Children’s comprehension and production of different pointing gestures



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Evolving linguistics: Integrative Studies of Language Evolution for Co-Creative Communication

The role of seeing gestures in children's word learning and event memory

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Keywords: gesture, word learning, language development, memory, iconicity

Iconic gestures refer to communicative gestures that depict motion, action and shape (McNeill, 1992). For example, as a speaker says, "she throws a ball", she might enact a throwing motion with her hand, or as she says, "the ball hit the wall and bounced back", she might trace the trajectory of the ball with her finger.

Iconic gestures can convey information not in speech to the recipient. However, in most previous studies, iconic gestures referred to entities not present in the speech event (e.g., an event that speaker had experienced in the past). Thus, it is not well understood how iconic gestures contribute to communication in ostensive situations, where the recipient can see both an iconic gesture and its referent. This presentation discusses how adults' iconic gestures in ostensive situations influence children's word learning and event memory. In particular, we tested whether iconic gestures schematise key information in the scene, and guide children attention to the key information. The goal of the presentation is to propose a new theoretical framework regarding different types of communicative effects of iconic gestures. This theoretical framework will draw on the following two key studies.

The first study (Mumford & Kita, 2014) showed that that adults' gestures can affect children's schematization of an event during word learning. In this study, an adult speaker used a novel verb ("Look! She is blicking") as 3-year-old children (N = 120) watched a video scene in which a hand moved objects in a particular way (pushing strips of cloth) into a particular configuration (vertical stripes). The novel verb was ambiguous between two possible referents: acting on objects in a particular manner (pushing) or causing the end state (making vertical stripes). When the adult accompanied the novel verb with a gesture highlighting the manner of action, children interpreted the verb as characterizing manner; when the adult accompanied the novel verb with a gesture highlighting the end state, children interpreted the verb as referring to making the end state. Thus, when learning a novel verb while watching a complex scene, children used the speaker's gestures to schematize the scene. This allowed children to focus on only one aspect of the scene, leading to different inferences about the referent.

The second study (Aussems & Kita, in press) showed that that adults' gestures can affect children's schematization of an event in a memory task. In this study, an adult showed 3-year-old children (N = 72) a video scene in which a person moves from the right to left in an unusual manner (e.g., walking as she repeatedly bends the upper body forward 90 degrees). While showing the video to children and saying, "Wow! Look at what he (she) is doing!", an adult produced either an iconic gesture that depicts the manner of walking, or an interactive gesture (e.g., showing a surprise by raising both hands with the palms facing forward), or no gesture. Iconic gestures had three types, depending on what the hand represented: hand-as-foot, hand-as-leg, hand-as-body. A few minutes later, children were shown pairs of videos and asked to recognise which one of the two videos they had seen (one video was indeed a video shown before, and the other foil showed either the same action by a different actor or a different action by the same person). Children recognised the action better when they have seen an iconic gesture during encoding than when they saw an interactive gesture or no gesture. Furthermore, children recognised the actor better when the hand represented the whole body, representing a large portion of the person. This indicates seeing iconic gestures while encoding events facilitated children's memory of those aspects of events that are schematically highlighted by gestures.

The key claim of the new theoretical framework is that iconic gestures do far more than just conveying the information encoded in the gestures (this basic effect is illustrated by Mumford & Kita, 2014). For example, iconic gestures serve a deictic function of guiding the addressee's attention (as illustrated by Aussems & Kita, in press). We further discuss other types of communicative functions of iconic gestures based on other findings in the literature.

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Does voluntary production of body movement have long-term effects on infants' learning about others' body movement?

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Keywords: Body movements, infant, rhythmic movement, habituation, motor learning

Body movement such as gesture is a fundamental cue for establishing social communication with others from an early stage in human development. Developmental studies have revealed that infants improve their ability to recognize others' body movements by observing and interacting with adults (e.g. Yamamoto et al., 2019). Previous research has shown that infants between 5 to 10 months perform voluntary rhythmic movements when they interact with caregivers (Thelen, 1981). However, little is known about whether these voluntary rhythmic movements affect recognition of others' body movements. In the current study, we examined if infants' voluntary production of body movements had a long-term effect on the recognition of others' body movement.

Ten-month-old infants (N = 30, 16 girls and 14 boys) participated twice in the study at an interval of one week. We utilized the infant-controlled habituation procedure with four types of video stimuli depicting abstract body movements (videos A, B, C, and D; see Figure 1). On the first day, infants were initially habituated to video A as the target stimulus (Habituation 1), and then they were presented with video A again and video B as a novel stimulus (Test 1). After one week, infants were habituated to video C (Habituation 2) and were then presented with video C again, video A as the target stimulus, and video D as a novel stimulus (Test 2). We evaluated the times infants looked at the target stimulus and novel stimulus in Tests 1 and 2 in order to assess infants' discrimination of others' body movements. We recorded infants' body movements in reaction to the target stimulus during Habituation 1 using a 3D motion tracking system (Oqus 300, Qualisys) to assess entrainment between infants' body movements and target stimulus.

We found that infants showed shorter looking times in reaction to the target stimulus compared to the novel stimulus in Tests 1 and 2. These findings indicate that infants were able to discriminate the target stimulus from the novel stimulus not only in Test 1 but also in Test 2, which was conducted one week later. In addition, we found that these 10-month-old infants voluntarily moved their body to the rhythm of the target stimulus during Habituation 1 and that there was a significant positive correlation between infants' entrainment level and their capacity to discriminate others' body movements in Test 2. These results suggest that infants' voluntary movements have a long-term impact on their recognition of others' body movements.

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Gesture imitation increases reciprocal communication in children with autism spectrum disorder

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Keywords: gesture, children with autism spectrum disorders, imitation, reciprocal communication, imitation recognition

Previous studies of typically developing (TD) infants have identified close connections between gestures and communication. However, children with autism spectrum disorder (ASD) have difficulty in understanding and expressing gestures in natural interaction. Children with ASD also imitate gestures less frequently and less accurately than TD children and children with other developmental disorders (Vivanti et al., 2014). One of the difficulties in understanding and expressing gestures and acquiring gesture imitation may be the difficulties in paying attention to others (Vivanti et al., 2014).

In this study, we examined the effects of gesture acquisition on promoting reciprocal communication in children with ASD. In particular, we focused on the fact that they are sensitive to "imitation recognition." Nadel (2004) shows that just like TD children, children with ASD can recognize when their vocalization and gestures are being imitated. Our research revealed that children with ASD would be more likely to communicate with the adult when the adult imitated children's responses immediately (which is called "contingent imitation") compared with when the adult did not imitate but gave a vocal response (Ishizuka & Yamamoto, 2016). Based on this result, we conducted gesture imitation training using contingent imitation for nonverbal children with ASD.

This study was approved by the research ethics committee at the Keio University. Six Japanese male children with ASD (Chronological age: four to five years; Developmental age: one to two years). Developmental age was measured using the Kyoto Scales of Psychological Development 2001 (KSPD). At the time of study, all participants attended kindergarten. All children came to laboratory once or twice a week. A multiple-probe design of single-subject research methodology was used to determine the effectiveness of the gesture imitation training using contingent imitation. Target gesture modeling stimuli were different across participants and selected based on participant's behavior repertoire. In training phase, the therapist immediately imitated all of the children's actions and vocalizations (contingent imitation).

The result showed that gesture imitation training encouraged not only the expression of new gestures but also the linguistic comprehension and the production on the gesture. In addition, after training, the time spent looking at the adult's face had extended, and the duration of reciprocal communication was also prolonged. The result showed that acquisition of gesture plays an important role in communication in children with ASD. It is suggested that children with ASD can recognize when their gestures are being imitated by adults and this leads to understanding and sharing the intention of others. Therefore, gesture could be an important clue for intention sharing in communication.

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Ontogeny of the human pointing gesture

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Keywords: prelinguistic communication; socialization; reference; gesture; pointing

The canonical pointing gesture emerges toward the end of the first year of life and is predictive of the development of linguistic communication (e.g., Carpenter et al., 1998; Iverson & Goldin-Meadow, 2005). Experimental findings from the past decade have revealed the communicative and cognitive complexities underlying prelinguistic infants' pointing when it has just emerged (Liskowski, 2018). However, much less is known about the processes of its very emergence.

I present recent and new evidence from cross-cultural (Salomo & Liskowski, 2013) and longitudinal studies to show that social-interactional experience has a profound and predictive effect on the very emergence of the human pointing gesture and its subsequent development. In two longitudinal studies from 8-13 months (N=29; N=40) with monthly assessments in the lab and home environments, we find on the caregiver-level that parent pointing at 8 months predicts the age of emergence of infant pointing. Further, parents of 6-month-olds point significantly less than parents of 8-month-olds. On the child-level, we find that show-gestures at 9 months, point-following, and whole-hand pointing predict the age of emergence of pointing.

The findings reveal that prelinguistic infant pointing is not just foundational to linguistic communication. Infant pointing is as much an outcome of social-interactional practices in the first year of life. These early social-interactional practices likely start out simple in routines of object transpositions, which scale up through the choices of objects to include offers, rejections, and requests of these, and so referential exchange. They build on directed activity and attentional processes paired with a uniquely human, deeply social motivation to join activities (Liskowski & R ther, in press).

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Coordination of pointing and eye gaze in adults teaching whole/part object labels

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Keywords: first language acquisition, teaching object labels, eye gaze, deictic/pointing gesture, ostensive signals

When learning word meanings, it is essential to identify the relationship between the word and the referent concept. Young children have the ability to understand the referential intentions of others conveyed by pointing gestures and eye gaze (Doherty, Anderson, & Howieson, 2009; Tomasello, Carpenter, & Lizskowski, 2007). To teach novel labels to children, adults use eye gaze and pointing gestures as ostensive signals. However, exactly how they are delivered is not well understood. Yasuda and Kobayashi (2012) reported that adult caregivers used demonstration, or touch-point, when they taught labels of part or whole objects to children. The caregivers touch-pointed the part of the object when teaching part names. However, when teaching the whole label, they used showing cues rather than pointing cues. It was suggested that the caregivers had monitored children's attention, and acted using referential gestures dependent on the type of label. As ostensive signals, pointing gestures and gaze are important to convey referential intentions (Csibra & Gergely, 2009).

In this study, we used Yasuda and Kobayashi's (2012) data to understand whether adults express different pointing gestures and eye gaze dependent on whether they are teaching a label for whole or part objects. This data consisted of a corpus delineating caregiver's gaze and referential gestures when teaching whole or part labels of objects to children. For example, in the caregiver's gaze class of "gaze to a child," the caregiver looked at the child's face or body. We classified four types of caregiver's actions: 1) referential gesture with gaze to the child; 2) showing with gaze to the child; 3) referential gesture with gaze to the referent; and 4) showing with gaze to the referent. To examine the caregiver's action and eye gaze, a Gaze direction (2: child, referent) x Action (2: referential gesture, showing) mixed ANOVA was performed for each type of teaching. The results showed that when caregiver taught the part name, they looked at the object with referential gestures such as pointing and demonstration ($p < .05$). However, if the caregiver taught the whole name, they looked at the child while holding and showing the object ($p < .05$). It appeared that the function of ostensive signals can be used to make a referent more specific, or to make a referent more ambiguous. We found that the adults indicated whether the label referred to the whole/part object by using pointing gesture and eye gaze. Therefore, adults provide nonlinguistic cues through referential actions and eye gaze to assist children's understanding of the adult's referential intentions.

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Children's comprehension and production of different pointing gestures

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Keywords: first language acquisition, pointing gesture, ostensive communication, object labels, referential intention

Pointing gestures are an important cue to specify a referent in ostensive communication. Our research focused on whether young children understand and produce atypical, or different, types of pointing gestures. Although it is known that children begin to perform pointing gestures at an early age for communication purposes (Liszkowski, et al., 2004; Tomasello, 2010), most previous studies have only examined typical index-finger pointing, at some distance from the referent, with the intention to communicate regarding the referent. The referents in these studies were primarily whole objects. However, pointing is useful even when the referents are not distinct in the environment, for example, parts embedded in whole objects. In these cases, typical index-finger pointing from a distance seems to be ineffective, or ambiguous, in specifying the object parts.

Studies on comprehension of pointing suggest that children understand unfamiliar pointing gestures (Kobayashi & Yasuda, 2012; Kobayashi, 2018). We examined whether 2-year-olds, 4-year-olds, and adults can learn part labels embedded in whole objects when they observed an adult pointing at, and touching, the object part (touch-pointing). We found that, unlike adults, children had difficulty learning using touch-pointing. However, in a different condition, under which a tiny circular motion of index-finger was added to the pointing, children, including 2-year-olds, effectively learned the part labels.

A recent study by Kobayashi (2018) examined children's comprehension and production of pointing using more complex object sets and found an interesting asymmetry in production of pointing. Most children understood unfamiliar pointing, as suggested in our previous study, but rarely used, or imitated, the presented unfamiliar pointing when presented. Instead, they used other types of pointing, including typical (distant) pointing, touch-pointing, or tapping to specify object parts. We found that children readily "replace" unfamiliar pointing gestures with more familiar ones, and sometimes do not recognize typical pointing may be ambiguous in specifying object parts.

Overall, we found young children understand and produce atypical, and different, types of pointing gestures. However, their performance was not comparable to that of an adult, and was still undergoing development. The findings suggest that higher levels of ostensive communication skills are needed to facilitate the proper use of pointing gestures.

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Reading Journal Abstracts: An Eye-tracking Study of EFL University Students Online Reading Behavior

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Keywords: academic L2 reading, online reading, eye-tracking, eye movement in reading, journal abstracts

This study was conducted to examine the online reading behavior of EFL university students as a fundamental component of their academic writing. In particular, this study investigated how university EFL students read journal abstracts online. Journal abstracts are important sources of information as they summarize, describe, and highlight the major sections of a journal article and they aid students in classifying the paper as relevant to their study topic and purpose (Alspach, 2017). In this time of clicks and flicks, academic texts have become more accessible online to EFL university students. Whether on computers or mobile devices, such as gadgets and smartphones (Tanjung, Ridwan & Gultom, 2017), the attitudinal change of reading online is becoming common (Jabr, 2013).

Participants in this study were 10 Hotel Management students selected purposively based on their English academic performance in the first semester of 2017-2018 and were classified based on their English competency, as either high or low. Each classification had five respondents. They were subjected to reading an online journal abstract of an article published in 2016 in the *International Journal of Hospitality Management*. They were assigned to a laptop equipped with the GP3 Eye tracker to capture eye tracking measures (i.e. time view in a given area) while they read the stimuli. "Measuring eye movements during reading is one of the most precise methods for measuring moment-by-moment (online) processing demands during text comprehension. Cognitive processing demands are reflected by several aspects of eye movement behavior, such as fixation duration, number of fixations, and number of regressions" (Raney, Campbell & Bovee, 2014, p. 1)

The study reveals that participants with different competency levels exhibited somewhat different viewing patterns. Highly competent students spent less time reading the article's abstract, such as journal's title, article's title, objective, findings, and conclusion. However, the competent students spent longer time reading on methodology compared to low competency students. To that end, this section was also most frequently viewed by competent students, they also regressed to this area after reading other sections of the abstract. In particular, there were not much regression, and the sequence was, on average as follows: Journal Name, Year, Article Title, Objective, Methodology, Findings and Conclusion. Another common aspect shared by these two group of individuals, is the fact that both did not read the year of publication.

To supplement the results of the eye-tracking study, in-depth interviews were conducted where respondents revealed their motivations for reading and their strategies for an effective online academic reading experience.

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Image Schemas in Second Language Learning of English Prepositions: An Event-Related Potential Study

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Keywords: Image schemas, English prepositions, second language learning, CALL, ERP

Image schemas are dynamic patterns of recurrent bodily experience (Johnson, 1987). There has been converging evidence supporting that language comprehension relies on image schemas (Rohrer, 2005). During language processing, people create embodied construals of spatial representations (Gibbs, 2005). As each language highlights slightly different conceptualizations of the spatio-physical world, second language (L2) learners often face challenges mapping the differences between their L1 and the L2 representations (Munnich & Landau, 2010). Schema-based instruction, which expose learners to the target L2 schematic representations, have been suggested to be a plausible solution to this learning problem (Tyler, 2012; Wong et al., 2018).

The current study was the first to employ a computer-based training paradigm together with an event-related potential (ERP) approach that examines the neurocognition of acquiring English prepositions via schema-based instruction. 51 Chinese-L1 intermediate EFL learners were trained in a sentence-picture matching task. The participants were randomly assigned to a schema-feedback group (SF) or a correctness-feedback group (CF). The SF group was given the image-schematic representation that is mapped to the sentence as well as a verbal explanation of the mapping. The CF group was only informed of whether their choice was correct or wrong. Before and after training, participants were examined by an acceptability judgment test (AJT) (behaviorally and with ERPs). The AJT measured the processing of the target preposition (*He waved at the mosquitoes*), distractor preposition (*waved to the mosquitoes*), and unacceptable preposition (*waved across the mosquitoes*). We predict that the processing of distractor prepositions is most problematic for learners.

At the pretest, no significant difference was found between the two groups. Behavioral responses showed a significant main effect for semantic violation, which confirmed our prediction. Target prepositions showed higher accuracy than unacceptable prepositions; unacceptable prepositions showed higher accuracy than distractor prepositions. Both behavioral and ERP results showed a main effect for time, indicating significant learning effects after training.

At the posttest we found an N400 component between 400-500 ms post preposition onset. We found a three-way interaction between preposition type, feedback type, and time. The amplitude of the N400 induced by schema-feedback was larger than what was induced by correctness-feedback in the processing of distractor prepositions, but not of target or unacceptable prepositions. This suggests that schema feedback stimulated learners' strong brain reaction to the semantic abnormality in the processing of distractor prepositions, albeit correctness feedback failed to achieve a comparable effect. The above findings provide strong neurological evidence suggesting that schema-based instruction promotes deep learning of poorly acquired L2 knowledge (Tyler, 2012; Zhao et al., 2018).

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Linguistic storage beyond the word level: The effect of multiword frequency on well-formedness of spoken utterances in aphasia

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Keywords: usage-based approach; aphasia; multiword frequency effects; whole-form processing; spontaneous speech.

Frequency effects are widely recognised in aphasia research and clinical practice (e.g. Whitworth, Webster, & Howard, 2014), but mainly only at single-word level. This is in line with the rule-based approach to language that remains influential in aphasiology, in which linguistic storage, and thus frequency effects, are mostly limited to single words. However, this view is increasingly being questioned in other language research, with mounting evidence that frequency effects are pervasive at various utterance sizes and degrees of schematicity (e.g. Ambridge, Kidd, Rowland, & Theakston, 2015). This topic is starting to gain momentum in aphasia (e.g. Gahl et al., 2003; Hatchard, 2015) but such research remains scarce, especially in spontaneous speech. Examining multiword frequency effects in this latter area could shed new light on why a speaker with aphasia can produce some utterances in a well-formed way but not others. This unevenness in well-formedness may correspond with whether the utterance has been retrieved as a whole or assembled from components. From a usage-based perspective, this should depend on the frequency of the utterance in everyday usage: if it is frequent enough, the speaker should be more likely to have encountered it more and consequently store and retrieve it as a whole, making it more likely to be well-formed on production (Bybee & Scheibmann, 1999).

The current study examines any link between multiword frequency and well-formedness of spoken utterances in spontaneous speech by native English speakers with aphasia. The utterances examined are from Cinderella narratives by six participants and 20-minutes' conversation by one of these speakers. Each utterance was coded as 'well-formed' or not, whereby 'well-formed' meant that it was an acceptable English word sequence (in terms of morphosyntax and semantics) and fluently produced (uninterrupted by hesitations, phonemic errors or non-words). The multiword frequency of each utterance was retrieved from the Spoken British National Corpus (Davies, 2004-) and utterances were coded as either 'attested' (ten or more instances in the corpus) or 'unattested' (under ten instances). Any relationship between utterance well-formedness and attestation was then assessed statistically.

Results from the narratives indeed show a relationship between well-formedness and multiword frequency in five of the six participants. On examining whether frequency was linked more specifically to 'acceptability' or production fluency (as defined above), this was the case for fluency, but not acceptability, in four of the same participants as for well-formedness overall. Analysis of the conversation sample is currently ongoing. The relationship between well-formedness and multiword frequency could offer some explanation for the within-speaker unevenness in spoken language capabilities observed in aphasia. By supporting a usage-based approach to language, these results highlight this as a promising theoretical perspective from which to characterise language in aphasia. Importantly, they suggest a need to consider frequency effects beyond the word level in clinical practice, for example controlling these in aphasia assessments and potentially exploiting them in therapy.

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Paradigms: cognitive plausibility and pedagogical application

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Keywords: morphology, second language acquisition, pedagogy, Russian, computational experiment

Russian corpus data and a computational experiment suggest that learning of inflectional morphology should focus on the most frequent word forms rather than presenting entire paradigms. These research findings are implemented in a new pedagogical resource, the Strategic Mastery of Russian Tool (SMARTool).

Among major world languages with large numbers of second language learners, Russian has relatively complex inflectional morphology: each noun has at least 12 wordforms, each adjective has 28 wordforms, and, while verbs vary, 100 or more forms are typically possible for each verb. Mastering these paradigms is a daunting task for L2 learners. And there is evidence that paradigms represented as matrices of equiprobable cells is not a cognitively plausible model for native speakers either. We offer a usage-based approach to the question of how to model inflectional paradigms.

Corpus data (Janda & Tyers 2018) reveals that for any given Russian lexeme, only a few (usually 1-3) wordforms account for nearly all attestations, while the remaining wordforms are rare or unattested. Our computational learning experiment shows that learning of Russian inflectional forms is best when training focuses only on the highest frequency wordforms: accuracy of prediction is consistently higher and severity of errors lower. These findings lend support to the idea that inflectional paradigms have the cognitive status of radial categories with prototypical and peripheral members (Nesset & Janda 2010). This cognitive model also accounts for the “Paradigm Cell Filling Problem” (Ackerman et al. 2009): native speakers of inflectional languages like Russian routinely recognize and produce peripheral wordforms that they have never been exposed to. Because the profile of prototypical wordforms is different for each lexeme, wordforms that are peripheral for some lexemes are prototypical for others, facilitating triangulation. For example, the Dative Plural wordform *dulam* of *dulo* ‘muzzle’ is so rare (2 attestations in 283M words, Russian National Corpus) that most native speakers have probably never encountered it. However the Dative Plural *slovam* is among the most common wordforms of *slovo* ‘word’, supporting analogy from the prototype of one lexeme to the periphery of another.

The SMARTool is a free, publicly available web resource that aims to help L2 learners of Russian achieve native-like prototype-periphery radial category structure for wordform paradigms. The SMARTool provides access to the most used wordforms, plus the grammatical constructions and collocations most typical for each noun, verb, and adjective. Representative grammatical constructions and collocations are determined based on data from the Russian National Corpus (<http://ruscorpora.ru>) and the Russian Collocations Colligations Corpora (<http://cococo.cosyco.ru>). Over 3000 Russian lexemes are represented in the SMARTool, culled from frequency lists and textbooks for a total of 500 each at CEFR levels A1 & A2, 1000 each at CEFR levels B1 & B2. Lexemes can be filtered according to proficiency level, topic, textbook, and grammatical categories. For each lexeme, the SMARTool provides the three most prototypical wordforms, plus example sentences that show how those wordforms are used, yielding over 9000 wordforms and example sentences. Users get a parse of each wordform and they can access a translation for each sentence with a button, as well as audio in both male and female voices. Interactive exercises are also under development.

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Cognitive approaches to L2 pedagogy: challenges and shortcomings of empirical testing

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Keywords: Spanish, assessment, L2 pedagogy, testing, cognitive grammar

Applying Cognitive Linguistics-inspired principles to the teaching of L2 grammar considerably enhances student comprehension and access to the representational world afforded by the target linguistic system (Llopis-García 2016, Alonso-Aparicio & Llopis-García 2019). A cognitive curriculum design for the explicit teaching of grammar provides learners with operative principles in the L2 that will enable them to control their performance without the sheer memorization of random lists. Experience in the classroom tells us that an approach of this nature is pedagogically more effective than a classical-prescriptive instruction, which often limits itself to offering the student a set of pre-established rules and arbitrary exceptions.

The aim of this paper is to contribute to the understanding of the potential of a cognitive-based grammatical instruction, but also and especially to the shortcomings and challenges afforded by current and traditional assessment design.

To this end, we will discuss the results of three classroom quasi-experimental studies and their assessment tests with A2 level (CERF standards) students at the university level in their learning of the aspectual contrast in Spanish / L2 (preterit vs. imperfect). A cognitive instruction group (which included the perspective of an embodied prototype within a mental space) was compared with a classic-prescriptive instruction (which associates each verb tense with a set of temporal markers) and a control group. Through a pretest / posttest design, the first study took up three instruction sessions (75 min each), and the assessment was comprised of a grammaticality judgment task and a gap-filling task. The results favored the cognitive-pedagogical instruction, but only in the production tasks. The second study created a replication and extension of the first. This time, four sessions were used for instruction, and learning was measured by two pedagogical translation tasks. Unlike the first study, the results do not reveal significant differences between the experimental groups in the posttest. The results of these two studies can be discussed within the framework of the Theory of Acquisition of Skills (Anderson and Lebiere 1998, Thompson 2018), which considers systematic practice as a key element in the development of knowledge. We posit, if learning were measured at an earlier stage of acquisition, would there be significant differences between the experimental groups? A third replication study was designed to answer this question. The degree of understanding (versus mastery in the use) of the target forms after one single session was measured. The results of the third study reveal an equal performance of both instruction groups, without statistical differences.

Our conclusions point to shortcomings in the design of assessment tests, which traditionally use fill-in-the-blank tasks (well-known to L2 students) that are in line with traditional instruction and no doubt favor it. This affords the cognitive group the merit of performing *at least* as well as the traditional one after having received a completely different pedagogical approach. We will propose alternative testing tasks that explicitly factor in a cognitive-based didactic approach and we will suggest new avenues for assessment design in future research.

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The effects of primary metaphor on the development of EFL learners' pragmatic proficiency

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Key words: metaphor, spatial concept, politeness, pragmatic proficiency

The present study was inspired by theoretical considerations in cognitive linguistics connected with the metaphorical idea of POLITENESS IS DISTANCE, applying them to develop Japanese learners' knowledge of the different degrees of politeness attached to English requests. Previous studies discovered that Japanese EFL learners have difficulty in adjusting politeness level of English requests depending on social variables such as power and closeness between speakers and hearers, and difficulty level of requests.

The total number of 89 participants in three intact classes at a university in Japan took part in the present study and they were randomly assigned to two treatment groups, such as cognitive linguistic treatment (CL) ($n = 27$) and non-cognitive linguistic treatment (NL) ($n = 32$), and one control group ($n = 30$). The participants majored in science and engineering and they were monolingual Japanese speakers learning English as a foreign language for eight years in Japan. Their average age was 20 years and their English proficiency was assessed to be at the intermediate level.

The cognitive linguistic approach is composed of two components: (a) watching an illustration based on HIGH-LOW and NEAR-FAR metaphors about the English requests under the instructor's guidance and (b) engaging in the problem-solving tasks. The non-cognitive linguistic approach consisted of two components: (a) watching the list of English requests under the instructor's guidance and (b) engaging in the problem-solving tasks.

The present study adopted a pre-test and three post-tests to measure the effectiveness of the cognitive linguistic and non-cognitive linguistic approaches through a discourse completion test (DCT), an acceptability judgement test (AJT), a retrospective evaluation questionnaire, and interviews. The data from the DCT and the AJT were analyzed quantitatively and qualitatively.

The results of the present study revealed that the cognitive linguistic approach group outperformed the non-cognitive linguistic approach and control groups in the DCT and the AJT, and further suggested that the spatial concept-oriented metaphor awareness-raising approach is an effective mnemonic device in developing Japanese EFL learners' pragmatic proficiency, helping them to facilitate deep processing form-meaning-context connections and keep long-term retention of them.

Poster session on the Aug. 7th

W01	Sh. Hirasawa	<i>Side by side</i> as a preposition	change
W02	T. Hayashi	A Quantitative Perspective on Grammaticalization: The Case of Deverbal Prepositions in English	change
W03	S. Hu	Discourse Functions of “Ke(re)do(mo)” and “Copula+Ke(re)do(mo)” at the Left Periphery (LP) in Spoken Japanese: A Functional Expansion Perspective	change
W04	M. Kawakita	Relation between Japanese character types and grammaticalisation	change
W05	M. Takahashi	A Diachronic Dimension of Grammaticalization: With Historic Examples of Negative Adverbs in English and Japanese	change
W06	T. Wang & Y. Shi	The emergence of passive structure with obligatory agent phrase in Chinese	change
W07	T. Yu	Constructional integration in grammaticalization: A cross-linguistic study of complementizer in Mandarin and English	change
W08	Sh. Xue	A Cognitive Link between Quantification and aspect: The Case of Chinese “Yousuo”	change
W09		cancelled	
W10	Sh. Wu	A corpus-based study of the Chinese synonymous approximatives shangxia, qianhou and zuoyou	corpus
W11	S. Kato & M. Asahara	Exploring metaphorical expressions in Japanese newspaper-article corpora	corpus
W12	R. Kikuchi, S.Kato & M. Asahara	Collecting figurative expressions using indicators and a semantic tagged Japanese corpus	corpus
W13	H. Hwang, Y. J. Hye & H. Kim	How Do Different Processes of Speaking and Writing affect Syntactic Complexity in Child Second Language Production?	corpus
W14	Y. Zhong	Pleasing to the Mouth or Pleasant Personality: A corpus-based study of conceptualization of desserts in online Chinese food reviews	corpus
W15	G. Junčytė	Middle marked intransitives and intransitives with the "complex formant" in Lithuanian: a corpus-based study	corpus
W16	N. Matsumoto	The Complex Interaction of Construal Operations: Multi-verb Sequences in World Englishes	corpus
W17	S.-F. Chung, M-Ch. Lin & Ch.-W. Chen	The Chinese PAINLESS: A Corpus-based Analysis	corpus
W18	Zh. D. & Q. Xu	A Study on Acquisition of Sentence-final Particles among Chinese-speaking Children	acquisition
W19	M. R. Espinosa-Ochoa	The relevance of anchoring and the duration of events in the early acquisition of Spanish verb morphology and its tense-aspect meaning	acquisition
W20	S. Hartmann, A. Quick, A. Backus & E. Lieven	Bilingual language acquisition from a usage-based perspective: A corpus study on the code-mixing of a German-English bilingual child	acquisition
W21		cancelled	acquisition
W22	M. Pleyer	Perspectivation and Pretend Play in Language Acquisition: A Corpus Study	acquisition
W23	M. Takanashi	L1 Acquisition of Japanese Deictic Verbs Iku Meaning ‘to Go’ and Kuru Meaning ‘to Come’: Focusing on Motion Event Description	acquisition
W24	K. Nakamura	The Expression of Motion Events in Japanese and English Narratives: A Developmental Approach	acquisition
W25	A. Bordilovskaya, K. Eguchi, M. Mano & Y. Yoshinari	Inter- and Intra-Typological Variations of the Representations of Complex Trajectories	motion

W26	K. Eguchi, M. Mano, A. Bordilovskaya, Y. Yoshinari & Y. Matsumoto	Cross-linguistic tendency of Path encoding: A production experiment of 14 different Paths in English, Hungarian, Italian, Japanese, and Russian	motion
W27	T. Molés-Cases	The expression of Manner-of-motion in inter- and intratypological translation scenarios: a comic-based analysis	motion
W28	Ch. Lin	Interaction of spatial prepositions ti7, tiam3 and tua3 and verbs in Taiwan Southern Min: From a corpus-based approach	motion
W29	Th. S. H. Yau	Conceptualization of motion event by Chinese-English Bilinguals: A study of difference between Cantonese and Mandarin	motion
W30	Y.-H. Liao	Motion Events in L2 Chinese: verbal and non-verbal behaviour across languages	motion
W31	J. Qu	How Japanese and Chinese advanced learners of English found the frog: A SLA study on rhetorical style of motion events	motion
W32	K. Hill	Applying Cognitive Linguistics to Content and Language Integrated Learning through L2 Polysemous Lexis Research	applied
W33	Y.-D. Lai	Relation between Perception of Sound Symbolism and Effects of a Cognitive Linguistics-based Approach to Vocabulary Learning by Taiwanese EFL Learners	applied
W34	Ch. Niu & A. Cienki	How we marginalised onomatopoeia: Evidence from a multimodal study on Chinese child language	multimodality
W35	K. Margiotoudi, M. Allritz, M. Bohn & F. Pulvermüller	Sound symbolic correspondences tested in human and non-human primates.	evolution
W36	M. Kanetani	So many ideophones in Japanese but less so in English: A three-tier model account	typology
W37	Th. Schlatter & Hs.-H. Ke	Hidden Iconicity in Tones	typology
W38	E. Adamou & Y. Haendler	Nominal tense: An experimental approach	typology
W39	T. Hisayoshi	The One Lexical Argument Constraint- A Comparative Study of Japanese and Korean	typology
W40	Sh. Yu	Semantic maps in typology: the case of resultative constructions	typology
W41	X. Tian & W. Zhang	Chinese Causative Constructions with shi and ling: A Cross-variety Perspective	sociolinguistics
W42	Hs. Ts. Lou	Revisiting Sex and Love in Language and Culture: A Cognitive Linguistic Approach	sociolinguistics
W43	A. Mukherjee	Metonymy: Underspecification and Reduction	metaphor
W44	J. Wang & Ch. Duan	Metaphor and Metonymy, which is more fundamental?	metaphor
W45	J. Yang & M. Liu	How metaphor and metonymy are used in Chinese and English ceramic discourse?	metaphor
W46	R. Zhou, W. Zhang & Y. Cheng	The Schematic Function of Conceptual Metaphor for Discourse Comprehension in Chinese and English Contexts	metaphor
W47		cancelled	metaphor
W48	M. I. Perdana	'Winter is coming': A corpus-based approach to spatiotemporal metaphors in English and Indonesian discourse	metaphor
W49	K. Ito	Emergence of Rhetorical Effect: Figurative Language and Systems Theory	metaphor
W50	A. Tamaru	Simile, metaphor, and their non-interchangeability: Beyond A is like B vs. A is B	metaphor

Side by side as a preposition

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Keywords: preposition, the NPN construction, grammaticalization, phonological/semantic motivation

The English construction *side by side*, an instance of the NPN (Noun-Preposition-Noun) construction, has been described as an adverb (e.g. *sit **side by side***) or adjective (e.g. *a **side-by-side** comparison*). But it is now starting to be used as a preposition, though informally or sporadically, as in *Work **side by side** the experts in your field* (<https://twitter.com/NewYorkFed/status/781844146961219584>) and *Singapore is an urban jungle—trees grow **side by side** the buildings, natural gardens co-exist with modern ones* (<https://www.sunstar.com.ph/article/166734>). Since the category of preposition is more functional than that of adverb or adjective, this language change might be considered to be an example of grammaticalization. This paper investigates how the new usage—[*side by side*]_P—arose.

My exploration is premised on some of the basic assumptions of cognitive linguistics. Language is a structured inventory of phonological, semantic and symbolic constructions of varying degrees of specificity. Some of them are more frequent and entrenched than others. A construction is motivated to the extent that they are perceived to be related to other constructions in the language (Taylor 2004).

The most likely explanation for the emergence of [*side by side*]_P is that it is derived from *side by side with* by omission of *with*, because the latter seems to be highly entrenched and have a unit status (the *WITH-ENTRENCHMENT* account). Though one can say either *We are working **side by side with** robots here* or *We are working **with** robots **side by side** here* without flouting any grammatical rules, a corpus search reveals that the former type of alignment occurs far more frequently.

The omission of *with* may be partly induced by the perceived paucity of the phonological and semantic contributions of the preposition (the *WITH-WEAKENING* account). Phonologically, *with* in *side by side with* is forced to live in the shadow of the adjacent content noun *side*, being invariably unstressed and often reduced ([wɪθ]>[wəθ]). Also, for some speakers, *with* might be perceived as semantically redundant. The most salient ACCOMPANIMENT sense of *with* in *side by side with* is something that is intrinsic to, and has already been conveyed by, the preceding *side by side*.

[*Side by side*]_P might also be motivated by the preposition *vis-à-vis* (the *VIS-À-VIS* account). Phonologically, *vis-à-vis* follows the same phonological pattern as *side by side*: $\hat{S}_a-S_b-\hat{S}_a$ (S for 'Syllable'). An experimental study shows that even infants can discern abstract syllable patterns such as $S_a-S_a-S_b$ from nonsense sequences of syllables (Marcus et al. 1999). Thus, even if *vis-à-vis* and *side by side* were semantically unrelated, it is possible that they would cluster together in a speaker's mental representation simply because of their phonological similarity (Taylor 2017). In fact, *vis-à-vis* and *side by side* are *not* semantically unrelated. The former is based on and indirectly conveys the idea of juxtaposing one thing against another; the latter is more directly associated with the same idea.

However, the motivation provided by *vis-à-vis* cannot be very strong, because the phonological and semantic similarities between *vis-à-vis* and *side by side* are too abstract. Indeed, the *vis-à-vis* account cannot explain why other NPN constructions (as far as I am aware) have not developed prepositional uses even though many of them follow the $\hat{S}_a-S_b-\hat{S}_a$ pattern and convey the idea of juxtaposition. A corpus search suggests that *face to face* and even *arm in arm* (which evokes the image of people walking side by side!) are not used prepositionally as frequently as *side by side*. The *vis-à-vis* account thus leaves us with the question, *What is so special about side by side?*

My answer is that less abstract and stronger motivation might be provided for [*side by side*]_P by the prepositions ending with *-side*, i.e. *alongside*, *beside*, *inside*, *outside* and *upside* (the *X-SIDE* MOTIVATION account). The fact that other NPNs are not used prepositionally follows from the present account. *Arm in arm*, for example, does not have any corresponding X-*arm* prepositions that would motivate its prepositional use. Besides, three of the prepositions listed above—*alongside*, *beside* and *upside*—are semantically analogous to *side by side* in that they directly evoke the idea of laterality.

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A Quantitative Perspective on Grammaticalization: The Case of Deverbal Prepositions in English

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Keywords: grammaticalization, semantic bleaching, layering

Previous research on grammaticalization has made qualitative analyses including English “deverbal prepositions”: *concerning*, *considering*, and *regarding* (Akimoto 2014: 179-191). Despite their contributions in clarifying the complicated process of grammaticalization, most studies have mainly focused on observations of each item, due to the different degrees of (i) categorical change and (ii) semantic change involved (cf. Koma 2001: 73-75). Here this study aims to make a comprehensive analysis by focusing on the “synchronic result” (Hopper & Traugott 2003: 124) of grammaticalization, “layering” (the co-existence of the older/newer items such as future *will* / *be going to* / *be + ing* / *be + to* (Hopper 1991: 22-24)). We aim to capture the varying degrees of change exemplified by *considering*, *concerning*, and *regarding*, all of which have emerged out of “thinking verbs” and have more or less similar meanings (Akimoto 2014: 190).

The theoretical background of the present study concerns “unidirectionality” of grammaticalization focusing on “deategorialization” and “semantic bleaching”. Decategorialization is “a loss of the optional markers of categoriality” (Hopper 1991: 30). Hopper (1991: 31) provides the following example,

(1) *Considering* its narrow beam, the boat is remarkably sea-worthy.

The *considering* used in (1) gains prepositional property and loses the verbal property, subject agreement: the (understood) subject of the main-/subordinate-clause is not identical (Hopper 1991: 31). Akimoto (2014: 179-191) also points out that such examples termed “dangling participles” have intermediate properties between verbs/prepositions. Of particular note is the fact that the later stages of grammaticalization also entail semantic bleaching, “loss of semantic content” as observed in the one of locational meanings in the future marker *be going to* (Hopper & Traugott 2003: 94).

The procedure of this study is as follows. First, we collected 100 examples of the use of *considering*, *concerning*, and *regarding* from the Corpus of Contemporary American English (COCA). Second, we analyzed these examples in terms of decategorialization and semantic bleaching. Each item is classified depending on the categorical behavior: participles (as in (2ab)), prepositions, dangling participles, conjunctions (2c), and others including adverbs, progressives, and gerunds.

(2) a. It was amazing, the ease I could control him with, especially *considering* his weight.
 b. For companies *considering* suing to recover the costs of making their systems compliant, ...
 c. *Considering that* they grow on marginal sites and require no maintenance, ... (COCA)

The result indicates that in around 20% of the collected examples, grammaticalized items (dangling participle, preposition) are present in spite of the fact that their historical development varies: *considering* was established in 14th century, *concerning* in 16th, and *regarding* in 18th (Görlach 1991: 109). Also, viewing from a synchronic perspective, *considering* is accompanied by semantic bleaching (cf. Ando 2005: 622), whereas *concerning* and *regarding* are not.

In conclusion, the present study has examined *considering*, *concerning*, and *regarding* in relation to layering. We noted that the observed “relational” deverbal prepositions grammaticalized out of thinking verbs exhibit striking similarities in degrees of semantic bleaching. The discussions made here imply that the unified quantitative perspectives also give us a “panchronic” viewpoint (Heine *et al.* 1991), the integration of synchronic and diachronic nature of grammaticalization.

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Discourse Functions of “*Ke(re)do(mo)*” and “*Copula+Ke(re)do(mo)*” at the Left Periphery (LP) in Spoken Japanese: A Functional Expansion Perspective

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Keywords: grammaticalization, functional expansion, left periphery, “*ke(re)do(mo)*”, contrast

In modern spoken Japanese, some connectives which are basically used to connect the preceding and the following sentences are often used at the left periphery (LP) of a turn (Onodera 2014: 108-111). For example, “*ke(re)do(mo)*” (among *keredomo*, *keredo*, *kedomo* and *kedo*) and “*copula+ke(re)do(mo)*” express the meaning of contrast when they are used in the sentence-initial position of the second sentence (Nihon Kokugo Daijiten 2). They can also introduce an utterance in which the speaker is reflecting on something when they are used at the LP (Matsumoto1988: 346) (see (1)). This study aims to use “Taiyo Corpus” (Taiyo) (1895-1925) and “Nagoya University Conversation Corpus” (NUCC) (2001-2003) to clarify the differences between “*ke(re)do(mo)*” and “*copula+ke(re)do(mo)*” used at the LP of a turn from the perspective of functional expansion.

- (1) (speakers are talking about the spelling of a disease)
F001: *Wakatteru kedo*. (I know (how to spell).)
F079: *Dakedo nee, osoroshii byooki da to omou yo*. (**But**, I think it is a terrible disease.)
(NUCC, data076)

The result of this study shows that in Taiyo, the number of “*ke(re)do(mo)*” (19 cases) used at the LP of a turn is almost the same with that of “*copula+ke(re)do(mo)*” (16 cases). However, in NUCC, people tend to use “*copula+ke(re)do(mo)*” (99 cases) rather than “*ke(re)do(mo)*” (17 cases) at the LP of a turn. For the reason, it seems that it is because as a connective, “*copula+ke(re)do(mo)*” appeared later than “*ke(re)do(mo)*”. Specifically, as a connective, “*copula+ke(re)do(mo)*” appeared in the 18-19th century while “*ke(re)do(mo)*” appeared in the 17th century (Yuzawa 1936, 1954).

Traugott (1982: 256) suggested that in the course of grammaticalization, the accompanying semantic-pragmatic change is more likely to be one “from propositional through textual to expressive” meanings, the kind of change that we can also see in “*ke(re)do(mo)*” and “*copula+ke(re)do(mo)*”. However, although the function of “*ke(re)do(mo)*” expanded, the percentage of expressing the propositional function is the highest in both Taiyo (95%) and NUCC (65%). On the contrast, for “*copula+ke(re)do(mo)*”, although the percentage of expressing propositional function is the highest (56%) in Taiyo, the percentage of expressing textual function is the highest (41%) in NUCC. In a word, during the progress of functional expansion, “*ke(re)do(mo)*” has a strong tendency to express the propositional function in the same way as its sentence-initial counterpart. On the other hand, “*copula+ke(re)do(mo)*” tends to express textual function. For the reason, “*ke(re)do(mo)*” can be used as a connective as the same as “*copula+ke(re)do(mo)*”, and it can also be used as a connective particle in a subordinate clause and a sentence-final particle in “*iisashibun*” (insubordination). It seems that the development of the usage of “*iisashibun*” influences the progress of its functional expansion.

On the whole, it is clear that although both “*ke(re)do(mo)*” and “*copula+ke(re)do(mo)*” can be used at the LP of a turn, they have differences in both frequency of use and the progress of functional expansion.

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Relation between Japanese character types and grammaticalisation

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Keywords: Grammaticalization, Japanese, Characters, Auxiliary verbs, Mental lexicon

The Japanese language has two types of scripts, Kanji and Kana, and they are sensitive to the degree of grammaticalization. The purpose of this research is to examine —through corpus researches and sentence production experiments— the effect of grammaticalisation on Japanese letters.

Kanji is ideographic with the characters representing semantic units. In contrast Kana represents a phonological speech unit (Morton and Sasanuma, 1984). Further, there are two kinds of Kana — Hiragana (cursive Kana) and Katakana (square Kana). In this paper, only Hiragana is interpreted because grammatical elements in Japanese are represented in Hiragana.

The present research hypothesizes that grammaticalization is reflected in the Japanese auxiliary verbs. Some Japanese verbs have two usages, — as a main verb and as an auxiliary verb. Main verbs are used independently and their literal meaning is that of the verbs. In contrast, the literal meaning of Auxiliary verbs is no longer that of the main verbs. Although auxiliary verb constructions in Japanese are originally incorporated with Kanji, over the course of grammaticalization, Kanji has slowly replaced with Hiragana. To demonstrate this, some corpora from the modern Japanese language and some from the present Japanese language were compared. Eight frequently used phrases were used as the basis for comparison. These phrases were collected from the Japanese Language Proficiency Test (JLPT). Examples include “V *te miru* (てみる/て見る)” [try to do something], “*Miru*” written in Kanji means “to see” or “to look”, but this meaning is not reflected in a grammaticalized sentence. Instead it is interpreted as “try to do something” This research shows that there are differences in Japanese between the 19~20th century and the 21st century; the latter uses more Hiragana than the former in auxiliary verb usages. This observation illustrates the effect of grammaticalisation on representation of constructions.

In another study conducted from the perspective of cognitive science, Kanji and Hiragana demonstrated to additional differences. Shinozuka and Kubota (2012) showed that Kanji accesses semantic recognition directly, whereas Hiragana needs phonological recognition to access the semantic recognition, making Kanji easier to interpret. Since grammaticalization is the phenomenon of “lexical terms” and “constructions” represented in diverse linguistic contexts to demonstrate grammatical functions (Hopper and Traugott, 1993), Kanji has changed into Hiragana because a Kanji construction forces the reader to interpret the original meaning. In this research, a sentence production experiment involving Japanese native speakers was performed. The experiment focused on the Japanese main verb “*morau* (貰う)” [receive], and the auxiliary verb “*te morau* (てもらう)” [to have someone to do something]. The subjects were asked to construct a sentence using “*morau*” written in Kanji characters or in Hiragana characters. This experiment revealed that Japanese native speakers have a tendency to use “*morau*” as a main verb when it is written in Kanji characters. It could also mean that Japanese native speakers store the main verb “*morau*” and the auxiliary verb “*morau*” as different words in their mental lexicon. In other words, the difference of representation in the written language could affect Japanese native speakers’ storage of mental lexicon. This result could help clarify other aspects about human cognition between visual representation and semantic interpretation.

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A Diachronic Dimension of Grammaticalization: With Historical Examples of Negative Adverbs in English and Japanese

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Keywords: Diachronic Dimension, Grammaticalization, Historical Examples, English, Japanese, Negative Adverbs

While grammaticalization has both a synchronic and a diachronic dimension, its foundation is diachronic in nature (Heine 2003). In this paper, a diachronic dimension of grammaticalization is explored with historical examples of negative adverbs in English and Japanese. Negative adverbs have not been the subject of grammaticalization, and the reason for an adverb's becoming a negative adverb has been unknown. However, this paper elucidates the diachronic process where an adverb with rich lexical meanings gradually serves as a negative adverb with more abstract meanings of negation.

Since grammaticalization is a diachronic process, findings should be verified by means of historical evidence. In this paper, each stage of the grammaticalization process is verified with historical examples of the English adverb *hardly* and the Japanese adverb *kesshite*. English and Japanese are historically best-documented languages, which makes it a good testing ground for hypotheses about grammaticalization in general (cf. Narrog & Ohori 2011). The abundant historical examples were gathered by thorough investigation. I investigated the general indices of literary works; looked up every type of dictionary, particularly those that are old; and searched those adverbs in computerized corpora and electronic databases.

Based on the numerous examples of those adverbs, it was shown that the gradual changes of phonological and morphological erosion occurred, which coincided with attenuation and bleaching of the lexical meanings. Loss of morphological elements and simplification of phonetic substance are conspicuous features of grammaticalization from a diachronic perspective (Heine and Kuteva 2007). Negative adverbs have had rich lexical meanings, however, such rich lexical meanings have been attenuated, and the adverb became a grammatical word completely bereft of lexical content (Takahashi 2016, 2018).

By examining the derivation and extinction of the historical meanings of those adverbs, this paper also verifies another characteristic of grammaticalization: "layering" (Hopper 1991). The historical examples showed that the old meanings had continued to be used for several centuries. Meanwhile, the new, attenuated meanings appeared and coexisted with the old, rich meanings.

The historical examples in a chronological order give deep insight into many questions regarding grammaticalization. Some answers will be provided to several key issues of grammaticalization, and the diachronic approach of this paper maintains consistency in the grammaticalization theory.

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THE EMERGENCE OF PASSIVE STRUCTURE WITH OBLIGATORY AGENT PHRASE IN CHINESE

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In the past 3,000 years or so, the structures and functions of the Chinese passives have undergone three typologically striking changes: (a) the passive morphemes in Archaic Chinese could not introduce any agent phrase in the preverbal position, but those in Contemporary Chinese must do so to make the passive structure well-formed, (b) the agent phrase could only occur in the POSTVERBAL position in Archaic Chinese but rigorously constrained to the PREVERBAL position in Contemporary Chinese, and (c) the passive morphemes are extremely diverse in Today's Chinese, four in Mandarin Chinese and sixty-nine in its dialects which have grammaticalized from different lexical sources, but their structures and functions are quite consistent and uniform. This article addresses the motivations and mechanisms behind these changes. I will prove that the passives and other major active structures actually share the same syntactic schema, and the overall evolution of the morph-syntax in history are responsible for the changes of the passive. The overall properties of the grammatical systems in particular periods to great extent determine the functions, structures, life-spans, grammaticalization paths of the passives. The studies in passive structures have played a crucial role in developing linguistic theories since Chomsky (1957), and the present analysis may therefore provide new perspectives for evaluating and improving those theories. Through offering an accurate yet comprehensive description about the issue, this article could also be seen as a critique to Li (2018, *Language* 94.2: e74-e98).

The complete passive pattern in Archaic Chinese, namely the 'passive morpheme + PP agent' construction, may be illustrated in the following example.

(1) *Wú cháng jiàn xiào yú dàfāng zhī jiā.*

I often JIAN laugh-at YU knowledgeable NOML one

'I was often laughed at by those knowledgeable people.' (Zhuang zi, Third century BC)

In this period, no passive morphemes could introduce an agent phrase in the preverbal position. However, the passive morphemes in Contemporary Mandarin Chinese and many dialects must introduce an agent phrase in the preverbal position in order to make the structure well-formed, something like the dummy subject *it* or *there* in English, as illustrated in 2.

(2) a. *Tā kěnéng jiào shénme-shì tuō-zhù le.*

he probably PASS something drag PFV

'He is probably dragged by something.' (The crosstalks of Present-day Chinese)

b. **Tā kěnéng jiào__ tuō-zhù le.*

he probably PASS drag PFV

The 'meaningless' agents need not to be spelled out in the corresponding English instances, but once they were taken away, the passive instances become ungrammatical as in 2b and 2b.

Specifically, we argue that the direct impetus for the emergence of the passive pattern with obligatory might be the emergence of the disposal construction, a new grammatical means which was first introduced into the language in the seventh century. Those disposal morphemes must introduce a patient phrase in the preverbal position in order to make the disposal structure well-formed. The passive and the disposal are functionally related: the former introduces an agent in the preverbal position and the latter introduces an patient in the same position. Thus, the passive constructionalization is subject to the analogization of the newly established disposal construction in Modern Chinese (from the 16th century to now).

Constructional integration in grammaticalization: A cross-linguistic study of complementizer in Mandarin and English

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Keywords: grammaticalization, complementizer, CG, conceptual overlap, constructional meaning

Cross-linguistic commonalities of complementizer have been systematically investigated to date. Dichromic evidence has illustrated how *that* involve from pronoun to complementizer (Hopper & Traugott, 2003:191). Its equivalent in Mandarin is considered by preceding study (Liu, 2004) to be “*Dao*”, which is grammaticalized from a verb meaning *to say*. Our analysis suggests that things are not so straightforward: apart from the functional affinities, “*Dao*” and *that* have drastic difference in performing their grammatical roles should they appear in direct or indirect speech. “*Dao*” is admissible in subordinating a direct speech, but considered inappropriate in indirect speech; while *that* is acceptable, or occasionally alternative, in indirect speech, but anomalous in introducing direct speech.

We adhere to the assumption that while changes are replicable across languages and certain property of grammaticalization, like unidirectionality, may be universal, grammaticalization, conceived as a study revealing the ongoing cognitive forces behind morphosyntactic changes, is language-specific, that is, it is intertwined with an individual language’s structure. By presenting a contrastive examination of the grammatical markers, our primary goal is to supplement traditional analysis of “*Dao*” and *that* with new ideas from the perspective of distinction. This study adopts a cognitive grammar approach to better account for this cross-linguistic difference. Cognitive grammar, initiated as a comprehensive and unified theory seeking to provide a felicitous framework for investigating linguistic structure, regards integration of constitutive elements of a construction as a pivotal factor in grammaticalization (Langacker, 2011). However, this approach has been downplayed and less appreciated in analyzing grammaticalization heretofore, and literature is certainly not replete with explicit discussions.

The current study makes it clear that the generalization of “*Dao*” in “*V-Dao*” construction is driven by the asymmetry of profiling between two constituents of the composite construction, in which the meaning of “*Dao*” is overlapped with the verb, whose status is more salient and contributes its profile to the composite construction. There is variant degree of overlap: “*Dao*” is alternative in “*SAY-Dao*”, revealing a full overlap, but a must for “*V-Dao*” construction, in which overlap is only partially implemented when verbs are of cognition and perception. This implies the grammaticalization of “*Dao*” is not completed, if not incipient. “*SAY-Dao*” is a quotative grammatical marker being schematic for the finite clause deriving from it and bearing quotative qualification. The entrenched uses of “*SAY-Dao*” introducing direct speech further render “*SAY-Dao*” a progressive characteristic pragmatically, namely “*SAYING-Dao*”, which makes “*SAY-Dao*” infelicitous in indirect speech. Such a generalization cannot seamlessly be made from “*V-Dao*” to “*VING-Dao*”, which seems to indicate that graded overlap of component structures may contribute to semantic gradation of construction. The case of “*Dao*” serves as a convincing example in exhibiting partial compositionality of constructional meaning. Reanalyzed from a pronoun, the historical grammaticalization process of *that* is also governed by conceptual integration, but it is the finite clause that *that* integrates with, with diverse degree of overlap as well. Thus *that* is redundant due to its full overlap with the proposition in introducing direct speech. As such, conceptual overlapping mechanisms of “*Dao*” and *that* are not the same, but rather disparate.

The analysis suggests that cognitive grammar approach, whose proposition could not have been more germane to the current matter, is compatible with grammaticalization, and conceptual integration is cross-linguistically evident, despite typological difference.

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A COGNITIVE LINK BETWEEN QUANTIFICATION AND ASPECT: THE CASE OF CHINESE “YOUSUO”

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Keywords: grammaticalization, partitive, quantification, aspect

It has been highly debated in Chinese historical linguistic studies why and how “Yousuo” underwent the evolution from a cross-level combination to a perfective marker with the implication of “low degree (of the action)”. Shi (2004) concludes the change of “Yousuo” is systematically motivated by the rise of resultative constructions. In terms of mechanism, Xue (2009) argues that the aspectual meaning resulted from frequent combinational use of “Yousuo” and verbs of measurable action. While Duan (2012) suggests the evolution is caused through neanalysis and analogy. However, a more elaborate diachronic description and analysis were not given in her study.

This research is aimed to present a detailed analysis of the historical evolution of syntactic and semantic characteristics of “Yousuo”, based on data from Center for Chinese Linguistics (CCL) Corpus proof-read by the researcher. It is illustrated that “Yousuo” has undergone three phases:

- (a) a combination of the verb “You” and a nominalization marker “Suo” Jin Dynasty
 会遇兵乱, (草创子书) 流离播越, 有所亡失
 ‘When I became involved in an armed rebellion and found myself wandering and scattered even farther afield, **(there were some of** my outlines of philosophical writing) getting lost.’
- (b) a perfective marker with the implication of “low degree” Song Dynasty
 有流而甚远, 方有所浊。
 ‘The water flows far, then it would **end up thick slightly.**’
- (c) a perfect marker which is still in the grammaticalization process Modern
 成交量有所放大, 但仍属于小量格局
 ‘The volume of transaction **has risen**, but the whole change is still of a small amount.’

This research also proposes there is a cognitive nature of the link between quantification and aspect: aspect can be seen as quantification of action. The further grammaticalization of “Yousuo” expressing Perfect aspect can be explained as a use shift from action quantifier to event quantifier. Then, more cross-linguistic evidence is offered in the present research to validate the cognitive link between quantification in the entity level and quantification in more abstract levels such as degree and speakers’ perspectives of events: According to Traugott(2010), in English, “piece of” originally expressed partitive meaning, then underwent the grammaticalization and became a modifier of degree referred to by its following adjective. While Finnish witnesses a more similar grammaticalization process to Chinese: its partitive marker developed to have an aspectual meaning (Kiparsky, 1998).

Finally, the research gives a further analysis of Chinese, English and Finnish cases. In addition to analyzing differences among the three cases, the research builds a common cognitive link on a higher level, shared by all of mentioned cases.

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A corpus-based study of the Chinese synonymous approximatives *shangxia*, *qianhou* and *zuoyou*

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Keywords: approximative, synonym, corpus-based study, metaphor, antonymous compound

The Chinese antonymous compounds *shangxia* 'up-down', *qianhou* 'front-back' and *zuoyou* 'left-right' can convey similar meanings as approximatives, indicating "about" or "around". This study addresses two questions: 1) To what degree are the three approximatives synonyms? and 2) what are the motivations behind their similarities and differences in actual usage? To investigate the semantic and usage differences between the three approximatives, this study employs the corpus-based behavioral profile (BP) approach (Gries 2010; Divjak and Gries 2006, 2010; Gries and Otani 2010). The data were extracted from the CCL (Centre for Chinese Linguistics) corpus. For statistical analysis, the study performed a hierarchical configurational frequency analysis (HCFA) (Gries 2009: 248-252). The corpus analysis yields the following findings. First, the most frequently used of the three approximatives is *zuoyou*, followed by *qianhou* and *shangxia*, in that order. Second, *qianhou* mainly approximates time; *zuoyou* approximates quantity; and *shangxia*, age. Third, in approximating age, time and quantity, the three approximatives exhibit subtle behavioral preferences. Specifically speaking, in approximating time-denoting expressions, *qianhou* tends to modify points in time, *zuoyou* tends to modify time periods, and *shangxia* seldom modifies temporal expressions; In approximating quantity-denoting expressions, *qianhou* does not collocate with quantity-denoting expressions, but *zuoyou* and *shangxia* are used widely; In approximating age-denoting expressions, *zuoyou* and *shangxia* are used much more frequently than *qianhou*.

Based on these corpus findings and conceptual metaphor theory, I address the motivations underlying the similarities and differences between the three synonyms. I argue that their similarities are explained by the metaphor QUANTIFICATION IS SPACE and their behavioral differences are due to the specificity in variations in the metaphor NON-SPATIAL ENTITIES ARE SPATIAL ENTITIES.

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Exploring metaphorical expressions in Japanese newspaper-article corpora

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Keywords: metaphorical expression, corpus, newspaper, semantic tagged corpus

We constructed a metaphorical expression database from the Balanced Corpus of Contemporary Written Japanese (hereafter, BCCWJ), comprising newspaper samples, and explored the metaphorical expression usage in the databases. The data include the article categories following Kinokuniya (2000), such as politics, economy, and culture. A subset of the data (117,543 words) consists of annotated semantic labels from the "Word list by semantic principles," hereafter WLSP (Kato et al., 2018). We exhaustively annotated about 3,000 metaphorical expressions in the subset of the data, using human judges (following MIP). The metaphorical expressions are subcategorized into "metaphor" (61.7%), "metonymy (including synecdoche)" (27.0%), "idiomatic" (10.2%) and "others" (0.5%).

Previous work constructing a metaphorical expression example database is limited to literary works (Nakamura, 1977; Nakamura, 1995; etc.). Moreover, such corpora are not exhaustive and instead pick examples at random. The data cannot be used for statistical analysis, as could exhaustive annotation data in a balanced corpus. Our work is the first comprehensive annotated database of metaphorical expression in the balanced Japanese corpus. We performed several analyses of the corpus.

First, we evaluated the distribution by metaphorical expression types. Metaphors were subcategorized with or without cue phrases. We also subcategorized metaphors by the source domain (SD) and target domain (TD) of semantic labels. The distribution shows that the prosopopoeia is 5.5% (e.g., SD: object [inanimate], TD: animal [animate]); and objectification is 34.0% (e.g., SD: concept [abstract], TD: object [concrete] is 33.1%, SD: person [animate], TD: object [inanimate] is 0.9%). In contrast to the results obtained by classifying the data of Nakamura (1977) in the same way, the percentage of prosopopoeia is exceedingly low and the objectification is higher.

Second, we explored the distribution by the article categories. The BCCWJ newspaper samples are also annotated with article categories. The sports (16.7%), international (8.0%), economy (18.2%), politics (20.2%), and culture (17.1%) articles contain the largest proportions of the corpus' total number of metaphorical expressions. Furthermore, metonymy appears frequently in international articles (49.1%).

Third, we explored the distribution of connective patterns. The semantic categories of elements as contextual binding were investigated in recent corpus-based metaphor research. For example, metaphors in the corpus of "fighting against disease" speeches tend to fall in the semantic categories of war and travel (Semino et al., 2015). In this way, contextual heterogeneous semantic elements are useful for identifying metaphors. We analyzed semantic categories such as "architecture" in articles of economy.

Our future work will extend the genres to books and magazines. We expect additional analysis of collected examples to reveal central features of Japanese metaphorical expressions.

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Collecting figurative expressions using indicators and a semantic tagged Japanese corpus

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Keywords: simile, figurative expression, figurative indicator, semantic tagged Japanese corpus

We constructed a large-scale figurative expression database using indicators and a semantic tagged Japanese corpus. Corpus surveys using indicators such as co-occurrence and patterns are useful for example collection. Collecting examples of similes with elements of figurative indicators in Japanese figurative expressions from a corpus appears to be easy. However, collecting figurative expressions with indicators requires human judgement to determine whether the collected samples are really figurative expressions. For example, if candidate expressions containing the possible figurative indicator “like” or “as” are collected, it is necessary to judge the candidates to extract the figurative ones, as this word has multiple meanings such as estimation, illustration, appearance, and similarity. Furthermore, for indicators such as “conscious”, which has multiple possible meanings including “experience,” “feel,” “perceive,” and “sense,” it is difficult to conduct an exhaustive search of examples containing synonymous expressions. In other words, using indicators to collect figurative expressions from a corpus involves collecting examples containing elements that could act as figurative indicators, including synonymous expressions, followed by extracting the actual figurative language from these potential candidates. Given this difficulty in collecting large volumes of figurative expression data, determining the extent to which a figurative expression is used, as well as the kinds of figurative expressions used in different genres, has been impossible.

In this study, we aimed to collect figurative expression data from large-scale corpora by first collecting simile expressions that contained elements that could act as figurative indicators, and used human judgement to extract the figurative expression from these example groups. The corpus data used was the core data of the Balanced Corpus of Contemporary Written Japanese (BCCWJ) (approximately 1 million words) and the semantic tagged BCCWJ (approximately 350,000 words from newspapers, magazines, books, and other publications (Kato et al., 2018)). The 441 indicators for figurative elements defined by Nakamura (1977) and the semantic tags assigned to them were used as cue phrases. When judging whether an expression was figurative, the preceding and succeeding 100 words of the target phrases that could act as indicators (cue phrases) were shown as context, and the portion with the figurative expression was extracted. The source and target domains for the expressions were simultaneously annotated, along with the type information.

Through this research, we collected 97,118 examples of potential figurative expression candidates, with 923 determined to be figurative. In other words, less than 1% (0.95%) of the examples was figurative. Through this study, we demonstrated the difficulty of collecting figurative expressions. We also added information on the topic, vehicle, source domain, target domain, and type to the collected examples. Furthermore, by using a semantic classification, we expanded the cue phrases that could contain indicator elements and were able to collect figurative expressions synonymous with these indicators. Through this large-scale collection of figurative expressions and the addition of defining information, BCCWJ enables us to study the current state of figurative expression usage in Japanese contemporary written works.

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How Do Different Processes of Speaking and Writing affect Syntactic Complexity in Child Second Language Production?

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Keywords: corpus linguistics, child second language acquisition, production modality, syntactic complexity, proficiency

Background: This study investigates how different processes involved in writing and speaking affect child second language (L2) learners' sentence production. Despite numerous learner corpora studies on the assessment of syntactic complexity in writing^{[1],[2],[3]}, less is known about how syntactic complexity in learners' production varies depending on production modalities, i.e., writing versus speaking. Moreover, most studies measuring syntactic complexity in L2 written production have focused on advanced-level adult learners. The current study addresses these gaps by comparing syntactic complexity in written and spoken data collected from child L2 learners of English with beginning-level proficiency.

Writing allows a more efficient control of planning and production and requires less cognitive load compared to speaking^{[4],[5]}. Drawing on such differences in cognitive mechanisms between the two production modalities, we ask how they affect child L2 learners' syntactic complexity in writing and speaking, and whether syntactic complexity features in written production better predict learner proficiency than those in spoken production.

Method: Seventy-six beginning-level Korean-speaking child L2 learners of English (mean age: 11.26) completed two production tasks where they described their teacher or friend, one in writing and the other in speech. Productions from each task comprised written and spoken corpora, respectively. Participants' proficiency was assessed through an independent test developed based on the yearly assessment implemented by Korea Institute for Curriculum and Evaluation. For the written and spoken corpora, seven syntactic complexity indices^[2] were analyzed: mean length of sentence (MLS) as a measure of length of production, clauses per sentence (C/S) as a measure of sentence complexity, dependent clauses per T-unit (DC/T) as a measure of subordination, coordinate phrases per T-unit (CP/T) and T-units per sentence (T/S) as measures of coordination, and complex nominals per T-unit (CN/T) and verb phrases per T-unit (VP/T) as measures of particular structures. These measures were computed using the Tool for the Automatic Analysis of Syntactic Sophistication and Complexity^[6].

Results: To compare how syntactic complexity measures differ between the written and spoken corpora, linear mixed effects regression was conducted on each complexity measure, with modality (written vs. spoken) as a fixed effect. Results showed that learners used longer sentences (MLS: $p < .05$), more subordination (DC/T: $p < .001$), and more verb phrases per T-unit (VP/T: $p < .001$) in writing than in speaking. These results indicate that writing involved longer and more complex structures than speaking. In contrast, a greater number of coordination was found in speaking than in writing (CP/T: $p < .001$). Such more coordination appears to stem from the learners' processing strategy of using *and* to make a syntactic unit larger under much cognitive pressure associated with speaking activities. Next, to examine which production modality better explains learner proficiency, a step-wise multiple regression model was fitted to each of the written and spoken corpora, including complexity measures as predictors of participants' proficiency scores. Results showed that the model for the written corpus ($R^2 = .197$) explained a greater amount of variance in proficiency scores than the model for the spoken corpus ($R^2 = .048$). These findings indicate that the different cognitive processes underlying writing and speaking influence the way that beginning-level child L2 learners produce sentences in writing and speaking tasks.

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Pleasing to the Mouth or Pleasant Personality: A corpus-based study of conceptualization of desserts in online Chinese food reviews

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Description of flavours of desserts often involves a rich range of vocabulary. As food, desserts are special in that their main purpose is to make people happy rather than to nourish the body. This is perhaps the reason why, in English and many other languages, words expressing sensuality and sexuality are dominant when used to describe good desserts (cf. Jurafsky, 2014). Does this apply to languages where explicit sensual expressions are not encouraged? This paper investigates the real-life language describing tastes of desserts in Mandarin Chinese, extracting data from *Dazhong Dianping*¹, the most popular restaurant review website in China. Using the *Sketch Engine* (Kilgarriff *et al.*, 2004) as the primary tool, this paper mainly addressed the following three research questions: a) What words are frequently used to describe taste and flavour of desserts in Mandarin Chinese and what are the linguistic characteristics of these words? b) How sensory vocabulary and sensory modalities interrelate, i.e., what kind of synaesthetic metaphors² are used when describing tastes and flavours of desserts in Mandarin Chinese? c) How desserts are represented and conceptualized in Chinese culture through the vocabulary used to describe desserts in Mandarin Chinese?

First, it is found that vocabulary describing 口感 (*kǒugǎn*, 'mouthfeel') is much more relevant than those for 味道 (*wèidào*, 'taste/smell/flavour') or 口味 (*kǒuwèi*, 'one's taste/flavour'), as evidenced by the hundreds of 'mouthfeel' words identified. Most of these terms are adjectives and people tend to combine 'preferred' morphemes to make up compound words to describe their 'preferable' taste and flavour, such as three morphemes 甜 (*tián*, 'sweet'), 香 (*xiāng*, 'fragrant/delicious') and 滑 (*huá*, 'smooth') in the compound words 香甜 (*xiāngtián*, 'delicious and sweet'), 甜滑 (*tiánhuá*, 'sweet and smooth') and 香滑 (*xiānghuá*, 'delicious and smooth'). In addition, compared to the overwhelmingly positive words of describing desserts, negative words are rare when describing taste in Chinese.

Secondly, concerning the interrelationship among five senses, the majority of 'mouthfeel' terms are tactile (sense of touch) in nature, which shall be considered as synaesthetic metaphors to depict taste sense. In addition, visual items including 薄 (*báo*, 'mild'), 清澈 (*qīngchè*, 'clear'), 蓬鬆 (*péngsōng*, 'fluffy'), 濃密 (*nóngmì*, 'thick/dense'), 乾淨 (*gānjìng*, 'clean') and etc., and auditory terms involving onomatopoeic words both suggest that flavour perception is multisensory. It integrates all the five sensory modalities, although to varying degrees.

Moreover, these 'mouthfeel' words often collocate with words connoting pleasant personality, especially in terms of warm social interactions, such as 調皮 (*tiáopí*, 'naughty'), 浮誇 (*fúkuā*, 'boastful') and 硬朗 (*yìnglǎng*, 'tough'). These adjectives stem from impressions of personalities gained through social interactional contact. Thus, personifying delicious desserts as pleasant characters using such positive adjectives illustrates that, in Chinese culture, language emanating from social interactional experience, rather than feeling of physical bodily pleasure only, is also used to describe desserts.

In summary, due to its intensional rather than physical telicity, description of desserts shows significant cultural variations. On the one hand, the preferred words still retain the same telic purpose, i.e., to please the mouth; on the other hand, instead of using expressions conveying intensional bodily pleasure (sensuality/sexuality), Chinese focus both on the parochial bodily experience (pleasing the mouth) as well as the social-interactional (pleasant personality) to describe desserts.

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¹ Accessed at <http://www.dianping.com/>.

² 'Synaesthetic metaphor' refers to the conception in one sensory modality could be modified by the conception from other sensory domains (see, e.g. Ullmann, 1957; Williams, 1976). For example, *sharp* [TOUCH/SOURCE] *taste* [TASTE/TARGET] - 'sharp' is a synaesthetic metaphor to modify TASTE, and the synaesthetic directionality is from TOUCH to TASTE.

Middle marked intransitives and intransitives with the “complex formant” in Lithuanian: a corpus-based study

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Keywords: Lithuanian intransitives, middle voice, middle marker, “complex formant”, corpus-based study

In Lithuanian, middle marked intransitives form a minor group of middle marked verbs (less than 10% of all middle marked verbs in Lithuanian; figures based on DCL). Some intransitive middles have a so-called “complex formant”, i.e. the middle marker always goes in conjunction with a prefix (e.g., *su-si-draugauti* ‘become friends’ : *draugauti* ‘be friends’). In any case, the middle marker is considered to add some additional sense to the meaning of the intransitive verb, e.g., ‘for one’s own pleasure’, as in *pa-si-vaikščioti* ‘have a walk’ : *pa-vaikščioti* ‘walk for a while’ (cf. Geniušienė 1987: 137). The corpus research shows that middle marked intransitives are dispersed through various situation types typically associated with the middle semantics (cf. Kemmer 1993: 16-20; Haspelmath 2003), namely: grooming and body motion (e.g., *gulti-s* ‘lie down’ : *gulti* ‘idem’, *už-si-lipti* ‘climb up’ : *už-lipti* ‘idem’), naturally reciprocal events (e.g., *šnairuoti-s* ‘squint at each other’ : *šnairuoti* ‘squint’), spontaneous events (e.g., *debesuoti-s* ‘cloud over’ : *debesuoti* ‘idem’), emotion/cognition middles (e.g., *nu-si-bosti* ‘bore smb’ : *nu-bosti* ‘idem’), facilitative middles (e.g., *dirbti-s* ‘work (with ease)’ : *dirbti* ‘work’).

In order to explain the curious redundancy of the middle marked intransitives (the middle marker is an intransitivizer itself), here they are considered as having two semantic roles expressed by a single syntactic subject (cf. Gerritsen 1986: 88), which corresponds to the notion of the higher participant distinguishability (Kemmer 1993: 69-70). Given that the transitivity scale consists of the transitive, middle, and intransitive verbs, it is concluded here that the addition of the middle marker to an intransitive verb “transfers” it to the middle domain, but from the opposite side in comparison to the transitive verbs.

This poster aims at representing the semantic groups of the middle marked intransitives and intransitives with the “complex formant” in Lithuanian and determining frequency and distribution related differences between the middle marked intransitives and their unmarked counterparts, based on the data from The Corpus of Contemporary Lithuanian (CCLL).

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The Complex Interaction of Construal Operations: Multi-Verb Sequences in World Englishes

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Keywords: verb phrase, deixis, construal, corpus, world Englishes

Through exploring four types of multi-verb sequences with the deictic verb *go* as V1 in English, the *go-to-V*, the *go-and-V*, the *go-V*, and the *go-Ving* sequences, this paper supports one hypothesis: the differences in meaning that different forms exhibit include differences in construal. Based on data from *Collins Wordbanks Online*, this paper shows how the differences in construal in American English are closely related to V2 selection and genres of language use in a complicated way. This paper also examines whether the findings of American English applies to other varieties of English, relying upon *Corpus of Global Web-Based English*.

The four types of multi-verb sequences share two remarkable features. From a semantic standpoint, the meaning of the verb *go* as V1 in each individual sequence inherits the deictic motion use or the modal use of the verb *go* (see Bourdin 2003, Clark 1974, Fillmore 1971). From a syntactic standpoint, each individual sequence has a reduced structure where one multi-verb sequence does not include two verb phrases despite the existence of two verbs. This paper divides the four types of multi-verb sequences into two groups: the semi-complement group and the adjunct/oblique group.

With respect to construal, the meaning of each individual multi-verb sequence as a complex expression is the result of construal operations. This functions at two levels, the construal of the word meanings and the one of the whole expression. At the level of the word meanings, deixis plays a crucial role. The semi-complement and the adjunct/oblique groups are exemplified by the modal use and the deictic motion use of the verb *go* respectively. At the level of the whole expression, the semi-complement group has one subgroup, the modality subgroup. With the adjunct/oblique group, the *go-to-V*, the *go-V*, and the *go-and-V* sequences have only one semantic subgroup, the motion-purpose subgroup. The *go-Ving* sequence has four subgroups. Based on the number of subgroups, there is a dividing line between the *go-to-V*, the *go-V*, and the *go-and-V* sequences on the one hand and the *go-Ving* sequence on the other. The *go-and-V* and the *go-V* sequences imply actual realization of the process represented by what appears to be the V2 phrase, but the *go-to-V* sequence does not. There is also a dividing line between the *go-to-V* sequence on the one hand and the *go-V* and the *go-and-V* sequences on the other. This paper calls the *go-and-V* and the *go-V* sequences 'semantically competing sequences'.

There are four main findings from our corpus data. First, with respect to V2 selection in American English, any V2 can occur in the semi-complement group. However, in the adjunct/oblique group, some restrictions are imposed on V2 selection. With respect to the top ten V2s used most frequently, the *go-to-V*, the *go-and-V*, and the *go-V* sequences indicate the relatively similar distribution. There is so little overlap between these three sequences and the *go-Ving* sequence. Second, with respect to genres of language use in American English, the significantly different distributions between the semantically competing sequences, the *go-and-V* and the *go-V* sequences, are observed. Third, the first and the second findings are commonly observed among eleven different English-speaking countries. Fourth, with respect to frequency of use, the crucial difference between the semantically competing sequences is observed among the varieties of Englishes. By contrast, the clear difference between the *go-to-V* and the *go-Ving* sequences is not observed among the varieties of Englishes.

From these findings from the varieties of Englishes, this paper shows that the similarities between the *go-to-V* and the *go-Ving* sequences are generally observed with respect to construal operations. However, such similarities are rarely observed between semantically competing sequences, the *go-V* and the *go-and-V* sequences. Therefore, it can be concluded that there is decidedly more to differences in grammar than well-known differences in pronunciation and vocabulary. Our empirical study discussed here is to a large extent supported by using different corpora, *BNC* and *International Corpus of English*.

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The Chinese PAINLESS: A Corpus-based Analysis

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Keywords: Chinese, wútòng, corpus, metaphor

Metaphorical extensions often happen in the language over time. Metaphor research in the past largely focused on the metaphorical mapping of domain information (Lakoff & Johnson, 1980) and often on the nouns or verbs being mapped, but in many cases, metaphorical extensions could occur subtly in other parts-of-speech. Lyons (1977: 550) said that metaphorical extension of a sense “is no more predictable by rule than is the creation of a new compound lexeme.” Extensions in the modifiers or adjectives are often less noticed than those in the nouns or verbs. Furthermore, metaphorical extensions do not often have parallel development. For example, in this study, we found that *wútòng* ‘painless’ (無痛) could extend figuratively to modify money, investment, and learning, while the opposite of it *tòng* (痛) or *tòngkǔ* ‘pain’ cannot ‘un-negate’ the painless meaning in *wútòng* (無痛).

In this paper, we analyzed the word *wútòng* (無痛) that appeared in the United Daily News (UDN) (聯合知識庫). The data (342 instances) were collected in the recent 10 years (2008-2018). We also looked at the definitions: *Wútòng* means ‘painless’ or ‘analgesia,’ in which the latter is a medical term that means ‘the loss of the ability to feel pain while conscious’ (taken from <https://tw.ichacha.net/%E7%84%A1%E7%97%9B.html>). Similar to its English-equivalent medical term, *wútòng* in Chinese is also often used in medical field. Many examples are related to the reduction of physical pain, with uses such as *wútòngjì* (無痛劑) ‘soothing agent’, *wútòng báiyá* (無痛拔牙) ‘a painless extraction of teeth’, *wútòng fēnmiǎn* (無痛分娩) ‘painless labor’, etc. While some examples referring to the characteristic of the noun being modified were also seen (e.g., *wútòngxìng huángdǎn* (無痛性黃疸) ‘painless jaundice’, *wútòngxìng qīngtān* (無痛性輕癱) ‘painless paresis’, etc.), some other examples refer to the mental state of ‘feelingless’ *wútòng wúgǎn* (無痛無感) and some are disease names (先天性無痛無汗症) (CIPA). Among these, ‘feelingless’ has developed into ‘ignorant’ meaning. (「當時甚至覺得，就算一覺起來對方突然消失了，也無痛無感。」).

Although the literal disease-related meanings still dominate about 80% of the data, the figurative use has changed from mental state to the following uses (1).

- (1) (a) 無形中引導他們自然的運用美語，通過無痛式學習 ‘painless learning’
- (b) 這種排隊法絲毫無痛，反而成為記憶中美好的經歷。 ‘a method of queuing that is painless’
- (c) 至於 3 G 用戶無痛升級，以及 4 G 流量優惠，也是兩家業者競爭利器。 ‘painless upgrade’
- (d) 楊士範說，目前已有第三方公司設計「無痛轉換」程式，但軟體來源不明確，仍有風險，建議 M S N 用戶不到「最後一刻」，不要輕易轉換到 Skype。 ‘A transformation (computer) program that is painless’

These uses are unrelated to pain, but to ‘difficulty’ – in other words, the sentences mean ‘without any difficulty’ or ‘with the lowest possible trouble’ (張仲杰表示，能無痛改善交通最好，但以北市的人車密度來看)。

As mentioned, these findings show that ‘pain’ is a trouble. What people need in today’s world is something that can be adopted ‘painlessly’ or ‘troublelessly’ or ‘without any difficulty’. If we put these meanings back to the disease-related uses, one could also mean that child-birth, extraction of teeth, etc. are becoming more ‘friendly’ and ‘troubleless’, a connotation that encourages the society to accept them.

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A Study on Acquisition of Sentence-final Particles among Chinese-speaking Children

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Key words: Sentence-final Particles (SFPs); language acquisition; Chinese children; functional modal particles; factor analysis

In Chinese, people often use sentence-final particles (SFPs) to express their attitudes and opinions towards certain behaviors or events. There is no lexical category as there is with SFPs in English, Russian, and other Indo-European languages, which therefore causes difficulties for foreign language students in their learning of SFPs—they often fail to use one when needed, while using one when there is no need. On the other hand, Chinese children have acquired their use of SFPs at an early stage with few errors. Therefore, it is worthwhile for studies to focus deeply on the reasons Chinese children are able to acquire their use of SFPs in comparatively short periods and being sensitive to the mood expressed in their mother language.

Research on Children's use of SFPs were found mainly in Japanese (Miyahara, 1974; Clancy, 1985; Matsuoka, 1998; Shirai, Shirai, & Furuta, 2000; Fujimoto, 2008; Murasugi, 2013) and Korean (Clancy, 1989; Choi, 1991; Lee, 2009), in which there is a similar category of SFPs as found in the Chinese language. Chinese academic research on children's acquisition of SFPs concentrated primarily on the Mandarin (Li, 2005; Liu, 2009; Qian, 2003; Song, 2013; Tao, 2012; Peng, 2016), Cantonese (Lee, Wong & Wong, 1995; Lee & Law, 2001), and Taiwanese (Erbaugh, 1992; Chang, 1991). The above research focuses on the syntactic and semantic aspects of SFPs and has achieved certain results. Yet the common inadequacies of the above research are with the insufficient number of subjects being studied (only 2-3 children), some of the corpus not being collected according to CHILDES (Child Language Data Exchange System), the lack of underpinning theories to systematically analyze the data, the lack of overview of overall SFPs' categories, and failing to put forward a general rule that can explain the results. Therefore, there are still some questions to be considered: (1) What is the acquisition order of SFPs? (2) Do adults' language input affect the acquisition of children's acquisition of SFPs? (3) Is it feasible to construct a model of children's SFPs acquisition?

Based on a corpus of four Northern Chinese Mandarin-speaking subjects (children ranging from 1 to 4 years old), this study is intended to explore the subjects' acquisition pattern of SFPs and the dominant factors in their acquisition by analyzing the data of their time of SFPs acquisition, mean length of utterance (MLU), the output frequency of children's SFPs, and the input frequency of parents' use of SFPs. It is found there are nine SFPs frequently used by the subjects, and the acquisition order is: tone particles > functional modal particles > general modal particles (“>” means earlier than). The dominant component affecting the overall internal language development of the subjects' SFPs is the functional modal particle. There is a correlation found between parents' input and subjects' acquisition of SFPs, but with low significance. The abstract classification structure and the predominant factor of SFPs are children's inherent and intrinsic linguistic knowledge, and do not need to be learned. The role of adult discourse input frequency cannot exceed this principle of acquisition. It can only have a corresponding influence on language acquisition from parts or child individuals.

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The relevance of anchoring and the duration of events in the early acquisition of Spanish verb morphology and its tense-aspect meaning

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Keywords: First language acquisition, Spanish, verbal morphology, input, tense and aspect.

The acquisition of the first words are related to the here-and-now of the context of enunciation, since the anchored elements of the communicative context allow children to associate words with the world, through a process of joint-attention with the co-present objects (Clark, 2003). In the case of acquisition verb acquisition, only the most incipient ones are acquired in ostensive contexts (Tomasello, 1992). Ostensive contexts are related to the acquisition of the first morphological marker acquired in English, the progressive marker *-ing*. At the same time, the earlier acquisition of this morphological marker seems to be influenced by the duration of events children experience in communicative contexts of daily life (Ibbotson, Lieven and Tomasello, 2014).

Spanish has a relatively complex verbal morphological system that expresses tense and aspect, as well as number, person and mood. Besides the rich inflectional paradigm, there are verbal periphrasis that express aspect. Among the first morphological markers produced by Spanish-speaking children are the present, the past perfect, the prospective periphrastic construction *ir a* 'go to' + infinitive and the progressive periphrastic construction *estar* 'to be' + gerund (Courtney, 1992; Rojas-Nieto, 2004). Even though there are many studies about the acquisition of verbal morphology in Spanish, there are no studies concerning the factors in the communicative context that favour the acquisition of verbal morphology.

This study has two research goals. The first one is to find out whether anchoring – the here-and-now of the context of enunciation- of verbs in the communicative context is relevant to the acquisition of verbal morphology. The second one is to determine whether the duration of events associated with verbs in the input, in communicative contexts, has an influence on the acquisition of the tense-aspect meaning of such verbal morphemes. Naturalistic observations of two children (1;08-3;02) were analyzed. Children and their main caregivers were videotaped for seven months in three different stages of the acquisition of the verbal morphology. Anchoring and duration of events were determined and calculated in the communicative context. Both children and adults' verbs were coded using ELAN (Crasborn & Sloetjes, 2008).

Results obtained indicate that the only four morphological markers which are anchored in the input are the first ones produced by children. Furthermore, the production of the morphological markers in child speech replicates the duration of events expressed by each morphological marker in the input. Children show little or no creativity in their use of such markers.

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Bilingual language acquisition from a usage-based perspective: A corpus study on the code-mixing of a German-English bilingual child

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Keywords: Language acquisition, multilingualism, traceback, acquisition of constructions

Lexically specific patterns such as *What's this?* and patterns consisting of a lexically specific “frame” and an open slot such as *look, an x!* play an important role in language acquisition scenarios (Cameron-Faulkner, Lieven, and Tomasello 2003). Recently, Quick et al. (2018) have shown that partially schematic patterns also seem to play a key role in the code-mixing of bilingual children, e.g. *I want x*, as in *I want die paint* ‘I want the paint’. Following up on this observation, the present study investigates whether lexically specific as well as partially schematic patterns in the code-mixing of a German-English bilingual child ($n=1,024$ code-mixed utterances out of 47,812 utterances in total) aged 2;3 to 3;11 can be traced back to patterns found in the input ($n=61,077$). In line with usage-based accounts of language acquisition (e.g. Tomasello 2003), this would suggest that bilingual children construct their code-mixed utterances on the basis of concrete linguistic material they have heard before.

In our operationalization of utterance-initial chunks as well as partially schematic patterns, we follow e.g. Dąbrowska & Lieven (2005) or Cameron-Faulkner et al. (2003): Repeated strings are considered patterns if they occur at least four times in the corpus. In a first step, only utterance-initial n -grams were retrieved automatically to identify recurring lexical patterns. It could be shown that a large proportion of the code-mixed data contain utterance-initial lexical chunks (82.2%), a large proportion of which (72.7 %) can be traced back to the parental input.

A more in-depth study of a subset of the data using manual annotation, which allows for identifying partially schematic rather than just lexically specific chunks, reveals that code-mixing often involves the filling of an open slot in a partially schematic construction. In addition, much of the code-mixing turns out to be primed by the occurrence of the same forms in the immediately preceding discourse. In sum, these findings lend further support to usage-based theories of language acquisition, and they can help understand code-mixing in early bilingual language acquisition from a construction-based perspective.

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Perspectivation and Pretend Play in Language Acquisition: A Corpus Study

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Keywords: Pretend Play, Language Acquisition, CHILDES, Perspectivation, Event Schemas

In this paper I present a corpus analysis of perspectivation and pretend play in language acquisition. Specifically, I am using the CHILDES database (MacWhinney 2000) to analyse instantiations of the Cognitive-Linguistic concept of event schemas (Radden & Dirven 2007) in the domain of pretend play.

Pretend play seems to be a uniquely human behaviour that is culturally universal and displays a predictable developmental sequence (Lillard 2017). Pretend activities also make up a significant amount of children's daily interactions (Haight & Miller 1993). This has prompted many researchers to propose that pretend play has a crucial role in children's development (e.g., Bergen 2002). Indeed, pretend play has been found to be closely connected and tightly integrated with other uniquely human cognitive and interactional abilities. For example, pretend play has been positively related to Theory of Mind, executive functions, and advanced sociocognitive capacities, especially in the form of pretend social role play (e.g., Carlson & White 2013).

Pretend play is also strongly associated with language and language acquisition (Lillard 2017). This view is consistent with the general framework of Cognitive and Usage-Based Linguistics, which sees language as being based on and as being tightly integrated with general cognitive capacities. For example, Cook-Gumperz & Kyratzis (2001) have shown that pretend play situations can be seen as a training ground and crucial scaffolding for the acquisition of progressive and simple present constructions. Regarding the relationship of pretend play, language and sociocognitive capacities, Rakoczy (2006) has argued that pretend play can be seen as a crucial cradle of the development of shared intentionality, that is, the capacity to engage in shared cooperative activities with others with shared intentions, which is a crucial foundation of language acquisition (e.g., Tomasello 2008). Research on cultural variation in pretend play has shown that pretend play universally serves the function to practice and internalize culturally salient frames, scripts, schemas and routines with the aid of linguistic interaction (Gaskins 2013). This can also be seen as a crucial aspect of language acquisition, which also depends on the acquisition of linguistic frame knowledge in order to express and understand utterances regarding situations and events containing frame slots and schemas such as transactions, actors and objects in various situations.

It is therefore not surprising that, as Lillard (2007: 136) notes, "[I]inguistic cues to pretending are the most researched topic in the area of how pretend differs from real." In addition to the examples given above, there have been numerous experimental studies of children's use of pretend language (e.g. Whitebread & O'Sullivan 2012; Orr & Geva 2015; Garvey & Kramer 1989). The pretend lexicon of children is therefore of immense research interest. However, little is actually known about how children use these words in their everyday life (Bunce & Harris 2008: 446). The fact that pretense is important in children's language acquisition is evident, for example, in the fact that the lexical item pretend is part both of the MacArthur-Bates Communicative Inventories (CDIs) (Fenson et al. 2007) as well as the 200-word Level II Short Form Vocabulary Checklist of the CDI for young children aged 16-30 months (Fenson et al. 2000: 108-109). There is then, a wealth of data on the acquisition of the lexical item pretend. What we do not have is corpus study investigating how the lexical item pretend is actually used by children and caregivers in their everyday interactions. In this paper, I present such a study, using two densely sampled CHILDES corpora: the Thomas-Corpus (Lieven et al. 2009) and the Manchester Corpus (Theakston et al. 2001). Specifically, I will present my data on which types of event schemas (e.g. Radden & Dirven 2007) children and their caregivers evoke in in play using the lexical item pretend. In other words, I will investigate which perspectives they express and adopt on pretend situations in interaction.

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L1 Acquisition of Japanese Deictic Verbs Iku Meaning 'to Go' and Kuru Meaning 'to Come': Focusing on Motion Event Descriptionⁱ

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Keywords: L1 acquisition, deictic verbs, motion event, iku 'to go,' kuru 'to come,' Japanese

This study investigates at what age children can use Japanese deictic verbs iku meaning 'to go' and kuru 'to come' to describe motion event in the same way as adult native speakers' use by applying the theory of usage-based models (Langacker 1988, Tomasello 2003).

Since the deictic verbs iku and kuru are basic motion verbs, children relatively start using them from an early age, and they repeatedly use these verbs in everyday situations. However, it takes a quite long time to acquire as accurately as adult native speakers. Some studies have shown that some children of 6 or 7 years old still make mistakes when they use these verbs (Clark 1974 on English, Masataka 1999 on Japanese). It has also been found that some adults native speakers' use of iku and kuru confuses for children to find the correct usage patterns of the exchangeable semantic types (Takanashi 2019). In some contexts, we can use either iku or kuru, which is a matter of consturual. Although research on the acquisition of deictic verbs has been being carried out, it has not been clarified when children can use iku and kuru as accurately as adult native speakers yet.

We conducted experiments to find out at what age children can use iku and kuru without making mistakes. In the experiments, 28 children from age 6 to 12 years were asked to answer 20 questionsⁱⁱ that they needed to choose iku or kuru depending on contexts. The same experiments were conducted for 10 adult native speakers to confirm the difference between adults and children's use. The questions were asked using slideshows on powerpoint to make children understand the scenes and contexts clearly.

The following specific issues were addressed:

- (1) When can children use iku and kuru to describe motion event as accuracy as adult native speakers?
- (2) How do children use iku and kuru of the exchangeable semantic types?

As a result of the experiments, these revealed that most children at the age of twelve could use iku and kuru to describe motion event as accurately as adult native speakers. However, some children of this age still make mistakes, and some were not confident which verb to use. Iku and kuru have the unique aspect of both ease and simplicity, and that complicity is inhered, which may affect the acquisition of these verbs.

To be more specific, the following results were identified:

1. Children around the age of twelve almost can use iku and kuru as accurately as adult native speakers when they describe motion event. However, some children still make mistakes, or in some cases, even they do not make mistakes, some were still struggling to use iku and kuru correctly. Adult native speakers answered the questions without taking time. However, children tended to hegitate and take time before answering questions.
2. Children tend to describe motion event subjectively for exchangeable semantic types. They tend to construe these verbs more subjectively compared to adult native speakers of Japanese.

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ⁱⁱ One of the questions asked on the experiment is as follows: Question1: ' Kore kara socchi ni (). (I am () there.)' 1. kuru ne (coming) 2. iku ne (going)

The Expression of Motion Events in Japanese and English Narratives: A Developmental Approach

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Keywords: motion, narratives, language acquisition, Japanese, English

Research on narratives has helped provide insight into a wide range of questions regarding language acquisition and use. Of these, many researchers have worked on the expression of motion, working with Talmy's (1991) typology of *verb-framed* and *satellite-framed* languages which focuses on the means of expression of the path of movement. In *verb-framed* languages path is expressed by the main verb in a clause (e.g., 'enter', 'exit'), while in *satellite-framed* languages, path is expressed by an element associated with the verb (e.g., 'go in/out/up').

In addition, Slobin (e.g., 1996, 2004) proposed a manner-saliency hypothesis, explaining how *satellite-framed* languages tend to be high-manner-salient, with *verb-framed languages* being low-manner-salient. Over the years, a substantial amount of research has been conducted on motion events in narratives in many languages including English, Spanish, Hebrew, and Turkish (e.g., Berman & Slobin, 1994; Slobin, 1996, 2004). In addition, Ohara (e.g., 2002) and Kita (e.g., 1997) have worked on Japanese. This study uses a developmental approach to compare the acquisition of expressions of motion events in Japanese (*verb-framed language*) and English (*satellite-framed language*).

The data for this study comes from existing collections of elicited oral narratives based on the Frog Story from: (1) Japanese children ages 3, 4, 5, 7, 9, and adults from Nakamura (e.g., 1993) and (2) the English-Slobin database in the Frog Corpora in CHILDES. In addition, written Frog Story narratives were newly collected from 100 Japanese adults and 100 English-speaking adults. The use of the Frog Story methodology allows for crosslinguistic comparisons based on the same motion events.

Regarding both languages, from an early age, children demonstrated use of language-appropriate forms to describe motion, with Japanese-children using forms typical of a verb-framed language such as *haitte-iku* 'to go into' or *hikkuri-kaetta* 'to fall over' and the English-speaking children using satellite forms in path-of-motion expressions such as *into*, typical of a satellite-framed language. Language-related differences were noticed in the depiction of motion events, such as the frequent use of manner morphemes, or ideophones, such as *gororin* (to flop down) and *dotsunko* (to bang into) by all Japanese age groups, adding manner elements to depict motion events. A comprehensive analysis of the types of ideophone expressions was conducted. In addition, age-related differences were also observed in the relative proportion of different linguistic strategies to describe motion. Results are discussed in terms of Slobin's "Thinking for Speaking" hypothesis, in which our experiences are filtered through language into verbalized events, to explain the process by which children and adults use the tools they have in their language to verbalize their thinking (e.g., Slobin, 1987, 1996).

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Inter- and Intra-Typological Variations of the Representations of Complex Trajectories

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Keywords: motion events, typology, Path

This study presents the results of crosslinguistic stimuli-based experiments, concerning the linguistic representation of motion events which have complex trajectories consisting of multiple Path segments (source, medial, goal). The languages examined were English, Russian, Hungarian, Japanese, and Italian. Following Matsumoto's approach (2017) we use the terms head Path-coding languages (languages coding Path in the main verb) and head-external Path-coding languages (languages coding Path outside the main verb stem) to refer to different types of linguistic expressions of motion event descriptions.

Previous studies on the description of complex trajectory motion events explored the potential existence of universal principles of motion-event segmentation across languages (Bohnmeyer, et al. 2007) and introduced a concept of Path saliency cline inter- and intra-linguistically (Ibarretxe-Antuñano 2009). In this study we will present our data on several different cases of complex trajectories based on the video clips representing real motion events, for example, a dog running out of its cage under a bench into a soccer goal.

Through a video stimuli-based elicitation experiment we collected and analyzed cross-linguistic data on four self-agentive complex trajectory motion events involving source-medial-goal Path segments. In particular, we examined double-segmented and triple-segmented trajectories. We investigated how the complexity of trajectories influenced the description of motion events and looked at the frequency of the reference to the three Path segments.

Firstly, our findings confirmed that all five languages demonstrated the consistency with their typological patterns irrespectively of the complexity of motion trajectories. Japanese and Italian tended to code the Path in the head, while English, Russian and Hungarian didn't code the Path in the head. Secondly, of the three Path segments, the 'goal' segment had the highest frequency and the 'source' segment had the lowest, and this pattern was consistent across all five different languages despite their typological differences. Therefore, our findings supported the existence of source-goal asymmetry in line with the previous studies showing that the 'arrival' segment is cognitively more salient than the 'departure' segment. This tendency of Path indication saliency hierarchy can be potentially cognitively universal in the perception of complex trajectory motion events. Finally, our results demonstrated the preference for different sentence complexity in the case of a triple-segmented trajectory. For example, intra-typological comparison of the three head-external Path-coding languages outlined that languages with morphologically bound head-external elements (prefixes in Russian and preverbs in Hungarian) tended to use the repetition of verbal stems to describe a triple-segmented trajectory, which resulted in the use of more numerous coordinate structures than English, which could cover all the Path segments in a simplex sentence. Intra-typological comparison of the two head Path-coding languages (Italian and Japanese) also showed the difference in the use of subordinate structure.

Therefore, the investigation of complex trajectory motion events showed both language-specific and potentially linguistically universal characteristics giving more insights into both typological and cognitive aspects of motion event representation.

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Cross-linguistic tendency of Path encoding: A production experiment of 14 different Paths in English, Hungarian, Italian, Japanese, and Russian

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Keywords: motion, cross-linguistic study, experiment, Path

This study examines if there is a cross-linguistic tendency in the coding of different Paths (e.g. ALONG, TO, INTO, ACROSS, UP), based on experimental results on five languages. It has been pointed out that there is a difference among Paths in their likelihood of being coded in the main verb positions. Matsumoto (2017), for example, points out that TO tends to be expressed by elements outside the main verb, i.e. adpositions and case affixes, whereas UP tends to be expressed by the main verb stem across languages. Based on this observation, Matsumoto et al. (2018) used a production experiment to examine the representation of 14 different Paths in five languages, French, Thai, Kupsapiny, Sidaama, and Tagalog, and suggested a semantic map-scale describing the likelihood of different Paths coded in the main verb. This previous study, however, did not examine typical head-external Path-coding languages, in which Path is coded outside the main verb position.

In the present study, we apply the same production experiment to five more languages: three head-external Path-coding languages (Russian, Hungarian, and English) and two head Path-coding languages (Italian and Japanese), in order to examine if the same tendency can be observed. The participants were asked to watch clips of various motion events with 14 different Paths, and verbally describe what they saw. Path coding positions are categorized into three: 1) the main verb (Head), 2) Adverbals (verb affixes, adverbs, particles), and 3) Adnominals (adpositions, case markers).

The results were generally consistent with earlier findings. In Italian and Japanese, vertical Paths (UP, DOWN) and boundary crossing Paths (ACROSS, OUT, INTO) tend to be coded in the main verb, while locative-like Paths and atelic Paths (VIA.BETWEEN, VIA.UNDER, AROUND, ALONG, and TOWARD) tend not to be coded in the main verb. In English, Hungarian and Russian, Path is almost always expressed in head-external positions, except for the vertical Paths (UP, DOWN) in Russian (UP: 56.7%, DOWN: 70.0%), again consistent with the map-scale.

A new finding is obtained in the pattern of Adverbial coding. Interestingly, Russian and Hungarian show a tendency of using Adverbial elements (if not the main verb) to represent Paths. Vertical Paths (UP, DOWN) and boundary crossing Paths (ACROSS, OUT, INTO) tend to be coded in the prefix/preverb, while locative-like Paths (VIA.BETWEEN, VIA.UNDER, AROUND and ALONG) tend not to be coded in the prefix/preverb. However, English speakers rarely used Adverbals for any Path in our results.

This new finding reveals the relevance of the map scale suggested in Matsumoto et al. (2018) not just to the Head coding of Path but also to the Adverbial Path coding in head-external Path-coding languages, suggesting the Path coding in languages is not as different as previous typological studies might have suggested.

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The expression of Manner-of-motion in inter- and intratypological translation scenarios: a comic-based analysis

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Keywords: Manner-of-motion, motion events, Thinking-for-translating, comics, visual narratives

This contribution aims to analyse the translation of Manner-of-motion in comics, a type of translation which is limited by the text–image relationship (Mayoral, Kelly & Gallardo, 1988). More specifically, the empirical basis includes a selection of the Franco-Belgian comic series *Les aventures de Tintin* (Hergé, 1930-1986) and their corresponding English and Spanish translations.

This study draws specifically on Talmy's theory of lexicalization patterns (1985, 2000) and Slobin's Thinking-for-translating hypothesis (1996). Based on the expression of Path, Talmy distinguished between two types of languages: verb-framed languages, such as French and Spanish, which typically encode Path in the verb and Manner through adjuncts or other mechanisms; and satellite-framed languages, such as English, which usually encode Path in a satellite and Manner in the main verb. According to the Thinking-for-Translating hypothesis, the translator's mother tongue affects the translation process and the lexicalisation of some semantic components (most frequently, Path and Manner). This contribution focuses on the semantic component of Manner, the lexicalisation of which presents divergences not only in the translation between languages belonging to different typologies (for instance: Alonso Alonso, 2018; Cifuentes-Férez, 2013; Ibarretxe-Antuñano, 2003), but also between languages belonging to the same typological group (e.g. Filipović, 2008). It also devotes special attention to the role of visual language within this framework.

Although the illustrated book without text *Frog, where are you?* (Mayer, 1968) and novels such as Tolkien's *The Hobbit* (1937) and J.K. Rowling's Harry Potter series (1997), among others, have been used on numerous occasions to study the expression of motion within the disciplines of Applied Linguistics and Translation Studies, to date the genre of comics has not been explored very much in this context (two exceptions are the studies of Tversky & Chow, 2017, and Cohn et al., 2017). The final aim of this contribution is thus to examine the translation of Manner in these two translation scenarios in order to identify translation techniques adapted to the translation problem. The results also indicate how translation of comics differs from that of novels in this specific context.

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Interaction of spatial prepositions *ti7*, *tiam3* and *tua3* and verbs in Taiwan Southern Min: From a corpus-based approach

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Keywords: spatial prepositions, Taiwan Southern Min, corpus linguistics, Taiwanese Concordancer, interaction of verbs and prepositions

Introduction: This study explores the interchangeability of three spatial prepositions *ti7*, *tiam3* and *tua3* in Taiwan Southern Min from a corpus-based approach by looking into its preceding verbs. The three spatial prepositions have been regarded interchangeable, but there are some minor differences (Lien 2003, Tiuⁿ 2009, Yang and Lu 2018). Lien (2013) contends that *ti7* can be declarative, while *tiam3/tua3* can be imperative. The three prepositions are more like in a continuum (Tiuⁿ 2009). There are several nuances between the three prepositions. The three prepositions are interchangeable for a past event; only *tiam3* and *tua3* are interchangeable for a future event. When the prepositions *ti7/tiam3/tua3* precede *toh4 ting2* 'the top of a table', *ti7 / tiam3 toh4 ting2* are acceptable. *Tua3 toh4 ting2* is ungrammatical, due to the interpretation that *tua3 toh4 ting2* only means 'to live on a table'.

Questions: Although several differences between the three prepositions have been discussed within the domain of a preposition phrases or from a pragmatic perspective, there is no lengthy research to focus on the preceding verb and to investigate whether there is an interaction between the verbs and prepositions.

Corpus: To better account for the interaction of verbs and the three prepositions, I adopt a corpus-based approach by extracting data from an on-line corpus, Taiwanese Concordancer (Lunn and Lau 2007). I pay specific attention to the distributions of the three spatial prepositions after thirty verbs. In total, there are 2312 tokens in the corpus.

Results: All the three prepositions are attested in the corpus, making them become interchangeable in use, but the frequency in the corpus reveals that *ti7* is the most favored, as the distributions of the two verbs suggest that *ti7* significantly outnumbers *tiam3* and *tua3* in the corpus. Out of 2313 tokens, 2072 tokens are in *ti7*, 179 tokens in *tiam3*, and 61 tokens in *tua3*. In the thirty verbs, three verbs exceed 10 percent of the corpus data (> 300 tokens): *khia7* 'stand', *khng3* 'put' and *che7* 'sit'. 449 corpus instances are attested in *khia7* 'stand' (19%), 384 instances in *khng3* 'put', and 306 in *che7* 'sit'. In the three verbs, preposition *ti7* tremendously outnumbers the other two prepositions (408 vs. 41 in *khia7* 'stand', 297 vs. 87 in *khng3* 'put', 279 vs. 27 in *che7* 'sit'). A Chi-square test is conducted to check whether there is a significant difference between the three verbs and three prepositions. The result suggests that there is a significant difference between the three verbs and the three prepositions. ($p < .0001$). The data reveal that *khng3* 'put' is associated more frequently with *tiam3* than the other two verbs are. In the corpus, verb *chhai7* 'place' has eight tokens of *tua3*, but it has only five tokens of *tiam3*. The distribution differs from the other verbs in the ranking that *tiam3* outnumbers *tua3* (5 < 8).

Implications: The findings have two implications. First, the corpus data suggest that the three prepositions are interchangeable (Lien 2003, Tiuⁿ 2009), but the distribution is skewed, and thus the prepositions should be treated with different weight, $ti7 > tiam3 > tua3$. Second, the preposition interacts with the preceding verbs, especially *khng3* 'put' and *tiam3*.

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Conceptualization of motion event by Chinese-English Bilinguals: A study of difference between Cantonese and Mandarin

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Keywords: Motion event typology; caused motion, agentive motion; directional verbs; Cantonese; linguistic relativity; second language acquisition

In the description of motion events, the proposal by Talmy (1985) classifies languages into two main categories with regard to how the path information is encoded. In verb-framed languages (e.g. Spanish and French), path is encoded by the main verb in a sentence while the manner of motion is described by adverbials or gerunds. In contrast, in satellite-framed languages (e.g. English and German), path is specified in particles of a sentence while manner is encoded in the main verb. In the discussion of motion events in Chinese, scholars have expressed a divided view towards the language's typological status as some consider Chinese as a satellite-framed language (e.g. Talmy, 2000) while others proposed that Chinese should be classified under the third category of language, namely the equipollently-framed language, because both path and manner are expressed with an equal grammatical status (e.g. Chen & Guo, 2009), as also found in languages such as Thai (Zlatev & Yangklang, 2004). However, the discussion on the typology of Chinese often only focuses on Mandarin, while relatively less studies have investigated other varieties such as Cantonese. The work by Yiu (2013) is one of the few examples featuring a comprehensive investigation of Cantonese and Mandarin in the expression of motion events. Despite the close resemblance of these two dialects, one significant difference is that the use of directional verbs to encode path in caused (or called agentive) motion events could only be found in Cantonese but not Mandarin. The examples below are extracted from Yiu (2013:549).

1. 他進*了信入信封裡。(Mandarin)

Tā jìn le xìn zài xìnfēng lǐ.
He enter (aspect marker) letter at envelope inside
'He put the letter into the envelope.'

2. 佢入咗封信入信封。(Cantonese)

Keoi5 jap6 zo2 fung1 seon3 hai2 seon3 fung1.
s/he enter (aspect marker) (classifier) letter at envelope
'S/he put the letter into the envelope.'

As demonstrated above, agentive use of the path verb “進” is not allowed in Mandarin, while it is possible with the agentive use of path verb “入” in Cantonese. On the other hand, following the thinking for speaking hypothesis by Slobin (2003), the lexicalization patterns of motion characterized by a language affects the non-linguistic representation in mind. Therefore, one may wonder if this difference between Cantonese and Mandarin would influence speakers' of both varieties in their conceptualization of motion event in a common L2, such as English. In view of this, this paper presents a preliminary study to investigate this intricate properties through narrative data of the classical frog study by the recruited Cantonese and Mandarin learners of English in both their first language and second language. It is expected that this study could provide further evidence to better understand the effects of intra-language difference in the conceptualization of motion events, which is essential in the area of study of second language acquisition.

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Motion Events in L2 Chinese: verbal and non-verbal behaviour across languages

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Keywords: motion event, second language acquisition, cross-linguistic differences, typology, Mandarin Chinese

According to Talmy's (2000) binary typology of motion events, the world's languages are classified into satellite-framed and verb-framed languages. Talmy argues that Chinese falls into the satellite-framed category in that Chinese uses post-verbal particles to encode the path, similar to English. Talmy's typological classification of motion verbs presents a problem in Chinese since it is both S- and V-framed depending whether V1 or V2 is taken as the main verb (Tai, 2003). Slobin (2004) proposes that serial-verb languages such as Chinese are equipollently-framed, which means that aspects of motion event (manner, path, deixis) have equal morphosyntactic status. Since then, a great number of studies have been conducted to examine the motion descriptions by native speakers as well as L2 learners.

There is still room for discussion, especially on the saliency of manner, types of path, and tendencies in deixis. The present study aims to investigate the expressions of motion event by adult English and French learners of Chinese. We look at the cross-linguistic influence in a equipollently-framed L2 Chinese from a satellite-framed L1 English and verb-framed L1 French. The study investigates whether the effect of language typology can go beyond motion event description, and influence motion conceptualization.

The participants were a group of Chinese learners of English (N=45) and a group of Chinese learners whose native language is French (N=45) at three proficiency levels (beginner, intermediate and advanced). Both proficiency group is composed of 15 participants. So that baseline data can be gathered, fifteen monolingual native speakers of Chinese were recruited.

The experiment asked subjects to verbally describe various motion scenes, which differ in manner, path and deixis. The task was coupled with eye-tracking paradigm in order to determine how participants prioritized the visual information during the perception of unfolding motion events. A set of 18 animated cartoon stimuli involving six types of manner that either involved the use of an instrument (bicycle, scooter, skates) or involved no such instrument (run, jump, crawl), two types of path, (boundary-crossing out of, into and across; without boundary-crossing up and down), and the deictic directions (toward the speaker, away from the speaker) were administered. Results show that descriptions of motion events had more manner expression in English group and variation in both groups. In addition, the eye movement data showed difference in speakers' attention allocation relevant to manner and path regions.

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How Japanese and Chinese advanced learners of English found the frog: A SLA study on rhetorical style of motion events

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Keywords: second language acquisition, rhetorical style of motion events, cognitive typology, salience in motion events, oral and written data

Abstract: SLA studies on motion events are mainly restricted to typological differences of lexicalisation patterns between L1 and L2. However, as Slobin (2004) pointed out that motion events often go across the clauses to the level of discourse, called “rhetorical style of motion events”, which involves not only typology but also sets of other factors. Therefore, it is of crucial importance to have more studies on how learners acquire L2 with a different rhetorical style of motion events. Based on this purpose, this research chose 15 English native speakers, 15 Japanese and 15 Chinese advanced learners of English as research subjects, whose first languages have different rhetorical style of motion events from each other, for these three languages are typologically different and with other factors involved as well. Considering that oral data can better reflect L1 transfer because of improvisation but on the other hand, some acquired L2 knowledge that is not very active may not be tested out in oral data, which can be made up for by written data to some extent, by using the picture book *Frog, Where are you?*, the author first collected oral data of L2 followed by L1 and then collected written data of L2 followed by L1 from Japanese and Chinese advanced learners of English. For English native speakers, only L1 oral data and L1 written data were collected. The data was analysed from the following four aspects: manner salience, path salience, ground salience and style (static or dynamic) based on the Slobin (2004) and Ibarretxe-Antuñano (2009). This research found that even advanced learners of English were remarkably affected by their habitual rhetorical style of motion events from their L1. Manner is much more salient in narratives of Chinese learners of English and English native speakers than Japanese counterparts; Path elements per verb was only one in both Japanese and Chinese data while several was common case in English native speakers; Average event segmentation in narratives of Chinese and English native speakers was more than that of Japanese; Ground was more salient in narratives of English native speakers than Japanese followed by Chinese; For style, both Japanese learners of English and Chinese counterparts tended to present much more static rhetorical style than English native speakers did. It is concluded that because rhetorical style of motion events is shaped by sets of factors, it is deeply rooted in language speakers’ mind and remains unconscious. Thus, extra attention should be paid to learning L2 with different rhetorical style of motion events.

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Applying Cognitive Linguistics to Content and Language Integrated Learning through L2 Polysemous Lexis Research

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Keywords: conceptual, everyday, genre-specific, metonymical, motivated, sociocultural

This presentation applies cognitive linguistics (CL) to what Llinares et al. (2012) refers to as the three overlapping theoretical perspectives of content and language integrated learning (CLIL): (a) systemic functional linguistics, (b) Vygotskian-based sociocultural theory, and (c) dialogic inquiry. CL is complimentary to these theoretical perspectives because it views language development as conceptually motivated, meaning making, and usage-based (Langacker 2000). Academic genre-based theory is another factor integrating content, language and learning in CLIL. The specific meaning-making under analysis is lexis that has both everyday and academic or genre-specific meanings. Boers and Lindstromberg (2008) outline the CL approach to teaching L2 polysemous lexis as showing how additional senses of the word extend from the core sense by emphasizing the metonymical connections between sense and meaning. Results of an empirical study indicate that CL-based instruction of the metonymically motivated extension in meaning from everyday to genre-specific significantly improves L2 learners' comprehension of both meanings. A two-tailed Mann-Whitney U Test was used to compare the performance in experiment and control groups and it showed that with pre-test scores there was no statistically significant difference between groups ($U = 41.5$, $n_1 = n_2 = 11$, $P = 0.23$); thus, their performance was comparable and homogenous. Post-test results, however, were statistically significant between groups ($U = 28.0$, $n_1 = n_2 = 11$, $*P = 0.03$). As a whole, the better performance of the experiment group can be seen as a consequence of the treatment (i.e., highlighting the extension). This presentation concludes that applying CL as a conceptual link to the theoretical perspectives of CLIL enhances its pedagogical efficacy to further integrate content, language and learning: i.e., content and language *conceptually* integrated learning.

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Relation between Perception of Sound Symbolism and Effects of a Cognitive Linguistics-based Approach to Vocabulary Learning by Taiwanese EFL Learners

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Keywords: sound symbolism, vocabulary learning, iconic, phonaesthemes, mapping elaborations

The purpose of the present study is three-fold: (1) to evaluate Chinese-speaking EFL learners' sensitivity to sound symbolism, (2) to investigate the effectiveness of a cognitive linguistics-based approach triggering form-meaning mapping elaborations (Deconinck, Boers, and Eyckmans, 2107) during vocabulary learning, and (3) to explore if the learning effect works as a function of learners' sensitivity to sound symbolism. Experiment 1, with a mixed method of rating and image- and description-matching tasks, tests whether Chinese EFL college students at the intermediate level ($N = 27$) could perceive sound symbolism in non-sense words designed to carry four different types of sound-meaning relations: (1) between vowels of different features (height & backness) and the image of size, (2) between consonants of different features (sonorant vs. strident) and the image of shape (curvy round vs. spiky angular), (3) between acoustic qualities (sonority & frication) and manners of walking (fast/light vs. slow/heavy), and (4) between English word-initial consonant clusters and phonaesthetic meanings (e.g., *gl-* 'light'). The results suggest that Chinese-speaking EFL learners could track the semantic distinctions of concrete concepts like size and shape flowing from the auditory-acoustic perceptual differences of both vowel and consonant qualities, but not those of less-concrete ones like manners of actions. The learners' matching responses also show evidence that some English phonaesthemes (e.g., *sn-*, *gl-*, *sw-*, *tr-*, *cl-*) are more naturally motivated, hence being more iconic, while some others are more conventionalized. Experiment 2 tests whether the same group of EFL learners in Experiment 1 (Experimental Group: $N = 20$) receiving an approach triggering the form-meaning association of 8 pairs of English phonaesthetic obsolete words would generate mapping elaborations that facilitate better vocabulary learning than the Control Group ($N = 19$) receiving the traditional vocabulary learning approach. The results of an unannounced vocabulary test indicate that the Experimental Group significantly outperforms the Control Group in both form and meaning recall, and the learning outcome under the cognitive-linguistics based approach does not correlate with learners' sensitivity to sound symbolism, suggesting that the EFL learners could in general benefit from the sound symbolism-based learning protocol of the form-meaning mapping elaborations.

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How we marginalised onomatopoeia: Evidence from a multimodal study on Chinese child language

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Keywords: onomatopoeia; multimodality; causation; child language; Mandarin Chinese

An embodied view of language assumes that meaning construction is grounded in human bodies. In this sense, meanings are not represented via completely arbitrary symbols, but rather constructed, represented, and mediated through sensory experience, including auditory, visual, and motoric imageries (Kita 1997; Lakoff & Johnson 1980). Previous research has supported this claim with evidence from both language perception and production. In language perception studies, for instance, it has been shown that when interlocutors comprehend utterances, corresponding neural simulations are active as well (Glenberg & Kaschak 2002; Stanfield & Zwaan 2001; Zwaan et al. 2002). In language production research, language-based communication has been argued to be variably multimodal, with gesture as a major co-expressive vehicle with speech (Cienki 2016; McNeill 1992; Müller 2009). Thus, research on both input and output jointly posit a close relationship between language and sensory information.

However, despite great efforts at revising ideology within linguistics, studies on aural representations like onomatopoeia remain marginal (though see Dingemanse 2018; Kita 1997). To fill the gap, this study adopts a multimodal perspective and uses everyday causal events to investigate the usage of onomatopoeia by children. It aims to answer the following questions:

- (1) How frequently is onomatopoeia used in children's verbal interactions?
- (2) How is onomatopoeia integrated with co-speech gestures in children's descriptions of causal events?
- (3) What are the linguistic functions of onomatopoeia?

Seventy eight monolingual children speaking Mandarin Chinese were taken as participants in an elicitation task. Their ages ranged from 4 to 7 and they were divided into 4 groups according to their age ranges. The stimuli were composed of second-long videos which show common causal events with noticeable causal chain elements (e.g. agent, patient, state change, etc.).

The results show: (1) 35 out of 78 children use onomatopoeia to describe causal events, and the total number of onomatopoeic words of the four age groups are 36, 30, 17, and 22 respectively, occupying a small share of total utterances. (2) Across the four age groups, onomatopoeic words are predominantly accompanied by the gesture stroke phase, the most effortful phase in a gesture unit, accounting for 83%, 87%, 94%, and 91% of gestures, respectively, for each age group. (3) Children's onomatopoeic expressions express three functions in causal event descriptions: (a) to represent the core force transmission in co-occurrence with gestures; (b) to modify the force transmission when used without gesture; and (c) to act as independent expressives. The results also show that onomatopoeia gradually loses the third function as children reach the age of 7.

These results reveal that onomatopoeia, though used in a comparatively small number of instances, acts as an effective source for children to provide "a faithful enough representation" of their experiences (Sasamoto & Jackson 2016: 45). The predominant integration of onomatopoeia with gesture strokes provides further evidence of the significant status of onomatopoeia in meaning construction as well as embodiment.

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Sound symbolic correspondences tested in human and non-human primates.

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Keywords: sound symbolism, non-human primates, iconicity, brain

The term sound symbolism describes the phenomenon of nonarbitrary links between the sound of an utterance and its meaning (Hinton et al., 1994). A classic example of sound symbolism is that of sound-shape correspondences described by Köhler (1929). People judge the non-word “maluma” to be a good match with a round shape whereas the non-word “takete” to an angular one. The relevant role of sound symbolism in the evolution of language has been highlighted in the literature (Imai & Kita, 2014; Perniss & Vigliocco, 2014; Ramachandran & Hubbard, 2001). Gestural and vocal iconicity have been proposed to be an achievement for the evolution and acquisition of language (Perniss & Vigliocco, 2014), because they possibly share neural resources with the latter. Despite the theoretical interest on sound symbolism in language evolution, there have been no studies testing sound-shape correspondences in our closest relatives, namely great apes. In the present project, we ran a two-alternative forced choice (2AFC) audiovisual task. 24 healthy human subjects and eight apes were tested. During the task the subjects listened to a pseudoword preceding the presentation of two shapes, one angular and one round. The subjects had to choose one of the two shapes. Both pseudowords and shapes were rated before as “sharp” or “round” via an online questionnaire. Based on our results, humans preferred to associate curved shapes to “round” sounding pseudowords and angular shapes to “sharp” sounding pseudowords. On the contrary, none of the great apes showed this soundshape correspondence. It is possible that sound symbolic effects depend on language and on the cortical wiring of the language network in perisylvian cortex. Neuroanatomical differences between the two species in perisylvian networks of language (Rilling, 2014) and in verbal working memory mechanisms enabled by human-specific connections (Schomers, Garagnani, & Pulvermüller, 2017) could perhaps explain the absence of a sound symbolic effect in great apes. Moreover a possible mechanisms of sound symbolism grounded in action-perception networks is discussed.

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So many ideophones in Japanese but less so in English:

A three-tier model account

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Keywords: *ideophones, the three-tier model of language use, public self, private self, cognitive-pragmatic typology*

Ideophones “typically depict sensory imagery using various types of iconic mappings” (Dingemanse & Akita [D&A] (2016: 502)) and “are a universal category” (Voeltz & Kilian-Hatz (2001: 3)), with which people generally *show*, and not *tell*, what they perceive (D&A (2016), Haiman (2018)). Even if ideophones are universal, their distribution is not equal across languages. For example, Japanese is rich in mimetics as a subclass of ideophones (e.g., *gorogoro* ‘rolling_{MIM}’) (Kita (1997), D&A (2016), Iwasaki et al. (2017), a.o.), while in English, ideophones, which include response cries (e.g., *brrr* [sound emitted when cold]) and twin forms (e.g., *jibber jabber*), are “insignificant and barely attested” (Haiman (2018: 68)). Why then are so many ideophones found in some languages and not in others? This study argues that the distributional biases are systematically accounted for by the three-tier model of language use (Hirose (2015)), in particular by the private-/public-self-centeredness of a given language. That is, private-self-centered languages like Japanese are rich in ideophones, but public-self-centered languages like English are not.

Two hypotheses of the three tier model (Hirose (2015: 123-125)) are relevant. (i) The three tiers of language use (i.e., the situation construal, situation report, and interpersonal relationship tiers) are combined in different ways in different languages; (ii) the speaker is decomposed into a public self as the subject of communicating and a private self as the subject of thinking. English is a public-self-centered language, in which the public self in the situation report tier views a situation from the outside and reports it, while Japanese is a private-self-centered language, in which the private self in the situation construal tier views a situation from the inside and expresses it.

Based on this pragmatic-typological distinction, Hasegawa (2017) recognizes two marked modes of language use in Japanese: *soliloquy mode* and *presentation mode*. The former is simply a bare realization of situation construal, detached from the rest. The latter mode, realized as soliloquy uttered to be heard, involves a “metapragmatic shift” by which to alternate the unification pattern of the three tiers as follows: situation report is detached from interpersonal relationship and is unified with situation construal; hence, the unification of situation construal and situation report. Though this pattern seems similar to that of English, the deictic center remains in the private self, or the self in situation construal. Thus, whether in the soliloquy mode or in the presentation mode, Japanese speakers can freely place themselves in a situation and see it from the inside, thus expressing it without regard to others. As a result, they can easily express a situation as they construe it regardless of the presence or absence of the hearer. By contrast, English speakers, due to the language’s public-self-centeredness, are always supposed to be conscious of the hearer. In fact, even response cries are observed less often with no hearer present in English (Goffman (1978), Hasegawa (2017)). However, ideophones are in essence speaker-oriented and are not aimed at communicating with others. Therefore, private-self-centered languages are richer in ideophones. From this conclusion, we may parameterize the frequency of ideophones according to whether languages are public-self-centered or private-self-centered.

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Hidden Iconicity in Tones

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Keywords: cognitive typology, tonal languages, systematicity, ANEW, cognitive phonology

The relation of sound and meaning have long been considered to be arbitrary (de Saussure, 1959). Yet, a growing number of psychological experiments can be interpreted as showing a correlation between form and meaning (Fort et al., 2013). Other scholars holding a similar viewpoint employ statistical analysis to prove the existence of iconicity in sound-meaning pairs, called Systematicity (Monaghan et al., 2014). People working on Systematicity, however, focus mainly on phonemes, such as vowels and consonants (Dingemanse et al., 2015). Suprasegmental features such as tone and pitch contour are seldom discussed. Past study on Chinese tone suggests the existence of hidden iconicity in this tonal language (Yap, 2018). A broader range of tonal languages are included in the current study to examine if Yap's claim is universally applicable. We intend to answer (i) whether there is hidden iconicity in tonal languages and (ii) whether such phenomena are universal or language specific.

In the current study, we first gathered valence and arousal ratings from the ANEW word list (Bradley and Lang, 1999). These ratings were then translated into the three tonal languages Mandarin Chinese, Thai and Vietnamese through Google Translate. Naïve native speakers were recruited to review the lists and examine the appropriateness of the translations. The correlations between different aspects of tone and valence and arousal scores have then been analyzed statistically.

Our preliminary analysis of Mandarin Chinese could not completely reproduce the findings of Yap (2018). Results show only a strong positive correlation between rising tone contour and positive valence ratings in the single character category. For two character words, closer examination of tone combinations shows that the fifth tone plays an important role in Chinese and hints at a more complex tone-valence relationship rather than simple tone directionality.

All the languages in the sample show a non-arbitrary relationship between form (pitch) and meaning (valence/arousal). As a general tendency, we can say that tones that are steep, short and falling often correlate with concepts that exhibit low valence ratings. Suggesting that a phenomenon already known from prosody (Scherer, 2003) is also applicable to lexical pitch.

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Nominal tense: An experimental approach

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Keywords: nominal tense; mental timeline; Pomak; Slavic; experiments

This is the first study to experimentally demonstrate that nominal tense (Nordlinger & Sadler 2004, Lecarme 2012) provides temporal information on its own. Evidence comes from Pomak, a Slavic dialect spoken in Greece, where the definite article for referents in the interlocutor's sphere (i.e., *t*-article) is also used for past reference that the speaker considers the addressee to be aware of (Adamou 2011). The *t*-article contrasts with the distal *n*-article, employed for irrealis, habitual, and realis future, and the *s*-article, restricted to 'here and now' for referents close to the speaker's sphere.

Experiment 1 is a 5-point Likert-scale acceptability judgment task testing Pomak speakers' sensitivity to agreement between the temporal reference of a definite NP and the temporal reference of the predicate. Forty L1-Pomak speakers from Greece participated in this experiment. Participants judged the acceptability of 55 auditorily-presented sentences in total. The experimental items included two conditions. In Condition 1, sentences with *t*-articles agreed with clausal tense; in Condition 2, sentences with *t*-articles combined with future clausal tense. As predicted, the sentences with *t*-articles that agreed with the past tense of the clause received significantly higher ratings than sentences with *t*-articles and future tense, confirming the importance of temporal reference.

Experiment 2 is a response time experiment adapted from Walker, Bergen & Núñez (2017). Our goal was to test whether articles in Pomak carry temporal information on their own, independently of other linguistic means (verbal or adverbial) or semantic and pragmatic cues. Forty participants listened to Pomak noun phrases related to the life of the experimenter, with past and future temporal reference. Half of the noun phrases had grammatical-only temporal reference (e.g., the_[*t*-article] *friends* vs. the_[*n*-article] *friends*) while the other half had grammatical and semantic-pragmatic temporal reference. Participants responded by pressing a left key for past and a right key for future referents, or vice-versa (each participant completed 160 experimental trials, i.e., 4 blocks x 40 stimuli). As predicted, responses were as accurate and fast in temporally ambiguous items (i.e., when temporal information was provided only through the articles) and unambiguous items (i.e., when semantic and pragmatic cues combined with the articles). In accordance with previous studies, speed was related to the reading experiences of the participants, though not in the language of education. In addition, the experimenter's location had a facilitation effect on the accuracy of past responses, revealing a cognitive representation of time that had hitherto gone unnoticed.

To explore the nature of the facilitation effect, we repeated Experiment 2 with 40 L1-Pomak participants in L2-Greek (Experiment 3). Twenty stimuli corresponded to referents in the experimenter's past (e.g., *my baby teeth*) and 20 stimuli corresponded to referents that were likely to occur in the experimenter's future life (e.g., *my wedding ring*). In this experiment, we replicated the effect found in the Pomak version for reaction times, but not the effect of the experimenter's location. This suggests that the facilitation effect is language-related and not due to general attentional processes.

Taken together, these experiments demonstrate that nominal tense, as expressed through deictic suffixes in Pomak, provides temporal information on its own. In addition, the Pomak data support cognitive models that promote flexible representations of time combining cultural, linguistic, and sensorial processes (see Bylund & Athanasopoulos 2017).

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The One Lexical Argument Constraint - A Comparative Study of Japanese and Korean

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Keywords: Japanese, Korean, typology, grammatical relations, iconicity

Japanese and Korean are typologically similar including morphology and syntax. So comparative/contrastive studies on both languages are flourishing in various topics. However, the references realization in argument positions is less studied, especially in terms of comprehensive coding in discourse. In an attempt to investigate the coding of reference in argument positions in written texts of both languages, this paper will focus mainly on the interplay of grammar and cognition, expanding on Givón (2001)'s elucidation and underscoring of the cognitive and communicative underpinning of grammatical universals.

By performing quantitative analysis on the way references are coded in argument positions throughout a certain amount of discourse, the frequent patterns of coding are investigated. In order to achieve this purpose, the written texts in Japanese and Korean languages have been annotated for forms, grammatical relations, and semantic and pragmatic features. In terms of form annotation, lexicality is focused, irrespective of whether a referent is lexically realized or not. Animacy is applied as a binary semantic feature that differentiates between animate referents (human, animal) and inanimate ones. As for the pragmatics annotation feature, it focuses on whether the referent – which is slotted into the subject or object position and is lexically realized – is newly introduced into the discourse or not.

As a result of examining spoken discourse in Sacapultec Maya, Du Bois (1987) demonstrated the 'Preferred Augment Structure', which represents the interaction between the grammatical forms and discourse patterns. In the grammatical dimension, he proposed 'the One Lexical Argument Constraint,' where more than one lexical argument per clause is avoided. He shows the tendency that the argument position capable of carrying new information is not the subject of a transitive verb (A) but the subject of an intransitive verb (S) and the object of a transitive verb (O), both of which are lexically realized.

This study shows the following two findings as shown;

(1) The One Lexical Argument Constraint is found to be predominantly applicable to both Japanese and Korean written texts and to be supportive of the comprehensiveness of the constraint. The strategy of reference coding in argument positions is skewed towards a certain combination of grammatical relations, forms and semantic features; A, Ellipsis, Animate/O, Lexical, Inanimate. This should be an unmarked strategy in carrying messages in texts of Japanese and Korean. The lexically realized O indicates a concrete and newly introduced referent. On the other hand, the zero form A represents an abstract and given information in the context. This contrastive set of information coding should be assumed to be associated with the degree of specificity and to be motivated by the concept of 'iconicity' (Haspelmath 2008).

(2) Although both languages show a similar behavior in argument coding, they show a different distribution in S and O positions, as shown in Table 1. The tendency for lexical realization is higher in Korean than in Japanese, thus possibly indicating that the Korean discourse strategy for augment positions is more solid than that of Japanese.

Table 1 Frequency of lexically realization in the position "S" and "O"

Language	S			O		
	N	%	total	N	%	total
Japanese	229	42.0	545	248	57.1	434
Korean	287	49.6	578	382	66.6	573

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Semantic maps in typology: the case of resultative constructions

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Key words: Semantic maps; Typology; Resultative constructions

Semantic maps is a method which describes the multifunctional patterns of grammatical morphemes (e.g. Haspelmath 2003). The basic form of a semantic map is a geometrical representation of functions in conceptual/semantic space linked by connecting lines that constitute a network. The configuration of functions is supposed to be universal, whereas various languages differ with respect to the boundaries of semantic maps that represent particular language categories.

The resultative construction, a form-meaning pair (e.g. *He wiped the table clean*), is characterized by the presence of a result XP (e.g. Croft 2012), which refers to a change of state or location of a referent of an NP caused by the action denoted by the main verb.

Resultatives have not been largely discussed typologically, only by Washio (1997) with 4 languages mentioned. In addition, the semantic-map approach has not been applied to resultatives. Based on previous studies, resultatives can be classified regarding various perspectives, for instance strong/weak/spurious (Washio 1997), subject/object-oriented (Rappaport Hovav and Levin 2001).

Data are collected from previous studies on resultatives (e.g. Nedjalkov 1988, Washio 1997), and corpora (e.g. Lancaster Corpus of Mandarin Chinese, McEnery and Xiao 2004). Then resultative constructions in 25 languages are analyzed in terms of various domains. As different languages have distinct properties, diverse distributions of the categories are demonstrated on the semantic map regarding languages. The research offers cross-linguistic comparisons of resultatives from a wide range of languages, which fills the gap in typology in this regard. The building of semantic maps suggests the validity of applying this method to typology.

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Chinese Causative Constructions with *shi* and *ling*: A Cross-variety Perspective

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Keywords: Cognitive Sociolinguistics; corpus-based; lectal variation; Chinese; causative constructions

In line with recent development in Cognitive Sociolinguistics, this study aims to investigate the near-synonymous Chinese causative constructions with the two most commonly used markers, i.e. *shi* and *ling* from a cross-variety perspective. We address the following two questions: (1) What is the extent to which varieties of Chinese differ in the choice of analytical causative constructions; (2) What is the extent to which varieties of Chinese share factors that constrain the causative alternation?

Chinese analytical causative constructions, which involve seven different markers, have long attracted the attention of many grammarians. Yet the onomasiological choice of causative markers in Chinese and factors affecting the choice have not been well studied, with the exception of Yang (2016). At the same time, previous studies on Chinese causative constructions barely consider their lectal variation, which have been attested in studies on Dutch causatives (e.g. Levshina 2011) in the framework of Cognitive Sociolinguistics. Methodologically speaking, the traditional approach in research on Chinese causatives largely involves introspection or small-scale corpus-illustrated description. Yet the empirical tradition of Cognitive Sociolinguistics necessitates a usage-based and quantitative approach to the investigation of causative construction.

For the current study, we rest on the 'Tagged Chinese Gigaword Corpus' (Huang 2009), which is a newswire corpus containing texts in Mainland, Taiwan and Singapore Chinese. For a practical reason, we restrict ourselves to a subset of the corpus by selecting data in the year of 2003. All the observations with *shi* and *ling* are automatically retrieved from the subcorpus, and then they are manually checked to avoid spurious hits. Observations with the causative markers *shi* and *ling* are annotated for a number of semantic, syntactic, discursive and lectal variables (cf. Levshina 2011). Then, a logistic regression model is built with the above-mentioned variables as independent variables and the binary choice of markers as the response to estimate the effect of the factors that constrain the causative alternation.

The findings of this study will demonstrate that variation in Chinese causative construction is lectally stratified and is shaped by various semantic, cognitive, or functional factors. Given the fact that syntactic alternation in Chinese varieties is far less explored than that in European languages, this study not only serves as an important reference for studies on Chinese causatives, but also contributes to the discussion on language variation and change from a cross-variety perspective.

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Revisiting Sex and Love in Language and Culture: A Cognitive Linguistic Approach

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Keywords: cognitive linguistics, sociolinguistics, conceptual metaphor, sex, love

This study aims to explore (i) how the separation of love and sex is conceptualized in speakers of Mandarin Chinese (Taiwan-based) and English (USA-based), and (ii) whether this conceptualization is crucially subject to its linguistic forms. For instance, in Mandarin Chinese, the character “交 (jiāo)”, meaning “befriending” and “interaction”, is commonly used in many sex terms; while in English, the word “get” often appears in sex slang with the metaphorical meaning of “obtaining” and “achieving”.

Previous studies (Judith 2011; Li, Dai & Wei 2010; Wu 2015) have pointed to the connection between “sex” and “love” in both Taiwanese and American cultures from the stances of anthropology and sociology. However, very few addressed this relationship from the perspective of conceptual metaphors (Lakoff 1980) as to how any such cognitive mappings (Kövecses 2002, 2010) take place, and how they contribute to perceptions in different speakers based on different languages. The study first collects the literature works from other fields, such as sociology, history, and anthropology, which display the traits of the connection and dynamics of sex and love in the two culture, and then the study verifies the traits in linguistic aspect. Basing its methodology in the cognitive framework, the research intends to analyze the metaphorical mechanisms underlying the various terms of sex in comparison with earlier studies. Terms of sex in this study are collected from online questionnaire designed directly to the speakers of the two languages and mainstream online social media, respectively, and are verified using Sinica Corpus (Taiwan-based Chinese corpus) and COCA (USA-based English corpus).

During the analysis of the sex terms in the two languages, the study demonstrates that not only the metaphors are commonly used for sex expression, metonymies and euphemisms also frequently appear in the sex terms. For example, “行房 (xíng fáng)” doing room, and “房事 (fáng shì)” room work, are two of the widely used terms when we want to express “sex” in quite formal occasions. In this case, place, metonymy is used, which substitute the behavior itself by where it takes place. However, significantly fewer obscure sex terms have been found in English literary works. As for the metaphorical mappings, this study has identified the following metaphors based on the sex terms collected: for Chinese, (i) SEX IS NATURAL PHENOMENON, (ii) SEX IS LOVE, and (iii) SEX IS WAR; for English, (i) SEX IS OBTAINMENT and (ii) SEX IS FILTH.

The metaphorical mappings, the metonymies and the evidence of the literary works in the two languages have indicated that in Mandarin Chinese, “love” and “intimacy” are the two dominant metaphors in the most commonly used sex terms, whereas few can be discovered in English. Therefore, it is concluded that a high correlation is found between the linguistic forms and the degree of “separation of sex and love” in speakers’ perception.

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Metonymy: Underspecification and Reduction

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Keywords: Metonymy; Underspecification; Linguistic Reduction; Structural Component; Content Component

Metonymy is a kind of non-correspondence in form and meaning, encapsulated by linguistic reduction, which the present paper aims to discuss. The paper attempts to find the locus of metonymy within several of such reductions. It elaborates on the nature and cognitive-pragmatic underpinnings of the linguistic reduction involved in metonymy and its resolution.

Metonymy is standardly viewed as a figure of speech wherein one expression is used to refer to some referent closely related to that particular expression. The typical cases of metonymy include PART FOR WHOLE, PLACE FOR EVENT, AUTHOR FOR WORK, etc. Some examples of metonymy are as follows:

1. The ham-sandwich left without paying. >> The person who ordered ham-sandwich left without paying

2. Have you read Rabindranath Tagore? >> Have you read Rabindranath Tagore's works?

In the expressions noted as exemplars of metonymy, most of the works, if not all, provide a linguistically expressed meaning of a metonymic expression. One may consider the examples (1-2) which involve shortening; also noted as language reduction by Le Guern (1973). Reduction of a similar sort is characteristic of another linguistic phenomenon called ellipsis which is a constraint-bound omission of obligatory information in a grammatical structure. Gonzalez & Clivillés (2006) note that "the reduction characteristic of metonymy is that of ellipsis..." They also note that the commonality between metonymy and ellipsis is that both need to recover the content of the empty element for meaning determination essentially because these expressions are otherwise ungrammatical. Agreeably so, these two phenomena differ too. Gonzalez & Clivillés (2006) claim the basis of their difference to be "completeness". In case of ellipsis, the expressions are, perceivably, incomplete from the structural perspective; whereas metonymy is complete by virtue of the head-modifier which takes over as the head of the phrase.

In this paper, I argue that metonymy is a result of not the same kind of linguistic reduction found in ellipsis. Consider the following example of ellipsis where the structural gap (denoted by [...]) exists despite the absence of the linguistic form.

3. Megha goes to a public school but Tiya does not.

>> Megha goes to a public school but Tiya does not [go to a public school.]

Metonymy, on the other hand does not exhibit any structural remnant post linguistic reduction. Consider example (1) restated here as (4):

4. The ham-sandwich left without paying.

>> The person who ordered ham-sandwich left without paying.

In this example, although the metonymy resolution seems similar to ellipsis, the reduction that takes place here differs from the one in example (3). In metonymy, the linguistic reduction does not leave a structural gap. Hence in metonymy, the linguistic reduction encompasses the omission of not only the content component but also the structural component of the linguistic symbol.

The paper also attempts to discuss the retrievability of metonymic meaning, which, as an instantiation of underspecification, invokes context-of-utterance. The phenomenon and the retrievability of its meaning calls not just for a syntactic or pragmatic or cognitive explanation alone, rather, mandates an account of the interplay between syntax, pragmatics and cognition, which is discussed in this paper.

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Metaphor and Metonymy, which is more fundamental?

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Keywords: metaphor; metonymy; fundamental; similarity; contiguity

The fundamental status of metaphor or metonymy has witnessed several shifts in the field of linguistics in general in the past decades of years. Before the mid-20th century, metonymy was regarded as one part of metaphor. But with the uprise of cognitive linguistics, especially due to the study of Jakobson (1956), metaphor and metonymy began to be regarded as two distinct cognitive mechanisms, with the former deemed as being based on similarity and the latter on contiguity. Later on, scholars claimed that metaphor and metonymy should be better regarded as being located in a continuum, with each typical one situated at one of the opposite ends. (Dirven 2003; Radden 2003; Barcelona 2000) In the middle of this continuum, there is an area in which the distinction of them two is vague. Then a central issue arises, that is, if the two cognitive mechanisms are not equally important, which one is more basic or fundamental? Currently, the claim that “metonymy is more basic than metaphor” (Panther 2014:4) seems to have the loudest voice, though opposing views also exist and can be supported with some evidence (Jiang 2016:90).

To answer the question of which is more fundamental, this paper would first of all review the evidences and proofs that support both fundamental claims, and then summarize the causes for the disparate views as follows: (1) diverse perspectives, both macro and micro; (2) over-expansion of the research scope; (3) over-generalization based on specific studies, which is typical of the area of literature, gesture and multimodality studies. To answer the question of which is more basic between metaphor and metonymy, it is proposed that much more work should be done on specific layers of research, such as the linguistic expression layer, the layer in which metaphor and metonymy are taken as two distinct mechanisms, the mixed layer in which metaphor and metonymy are interweaved, or the cognitive layer where only the most general determining factors are assessed. The result reached at each layer applies to this layer only, and can not be extended to the interpretation of other layers. Only when the collective results derived from all layers support one single claim, either preferring metaphor or metonymy, can we be so sure that the one favored is more fundamental.

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How metaphor and metonymy are used in Chinese and English ceramic discourse?

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Keywords: ceramic metaphor, ceramic discourse, cross-lingual analysis, ceramic corpus

This study aims to identify and compare the uses of metaphor and metonymy in Chinese and English ceramic discourse, based on two self-compiled ceramic corpora. With profound artistic forms, ceramic texts have been considered as an important metaphorical carrier to symbolize and explicate artistic conceptualization, yet few studies have been dedicated to analyzing the linguistic characters of the artistic discourse, and not much has been done to tease out the metaphorical strategies and conceptual mappings in ceramic texts.

For the cross-linguistic comparison, two self-built ceramic corpora are compiled from academic articles that were published between 1980 and 2000, all of which specifically describe ceramic works from different aspects such as culture, history and art. This study will identify metaphors by means of Metaphor Identification Procedure VU University Amsterdam (MIPVU, Steen et al, 2010), which has been proved to be reliable in metaphor identification in various texts (Lu & Wang, 2017). Additionally, two reference ceramic glossaries were selected for detecting common ceramic metaphors and metonymies in ceramic jargon, based on which the texts in corpora were divided into five categories according to the objects of their descriptions, which included shape, color, size, texture and surface pattern.

Preliminary findings show that human cognition of ceramic art is largely influenced by the conceptualization of the universe and natural entities in both languages. A porcelain piece can be perceived as a Universe, a Person, an Animal, a Plant, or a Cloud. In ceramic shape descriptions, human, animal and plant are the most frequently used source domains. For example, *měirén jiān* “美人肩” (lit., beauty's shoulders vase) is a type of porcelain that has a similar body shape to a beautiful woman. In color descriptions, animal, plant and natural phenomenon are the most frequently used source domains, such as *méizǐ qīng* 梅子青 (lit., plum green) and *liúxiá zhǎn* 流霞盏 (lit., rosy clouds cup). In size descriptions, human and animal constitute the two main source domains, as in the use of *zhuàng guàn* 壮罐 (lit. zhuang jar) which signals the large size of the porcelain as a strong human. In the description of ceramic texture, common objects with specific textual features provide the major source domains. For instance, *luǎnmù bēi* 卵幕杯 (lit., eggshell-thin cup) emphasizes the thinness of the porcelain as if it is an eggshell. In addition, the Universe is the most frequently used source domain in surface pattern descriptions. The term *lǜdì bái huā* “绿地白花” (lit., white-flower decoration on a green ground, a specific decoration pattern) indicates that the contrast between the dark-colored surface and the white flowery design pattern, mirroring the contrast between the plain earth and the colorful flowers.

There are also distinct variations in describing ceramic art between Chinese and English, despite their similar tendencies in choosing the source domains in corresponding texts. For instance, an interesting case of metonymic transfer is that while Chinese uses the color term *green* directly for porcelain with green glaze, English uses “*celadon*”, a term originating from a character called Shepherd Celadon, who wares pale green ribbons in a French pastoral romance “*L'Astrée*”. Moreover, semantic mismatches between Chinese and English expressions were also revealing. The helmet-shaped porcelain is termed after a human figure as *jiāngjūn guàn* 将军罐 (lit., the general's jar) in Chinese but translated into English as ‘the general's helmet’, to directly signal its unique shape as a helmet. Varied types of metaphorical and metonymic mismatches were distinguished with a discussion of language-specific features. It is suggested that the Chinese mapping strategies tend to be less direct and precise, thus more imaginative and poetic, than the English counterparts.

The study is significant in its investigation of language-specific means of conceptualization in ceramic discourse and cross-linguistic comparison of semantic mismatches between Chinese and English. It is expected to shed new light on the understanding of universal conceptualization patterns in dealing with ceramic art from a cultural-cognitive perspective.

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The Schematic Function of Conceptual Metaphor for Discourse Comprehension in Chinese and English Contexts

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Keywords: metaphorical schema, conceptual metaphor, discourse comprehension, Chinese context, English context

Since Conceptual Metaphor Theory (Lakoff and Johnson, 1980) was put forward, it has attracted a lot of attention and also aroused many queries. Evidence for the functions of conceptual metaphor and the psychological reality for conceptual metaphor system from cross-linguistic perspective is the key to the establishment of the validity of the theory. One of the important functions of conceptual metaphor is assumed to be the creation of schemas for discourse comprehension, but there are few cross-linguistic studies on the validity of the function. The present research explored the schematic function of Conceptual Metaphor from cross-language approach and intended to test whether and how metaphorical schema of Conceptual Metaphor work for Chinese and English discourse comprehension.

Two online experiments were conducted and the typical semantic priming method was used. The first experiment explored the effects of metaphorical schema on Chinese-English bilinguals' text comprehension in L1 and L2. A 2×2 within-subjects design was employed with the prime type and language arrangement between the prime and the text as the independent variables. The dependent variable was subject's comprehension time of texts primed by conceptual metaphor. The second experiment was the modified version of Allbritton's recognition paradigm (1995) and aimed to investigate whether the associations mediated by metaphorical schemas would facilitate sentence recognition for Chinese-English bilinguals. Schema-matching text and non-matching text were designed and language arrangement in L1 and L2 between the prime and the text was employed.

The findings from the two experiments show that English metaphorical schema play a facilitative role in the comprehension of English text while the priming effect is not obvious on the comprehension of Chinese texts, although the comprehension time of Chinese target sentences is significantly shorter than English target sentences; English text based on coherent metaphorical schema can significantly promote subjects' recognition of English target sentences while Chinese metaphorical schema fails to demonstrate a significant positive effect. We first explain and discuss the different priming results from the perspective of language discourse structure differences and we assume that the different priming effect may be due to highly linear structure feature in English and non-linear structure in Chinese. Based on this, we conclude that metaphorical schema may perform positive effect in English condition, but not that obvious priming effects in Chinese condition, which challenges the universality of Conceptual Metaphor Theory. We also explain and discuss the findings from second language acquisition perspective and we assume that the high degree of conventionality and accessibility of Chinese as mother tongue may not need conceptual metaphor as mediation mechanism for the comprehension and recognition of Chinese target sentences, while English as a second language needs the mediation of conceptual metaphor and thus shows priming effect. This may provide supporting evidence for the Career of Metaphor Hypothesis (Bowdle & Gentner, 2005).

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‘WINTER IS COMING’: A CORPUS-BASED APPROACH TO SPATIOTEMPORAL METAPHORS IN ENGLISH AND INDONESIAN DISCOURSE

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Keywords: conceptual metaphor, space-time, English, Indonesian, corpus linguistics

Lakoff and Johnson’s Conceptual Metaphor Theory (1980) asserts that we use concepts from one domain of knowledge to structure information in another domain, as reflected by metaphors in language. The current study expands on this idea by exploring the relative frequencies and patterns of one such metaphor, TIME IS SPACE, in English and Indonesian discourse. Clark (1973) established two main perspectives of this metaphor: **Moving Time** (e.g. “the new year is approaching”) and **Moving Ego** (e.g. “we’re approaching the new year”).

The TIME IS SPACE metaphor is well-documented across the world’s languages, from the opposing vertical directions found in Mandarin (Yu, 1998) and Wolof (Moore, 2014), to Aymara’s unique placement of the past and future (Núñez and Sweetser, 2006). Additionally, while psycholinguistic experiments have shown that spatial concepts can indeed be used to structure temporal concepts (Boroditsky, 2000), few studies have investigated how these metaphors are used in natural language. As experimental data may not match day-to-day discourse, the current study uses a novel corpus-based approach to conceptual metaphor research by searching for collocations between motion verbs (e.g. *come*) and temporal/event words (e.g. *winter*) in both English and Indonesian corpora (The Corpus of Contemporary American English and a corpus from PAN Localization, respectively), with the aim of determining the usage frequencies of both perspectives, as well as investigating crosslinguistic patterns at the lexical level.

The results obtained indicate that both languages appear to strongly prefer the Moving Time perspective, but also revealed several previously-undiscussed nuances, including the different behaviors of different verbs and their various morphological forms, as well as different behaviors of lexical equivalents across English and Indonesian. The study concludes with the potential primacy of the Moving Time perspective over Moving Ego and the notion of ‘perspective preference’ among different motion verbs in language. It also highlights the benefits of corpus-based approaches in metaphor studies (cf. Pragglejaz Group, 2007), as well as the need for conceptual metaphor researchers to focus more on the lexical level.

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Emergence of Rhetorical Effect: Figurative Language and Systems Theory

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Keywords: metaphor and metonymy, figurative language, discourse analysis, emergence, systems theory

Researchers have been discussing emergent property of metaphor for a long time (e.g., Black 1979; Gineste, Indurkya, and Scart 2000). From broader perspective, Cameron and Deignan (2006) described emergence of metaphor in social context, and Demjén (2018) explains how the birth and decline of a running joke, both employing concepts of the complex systems theory, such as non-linear, phase shift, self-organize, and emergence. However, not all researchers share the definition of complex systems (cf. Ladyman et al. 2013). Therefore, the present study describes some aspects of comprehension of figurative language through some concepts in systems theory in general, rather than those of complex systems in a narrow sense.

The present study describes the following two features of rhetorical effect from the perspective of systems theory: (i) effect of some of the figures of speech are emergent in the traditional sense (i.e., the whole is greater than the sum of its parts); and (ii) the meaning of a lexical item is evoked downwardly (downward causation). These two concepts, emergence in the traditional sense and downward causation, are sometimes included as features of complex systems (e.g. Hashimoto (2014)) but other times not. However, linguists do not have to employ only the features of complex systems. Rather, linguists should pursue the features of language as a system, regardless to it is complex or not.

For the first point (i), the present study analyzes how figurative meaning of a metaphor and rhetorical effect of double-meaning emerge in the language system. Based on the analyses, the author claims that not only conceptual contents, but poetic effect also emerges through the integration of lower-level units.

Next, for the other point (ii), the author analyzes the mechanism of how a pun is understood based on Giora (2003) and the author's own research, and shows that both of the local (intra-sentence) and contextual environments influence the comprehension of a pun. The latter one is engaged with downward causation, in the point that macro-structure influence the interpretation of lower-level structure.

Through these arguments, the present study shows that it is useful to broadening the scope of research from complex systems to systems theory in general when we study figures of speech.

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Simile, metaphor, and their non-interchangeability:

Beyond *A is like B* vs. *A is B*

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Keywords: rhetoric, construction, metaphor markers, signaled metaphor, comparison-based simile

Metaphor and simile are one of the primary figures that have been widely recognized since the time of Aristotle. Since both figures seem to act in similar fashion, they have been defined in terms of presence/absence of explicit markers, e.g. *Richard is a lion* vs. *Richard is **like** a lion*.

Previous studies, examining the semantic and functional distinctions between the two, tended to focus on a copulative construction marked by *like*, *A is **like** B*, possibly due to its apparent contrast with *A is B* ([1, 2, 3, 6] etc.). However, as illustrated by [4], metaphor is linguistically signaled by various markers. The aim of this study is thus to investigate whether all simile constructions really have metaphorical counterparts and what range of metaphor constructions ([7, 8]; e.g. *mental exercise*, *Your morals reek*) can be explicitly signaled by simile-markers.

In order to explore the relationship between metaphor and simile, 203 instances are collected from [4] and [5], both of which identify varying types of simile and related constructions. Each instance is judged as to whether its marker-less counterpart is grammatically acceptable (e.g. *Raindrops glistened everywhere **{like/ *φ}** a coating of ice*). For the instances whose simile-markers are analyzed as optional, the following two features are examined: type of simile-markers and type of metaphor constructions ([7, 8]), which are signaled by them. Simile-markers are classified by the author in terms of their functions: (i) expressing similarity such as *like* and *similar to*, (ii) perspectivization such as *he thinks* and *it seems*, (iii) hedging such as *a sort of* and *in a way*, and (iv) metalinguistic commenting such as *so to speak* and *metaphorically speaking*.

It is found that simile constructions can be divided into two categories: the one which has metaphorical counterparts and the other which does not. I call the former type as signaled metaphor and the latter as comparison-based simile. Signaled metaphors show a skewed distribution in terms of possible combinations between metaphor constructions and simile-markers. Metalinguistic commenting markers are applicable to all types of constructions. On the other hand, *like*, which is assumed to encode a prototypical simile, has a greatly limited range of application. Copulative expressions are peculiar in that they can be signaled by all types of markers as in *Margaret Thatcher is **{(i) like/ (ii), he thinks,/ (iii) a kind of/ (iv) symbolically}** a bulldozer*.

Comparison-based similes take the form of literal comparative constructions except that what is compared is something *bizarre*. They are not easily separable into a metaphor construction and a marker. They take figurative complements as in *she's **as sweet as** sugar candy* and *a madam would **see the gulls as** flying lizards*, as well as figurative adjuncts as in *he jumped **like** a private in a fox-hole*.

In summary, it is shown that what have been called simile is a concept encompassing both *signaled metaphor* and *comparison-based simile*. The second type is contrasted with literal comparison, not with metaphor, indicating that simile needs to be studied beyond the distinction between *A is B* vs. *A is like B*.

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Causation, Culture, and Constructional Change

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Large diachronic corpora such as the COHA or Google Books offer data that is tempting in its promise: In the words of Michel et al. (2010), it can “provide insights about fields as diverse as lexicography, the evolution of grammar, collective memory, the adoption of technology, the pursuit of fame, censorship, and historical epidemiology”. Studies that have pursued this line of thought have received widespread attention in the media, but have been met with reservation in the linguistic community. For example, Greenfield (2013) takes frequency trends of words such as *choose* and *get* as evidence for increasing individualism and materialism in American culture. Liberman (2013) comments on the paper as follows: “I’m not arguing that her theory is wrong, or that the Google ngrams datasets don’t contain supporting evidence. But it’s going to take a much more careful and systematic analysis of the lexico-historical data to convince me.” Liberman’s comment raises the central question for this talk: How exactly can diachronic corpus data be analyzed in order to yield reliable insights about social change?

This paper addresses the issue of how culture can be analyzed on the basis of diachronic textual data in two parts. The first, theoretical part surveys a series of problems that need to be controlled for in analyses of diachronic textual data. These problems include the increasing risk of spurious correlations in large datasets (Koplenig and Müller-Spitzer 2016), the problem of the non-equivalence of onomasiological frequency and semasiological frequency, and the difficulty of disentangling cultural change and grammatical change (Szmrecsanyi 2016).

The second part implements these ideas in a study of change in the English make-causative (Kemmer 2001). As a grammaticalized expression of authority, the construction lends itself to a study of social change: Examples such as *She made the boys clean up their room* verbalize that a causer prompted a causee to perform a coerced action. If American culture becomes less authoritarian, as has been argued by Greenfield (2013) and others, examples such as the one above should recede in favor of uses such as *That music made me smile*, which involve inanimate causers and non-coerced actions. Data from the COHA is retrieved to track the history of the make-causative in terms of several semantic parameters, including animacy of causer and causee and the semantics of the verb that expresses the caused action.

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Aug. 8th (Thursday)

8:20-9:00	COFFEE (near room 101 in Bldg. G)				
9:00-10:30	PLENARY 4: Nick Enfield. Enchrony: An Essential Frame for Language and Cognition (Central Auditorium)				
10:30-10:50	BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)				
room #	101	103	104	105	108
category	THEME: Stance-stacking in language and multimodal communication (2 nd Day)	THEME: Ethnosyntax (Organizer: K. Horie)	THEME: Macro-events, Grammaticalization, and Typology (2 nd Day)	motion (Chair: Kazuhiro Kawachi)	creativity (Chair: Vera Zabolotkina)
10:50–11:15	D. Horst Stance as multimodal, dynamic, and intersubjective phenomenon in interaction	K. Horie & J. Kim Negative politeness and the preference for nominalization strategies in Japanese: A contrastive study with Korean	S. De Knop & M. Hermann From lexical meaning to functional role: the case of complex noun-verb phrases	K. Kawachi et al. Speaker's territory as a factor in the use of deictic verbs and verb affixes: The cases of Kupsapiny and Newar	V. Zabolotkina Cognitive mechanisms of linguistic creativity
11:20–11:45	S. Spronck & A. Si Mistaken-belief expressions: a stance-stacking laboratory	S. Rhee When crudity steps into grammar: The case of Korean auxiliary verbs	Y. Chen Macro-events in verb-verb compounds from the perspective of baseline and elaboration: Iconicity in typology and grammaticalization	T. Morita Linguistic deictic meanings beyond gestures: A contrastive study on motion event descriptions in French and Japanese	Y.-M. Oh Do too many linguists spoil the research? Creativity and fixedness in creative uses of proverbial idioms: A cross-linguistic, corpus-driven study
11:50–12:15	L. Vandelanotte Internet memes and the dynamics of stance	K. Kataoka Discursive management of <i>space</i> and <i>textual</i> deictics in Japanese spatial monologues (and beyond)	G. Zhao The grammaticalization of Pleonastic negation—A case study of "chàdiānméi" in Mandarin Chinese	Cl. Voirin et al. The encoding of dynamic deixis in motion event: A crosslinguistic exploratory study	T. Okahisa & K. Yamasaki The two ways to the same interpretation of a novel expression: metaphorical and metonymical categorization
12:15–13:15	LUNCH (BIG PAPA or other locations)				
category	THEME (Cont.)	THEME (Cont.)	THEME (Cont.)	translation (Chair: Keiko Tsuchiya)	categorization (Chair: Jürgen Bohnemeyer)
13:15–13:40	T. Janzen et al. The embodiment of stance in narratives in two signed languages	Y. Kimoto Morphological manifestations of hunter-gatherer lifestyle: Word formations and ethno-semantics in Philippine Negrito languages	L. D. Ren Typology of English and Mandarin: Taking spatial stationary events as examples	A. Hijazo-Gascon Cognitive Linguistics and Interpreting in Police Interviews	J. Chen et al. Unconscious effects of language-specific terminology on spatial concepts in bilinguals
13:45–14:10	S. Siyavoshi et al. Facial displays as stance markers in multimodal spoken and signed constructions	Discussion w/ Nick Enfield	N. Liu The Grammaticalization of Chinese Directional Verb 'kāi': A Constructional Approach	Sh. Song Fluency Development in Simultaneous Interpreting Performance of Trainee Interpreters: The Perspective of Cognitive Fluency	S. Devylder et al. Mapping the body
14:15–14:40	E. Sweetser Embedded viewpoint and stance in gesture and speech: multimodal stance-stacking		E. Soroli Typological differences influence motion event perception: Evidence from similarity-judgment tasks and eye tracking		I. Stasiūnaitė On the motivated polysemy of the Lithuanian PO and the English UNDER
14:45–15:10	Discussion		Discussion		K. Ujiie & M. Ishizuka When locational expressions are not locational: the case of Japanese demonstratives
15:10–15:30	BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)				
15:30–16:50	POSTER SESSION (Learning Commons (Basement of Central Auditorium))				
17:00–18:00	CULTURAL EVENT: Noh (Central Auditorium)				
19:00–21:00	CONFERENCE DINNER (Takarazuka Hotel. Bus shuttles leave at 18:15)				

COFFEE (near room 101 in Bldg. G)

PLENARY 4: Nick Enfield. Enchrony: An Essential Frame for Language and Cognition (Central Auditorium)

BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)

204	205	206	207	208	301
metaphor (Chair: Jamin Pelkey)	change (Chair: Graeme Trousdale)	acquisition (Chair: Nikolas Koch)	THEME: Socio-cognitive approaches to analyzing spontaneous interactions (Organizers: M. Fried, E. Lehečková & J. Jehlička)	Evolinguistics (Chair: Michael Pleyer)	construction (Chair: Laurence Romain)
Sh. Shum & J. Pelkey Cultured Meat or Frankenfood? Toward an Expanded Account of the Education-Persuasion Tension Intrinsic to Conceptual Integration	H. Negi Grammaticalization of temporal meanings in Japanese and Spanish: With special reference to the antonymy in "EARLINESS" and "LATENESS"	M. Surakka Temporally extended self in children. Linguistic and psychological views on the development of future time references.	M. Fried & P. Machač Sound patterns as interpretive clues in spontaneous interaction	J. Nölle et al. Using virtual reality to study language evolution	T. Ungerer Using structural priming to test links between constructions: Caused-motion sentences prime resultatives
E. S. Afreh & H. A. Kyeremeh Metaphors of Formal learning, education and knowledge among Ghanaian students: The Case of Knust	Y. Takahashi Old English subject-verb word order: An intertextual comparison	J. Mažara & S. Stoll The Role of Aspect During the Acquisition of Verb Morphology in Russian: From Item-Specificity to Proficient Use	Th. Chaminade et al. Artificial Conversational Agents to Investigate the Neural Bases of Conversation with fMRI	Th. Matzinger et al. The effects of prosodic cues on word segmentation in an artificial language learning task	S. Hartmann Empirical approaches to competing future constructions: Converging evidence from corpus and experimental studies
X. Liu The Cultural Models of "Happiness" in Chinese: Metaphor, language and identity	Y. Sato From Manner to Temporal Uses: Historical Changes of the English Subordinator <i>As</i>	N. Koch Schemas in first language acquisition: A German traceback study	M. Lelandais & G. Ferré A parametric multimodal approach to subordination in conversation	M. Pleyer & M. Pleyer A Cognitive-Interactional Approach to the Evolution of Linguistic Im/politeness	L. Romain & M. Lemmens The status of alternations: a lexical-constructional interface

LUNCH (BIG PAPA or other locations)

metaphor (Chair: Jurga Cibulskienė)	change (Chair: Masaru Kanetani)	pragmatics (Chair: Kyoko Masuda)	THEME (Cont.)	sociolinguistics (Chair: Ingie Zakaria)	construction (Chair: Seiko Fujii)
J. Cibulskienė & I. Šeškauskienė Constructing attitudinal stance via metaphors: a multi-perspective cognitive approach toward politically contested events	E. W-Ch. Shih A pragmatic construction of two constructions: A corpus-based case study on <i>just because</i>	K. Beeching & L. Cribble Crosslinguistic paths of pragmatic development: <i>actually</i> and <i>en fait</i> in British and French children	A. Inbar Visualizing discourse functions: The case of list constructions in Israeli Hebrew	M. J. Serrano The cognitive basis of desubjectivizing constructions: The use of the periphrases <i>haber/tener que</i> + infinitive in Spanish	J. Leino Ordered and unordered constructions: The role and representation of word order in Construction Grammar
S. Mukherjee Metaphorization in Grammatical Gender	W. Kono Constructionalization of <i>Have it (PP) that</i> Construction as English Evidential Strategies	K. Masuda The prosodic features of the interactional particle <i>yo</i> in student-professor conversation	E. Lehečková et al. Interplay of information structure, pitch contour, and gesture in spontaneous interactions	G. Kilp Usage-based approach to computer-mediated Estonian-English-Japanese communication	Th. Herbst Constructionists are not at all easy to please
J. Cibulskienė Cross-linguistic metaphorical representation of the #MeToo movement: Communicating attitudes	E. Mizokami The Current Usage of the Quotative <i>be like</i> in British English	M. Yamaguchi & Ch. Sakurai A Study of Reported Speech by Preschool Japanese Children: Implications for Theory of Mind	B. Nir Constraining Constructions: Resonance and Structure in Interaction	I. Zakaria Self-Perception, Hegemony, and Postcolonial Background: English outside its Natural Environment	S. Fujii & R. Lee-Goldman Frame-based constructional approach to argument structure satisfaction via unselected adjuncts
		P. Palacios & R. Maldonado <i>Tipo (Like)... do you get me?</i>	Discussion	A. Libura et al. Healthcare challenges in memes. A comparative analysis of American, British and Polish humor	

BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)

POSTER SESSION (Learning Commons (Basement of Central Auditorium))

CULTURAL EVENT: Noh (Central Auditorium)

CONFERENCE DINNER (Takarazuka Hotel. Bus shuttles leave at 18:15)

Enchrony: An Essential Frame for Language and Cognition

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If we are going to explain why languages are the way they are, we need to look at the full range of frames in which causal processes apply. Linguists have long distinguished a synchronic frame (focusing on description of systems at one point in time) from a diachronic frame (focusing on historical processes). We can also distinguish a phylogenetic frame (focusing on how the capacity for language evolved in our species) and an ontogenetic frame (focusing on how the capacity/behaviour develops in individuals). And further, we can discern a microgenetic frame in the moment-by-moment psychological processes of language production and comprehension. A natural, causal account of language needs to consider all relevant frames together in an integrated way, including an explicit account for the links between these frames. This work cannot proceed until we recognize at least one more distinct causal-temporal perspective. This is the enchronic frame, which runs at a similar time course to microgenesis, but which critically involves a public semiotic process by which each utterance serves as an interpretant of what came before it, driving the progression of interaction in the most experience-near context of language usage: conversation. The goals of this talk are (1) to explicate the notion of enchrony, with illustrations, (2) to argue for its utility in bringing together some aspects of language which are typically handled by quite disparate conceptual and methodological approaches (e.g., lexical semantics, morphological typology, conversational turn-taking), and (3) to situate it within the ideal of an integrated set of temporal-causal frames that together may provide the conceptual tools for a natural, causal account of language.

Stance as multimodal, dynamic, and intersubjective phenomenon in interaction

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Keywords: stance, affect, meaning-making, multimodality, intersubjectivity

Stancetaking is an inherent facet of language and interaction. Besides representation and appeal, Karl Bühler (1934) names expression as basic function of the linguistic sign in his organon model. This multifunctionality is not restricted to language alone. Employed as partners of speech, gestures can equally be “used to express inner states, to appeal to somebody [...], and to represent objects and events in the world” (Müller 2013: 204). It is the particular gestural performance which embodies the expressive quality of gestures and “our affective stance towards the object we are depicting” (Müller 2013: 202). Interacting, interlocutors thus constantly position themselves towards given issues, exchange and align their affective states.

These complex multimodal construals are, however, not to be considered as a succession of solipsistic sensations of individual speakers as, for instance, Paul Ekman’s idea of distinct emotions suggests it (Ekman/Rosenberg 1997). Instead, the paper brings forward a view of stancetaking in face-to-face interaction that conceives of it as an intersubjectively emerging and unfolding process involving multiple stances and grounding processes of meaning-making. In this light, affective stance is considered to be embodied – and thus to become perceptible – in the dynamics of interlocutors’ expressive behavior. This inextricable intertwining of expression and affective experience provides the embodied ground for intersubjectively shared meaning in face-to-face interaction (cf. Froese/Fuchs 2012).

The argument is illustrated by a conversation between three students discussing psychological problems during their studies, particularly by a three-minute sequence of confrontation around the question of content-related self-determination during one’s studies. Along with this negotiation process in which all interlocutors engage affectively, metaphorical meaning emerges, formulating and escalating the controversial positions. The paper combines a descriptive and sequential method of analysis (Horst et al. 2014) of the interlocutors’ interactive expressive behavior, e.g., speech, gesture, body movements, as an intersubjectively shared temporal process of “stance-stacking” (Dancygier 2012), with a Metaphor Foregrounding Analysis (Müller/Tag 2010), i.e., metaphoricity that is made interactively relevant in the conversation. By demonstrating the inseparability of metaphorical meaning from multimodal patterns of affective engagement in the interaction, stance turns out as a multimodal, dynamic, and intersubjective phenomenon that grounds meaning-making in face-to-face interaction. Such a perspective formulates a counter position to the common view of affective stance as being enclosed inside and therefore deciphered from outside, and a sender-receiver model of communication.

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Mistaken-belief expressions: a stance-stacking laboratory

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Keywords: Stance-stacking; Viewpoint; Mistaken-belief expressions; Constructions; Burmese; Kikuyu; Ungarinyin

The notion of stance-stacking draws attention to the fact that stance (Englebretson, 2007) is (a) often expressed through multiple markers simultaneously, and that (b) the resulting stance interpretations cannot always be straightforwardly derived from its constituent parts. A stance marker may take on a new meaning in the context of another stance maker, non-attitudinal elements may gain a stance interpretation when combined with a stance-signaling device, and contextual or multimodal features can dramatically affect the meaning of a stance construction.

In this paper we argue that mistaken-belief expressions present an ideal linguistic environment for studying stance-stacking. These expression types combine the ascription of a belief to some entity (*x* believes that *p*) with a speaker-oriented meaning ‘I know that *p* is untrue’. Consider example (1), from the Australian Aboriginal language Ungarinyin.

- (1) Context: Talking about birds who mistake little stones for food:
 bIRR-niyangarri-karra burr-ma-∅ mangarri
 3PL-good-MODAL 3PL-do-PRS food
 ‘They think those are good food’ [but they are stones] (Spronck, 2015)

We demonstrate that the Ungarinyin mistaken-belief construction illustrated in (1) is a prime example of stance-stacking since it involves elements which either acquire or change a stance meaning when combined with (other) stance markers.

We compare the Ungarinyin data to data from two unrelated languages that, have dedicated mistaken-belief constructions as well, but use radically different strategies: Burmese and the African Bantu language Kikuyu. All data reported are drawn from original fieldwork by the authors.

Our observations lead us to conclude that stance-stacking can result in conventionalized effects, and we point to similarities between the three languages compared. We suggest that our observations help shed light on the relation between convention and emergence in the interpretation of stance-stacking.

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Internet memes and the dynamics of stance

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Keywords: Internet memes, intersubjectivity, multimodality, simile, stance

Stancetaking has been recognized as “[o]ne of the most important things we do with words” (Du Bois 2007: 139). In an era of communication in which combining language forms with images has become second nature, it is important to bring into sharper view the ways in which image-text combinations, too, centrally involve stancetaking. This paper focuses on Internet memes – online artefacts replicated, altered, shared and commented on in various ways – which recent work in Cognitive Linguistics has argued can be approached as a particular kind of multimodal constructional pattern (Dancygier & Vandelanotte 2017, Bülow et al. 2018, Zenner & Geeraerts 2018) with linguistically interesting properties, such as the use but also modification of existing linguistic constructions or the use of images to ‘fill in’ constructional slots normally expressed verbally.

Using a large manually collected data set, this paper presents a qualitative analysis of how words and/or images contribute to conveying multiple stances. Preliminary analysis suggests the following:

1. In some meme families the image plays a minor, supporting role, but the words themselves constructionally stack up stances (cf. Dancygier 2012), as in examples like *Can I wear your Crocs, said no one ever*, in which the apparent positive evaluative stance is cancelled, and exposed as ludicrous, by the apparent reporting clause.
2. Other meme families feature an image calling up a (pre-given or more *ad hoc*) frame used to categorize a new instance as being of the same type. For instance, the *one does not simply* meme originates in a film scene where “walk into Mordor” is an impossible task; this has come to serve as an evaluative stance template to categorize ever more undertakings as futile and unattainable.
3. A final class of meme families relies more specifically on multimodal simile, first described by Lou (2017) for *when*-memes, which complete a *when*-clause not verbally but via visual depiction of a scene or situation in respect of some properties of which an experience or attitude is evaluated. Other simulative memes include *be like* memes, which posit a stereotypical attitude and express a stance towards it, and *me: also me:* memes, which contrast good intentions with less-than-good outcomes, and take an evaluative stance towards this contrast. Both of these types tie in with existing descriptions of quotations as depictions (Clark 2016). So-called labelling memes are different again: they overlay discrete elements in complex images with words to guide stepwise interpretation, reframing the depiction as a complex stance expression.

In addition to evaluative stances, online memetic discourse involves affective, usually humorous stances intersubjectively shared in online communities of discourse. In sum, Internet memes provide a fascinating testcase for current concerns in Cognitive Linguistics concerning constructions, intersubjectivity, multimodality, and the expression of complex, ‘stacked’ stances.

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The embodiment of stance in narratives in two signed languages

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Keywords: Stance, signed language narratives, embodied simulation, intersubjectivity

The ‘embodied simulation’ hypothesis (Kok and Cienki 2017) attempts to model how a speaker (or, in our case, signer) creates a simulated version of another entity’s action or speech, claiming that “language comprehension engages partial re-enactment of perceptual, motoric, and affective memory traces” (p. 3). This seems to fit well with how signers enact character actions and interactions when they construct narrative sequences. These portrayals are necessarily embodied, grounded in experiential memory and, it appears that signers intend their visual narrative to be jointly experienced.

Such jointly-embodied simulations involve multiple markers of stance both in portraying projected subjective character stance along with frequently interjected signer-as-narrator stance marking, characterized by phenomena such as simultaneity (Vermeerbergen, Leeson and Crasborn 2007) and body partitioning (Dudis 2004). Stance is conveyed in two respects in narratives. First, characters within the narrative space are portrayed as subjectively viewpointed in that the narrator imposes a viewpoint on those characters (and a viewpoint on their relative narrative space). Second, the narrator herself has a subjective viewpoint on aspects of the narrative as it unfolds, intersubjectively between her and her present interlocutor. Shaffer (under review) suggests that signers assign an “attributed stance” to some referent and then co-opt that stance as their own. These stances are fully enacted, and therefore visually displayed for the addressee. The narratives in Janzen (2012, 2018) show evidence of similarly complex stance-taking, highlighting the fact that these stance portrayals reach across past and present spaces. But are these stance elements “stacked” in Dancygier’s (2012) sense?

The present study examines this question by looking at spontaneous narrative passages in American Sign Language (ASL) and Irish Sign Language (ISL) to examine the multiplicity of expressions that indicate stance within utterances and the embodied simulation effects they create. How do signers enact the stance-laden perspectives of narrative characters to scaffold their own intentional and intersubjective stance “performances” so as to shape addressees’ embodied simulation of the narrative events, thus jointly constructing a way to apprehend the narrative scene, and ultimately leading to a way to comprehend the stance-related goals of the narrator. Our results show that multiple elements frequently combine in ASL and ISL utterances to convey speaker stance, leading us to believe that these instances provide evidence of embodied simulated comprehension.

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Facial Displays as Stance Markers in Multimodal Spoken and Signed Constructions

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Keywords: stance-stacking, signed language, gesture, epistemic assessment, cognitive grammar

Dancygier (2012) introduced the term stance-stacking to describe a constructional phenomenon wherein multiple expressions of stance create a constructional cluster. We adopt a cognitive grammar (CG) framework to analyze the role played by three facial displays in the expression of stance in co-speech gesture and in signed language constructions. Two aspects of CG that we will use in our analyses are *epistemic control* and *reality conception* (Langacker 2013). Epistemic control concerns the formulation, assessment, and incorporation of a proposition into a conceptualizer's body of knowledge. Reality conception refers to the conceptualizer's "take" on reality, which is a fundamental component of stance.

The three facial displays we examine are brow furrow, eye aperture (squinted/wide), and horseshoe mouth (corners of the lips pulled downward). We investigate these facial displays in the context of signed utterances in American Sign Language (ASL) and Iranian Sign Language (ZEI), and spoken/gestural utterances in American English and Farsi. We find several broad stance functions associated with these three facial displays across the languages and modalities investigated. All three contribute to categories associated with the expression of epistemic stance. Brow furrow is associated with different degrees of certainty, including absence of certainty or doubt when used in a construction with squinted eyes. Squinted eyes and wide eyes often make covert reference to the common ground of the discourse, thus serving an intersubjective function. Horseshoe mouth expresses epistemic assessment. Specifically, it indicates the speaker's/signer's inclination to accept or reject what is being asserted in the propositional content expressed manually in ASL and ZEI and in the spoken utterance in American English and Farsi.

These facial displays occur both simultaneously with each other and with the spoken or signed channel, or in sequential constructions within and across each modality. In all cases the result is a higher-level constructional cluster of stance expressions.

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Embedded viewpoint and stance in gesture and speech: multimodal stance-stacking

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Keywords: multimodal, stance, viewpoint, embedding, stance-stacking

In multimodal communication, the gestural channel and speech channel both express aspects of real or imagined speaker stance. As discussed in Sweetser 2014, different "channels" within the visual medium have distinct advantages in presenting layers of stance. It has long been recognized that in ASL, the head is a primary locus of grammatical marking (topic, questions) and also of affective space. In gesture, gaze is distinguished as the most easily shifted parameter; even while otherwise fully enacting a character, a narrator may visually "check" her interlocutor's reaction (Sweetser and Stec 2016). It has also been observed (Wehling 2017, Sweetser and Sizemore 2008) that discourse-regulating markers correlate with gestural ones.

In a single-sentence TV interview example (from UCLA's Red Hen corpus), the interviewee says, *If you've seen my movies...they're not all that good*. His verbally expressed (negative) evaluative stance towards described content is indirect, layering *good* under the attenuating Negative Polarity marker (*not*) *all that*, rather than just saying *bad*. In the visual channel, a two-palm-out defensive "don't kill me" gesture and an apologetic smile socially mitigate this negative evaluative context by adding humorously self-deprecating stances towards the audience – forestalling blame (whether for making poor movies or alternatively, for bad-mouthing movies the audience might like). A final two-palm-up presentational gesture strengthens the positive epistemic stance of the statement ("you see") – but is mitigated in the linguistic track by the preceding speech-act conditional clause (*If you've seen my movies*). Thus within this single sentence, the speaker layers his negative evaluative stance both verbally (under an attenuating NPI and inside a speech-act conditional qualifier), and gesturally (with alternating apologetic-defensive and strong-presentational markers).

Quoted-speech examples involve even more layering, since the actual speaker's stance and the quoted speaker's stance are both relevant, and both potentially expressed in both speech and gesture (examples from an elicited American story-telling corpus, (Sweetser 2014, Sweetser and Stec 2016). For example, a story-teller may simultaneously enact more than one character, frequently with one character being the "continuity" core character and the other more temporarily reflected. One story-teller, recounting a discussion with her boyfriend about teasingly putting a laundry basket on top of their cat, alternates head direction and emotive facial expressions (looking up and left as her Past Self, and down and right as the taller boyfriend) while her hands continue throughout to enact the boyfriend's basket-holding hands. In another example, the narrator turns to her real-world interlocutor to respond to a question; although her gaze/head direction and facial expressions are those of her real-world Self, her hand-shape remains that of a document-holding character, retaining the embedded space of the character and the narrative.

In sum, for a single subject, affect-representation is already "stacked" in complex ways as speakers/gesturers multimodally indicate their multiple layers of stances; with multiple subjects represented by a single speaker/gesturer, complexity shifts to viewpoint embedding, and "stacking" the multiple subjects' stances. Head direction and gaze remain the most fluid parameters, while body and hands represent more stable and ongoing layers of stance.

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Theme session

Ethnosyntax: East and Southeast Asian Perspectives

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Cultural underpinnings of creative and conventionalized language use have been approached from a variety of perspectives, e.g. typology (Perkins 1992), semantics-pragmatics (Goddard and Wierzbicka 2013), cognitive linguistics (Kövecses 2006), and psycholinguistics (Slobin 1996). However, the relationship between grammar and culture, a most intriguing yet entangled research topic, has not been sufficiently investigated both qualitatively and quantitatively.

This theme session thus revisits the concept of ethnosyntax, the proposition that the grammar of a language is intimately linked to the culture of its speakers. The research framework of ethnosyntax was originally proposed by Anna Wierzbicka (1979) within her Natural Semantic Metalanguage (NSM) framework but was later substantially expanded by Nick Enfield (Enfield 2002, 2015) to include a variety of analytical approaches beyond the NSM framework. The grammar-culture connection has since then been continually investigated, particularly in relation to social cognition, by typologically oriented linguists (Evans 2003). However, arguably due to the difficulty of empirically analyzing such connections, ethnosyntactic phenomena have not been a high profile research topic within the cognitive linguistic community for the past few decades.

Inspired by the recent trend in cultural linguistics (Sharifian 2017; cf. Palmer 1996), this theme session brings together recent cutting-edge research findings exploring the (broadly construed) grammar-culture connection based on East and Southeast Asian languages, including Japanese (Horie & Kim, Kataoka), Korean (Horie & Kim, Rhee) and Arta and other Negrito languages (Kimoto), and discusses the current state of the art as well as the prospect of ethnosyntactic approaches to the grammar-culture connection, with Professor Nick Enfield as the discussant.

Speakers and titles:

1. Kaoru Horie (Nagoya University) & Joungmin Kim (Reitaku University)
Negative politeness and the preference for nominalization strategies in Japanese: A contrastive study with Korean
2. Seongha Rhee (Hankuk University of Foreign Studies)
When crudity steps into grammar: The case of Korean auxiliary verbs
3. Kuniyoshi Kataoka (Aichi University)
Discursive management of space/time and textual deictics in Japanese spatial narratives
4. Yukinori Kimoto (Hyogo Prefectural University)
Morphological manifestations of hunter-gatherer lifestyle: Word formations and ethno-semantics in Philippine Negrito languages
5. Nick Enfield (University of Sydney): Discussion

Negative politeness and the preference for nominalization strategies in Japanese:

A contrastive study with Korean

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Keywords: nominalization, negative politeness, nouniness, engagement, honorification systems

Brown and Levinson (1987) point out that nominalization can be strategically employed to convey negative politeness. Crucially, they note that the increase in the degree of 'nouniness' (Ross 1973) has the negative politeness effect of making the speaker's evaluation of the addressee's performance sound less face-threatening.

Inspired by Ethnosyntactic approaches to language and culture (e.g. Enfield 2002), this paper examines the extent to which nominalization strategies are employed for politeness effect in Japanese through a comparison with Korean. Both languages have elaborate grammaticalized honorification systems and apparently similar socio-cultural norms of respecting seniors.

Crucially, both Japanese and Korean have rich inventories of nominalization constructions, e.g. Japanese *n(o)(-da)*, *mon(o) (-da)* and Korean *ke(s) (-ita)*, consisting of a nominalizer and the copula, that convey variable pragmatic nuances. However, the degree to which nominalizations are employed for politeness effect, and the types of politeness meaning encoded therein, can vary even between these two languages that have remarkable similarities in grammatical structures and socio-cultural norms. Specifically, a nominalization constructions in Japanese can convey negative politeness effect more readily than its Korean counterpart (see (1a) vs. (1b)):

(1a, Japanese) Onegai-ga aru-*n desu* ga.
request-NOM exist-NMLZ-COP:POL but

(1b, Korean) *Pwuthak tuli-l il-i iss-nun *kes-íntey-yo*
request give-ATTR thing-NOM exist-ATTR NMLZ-COP-CON-POL
'I have a big favor to ask of you...'

The extensive use of nominalizations for varying politeness effects in Japanese may arguably help shape culture-specific ways of maintaining social relationships. It is yet another facet of its rich system of "engagement", e.g. final particles *yo* (speaker-oriented) and *ne* (addressee-oriented), "grammaticalized means for encoding the relative mental directness of speaker and addressee toward an entity or state of affairs" (Evans et al. 2018: 110). From the perspective of Ethnosyntax, this paper will address the question why nominalizations fail to convey similar politeness effects in Korean and how such effects are achieved therein.

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When crudity steps into grammar: The case of Korean auxiliary verbs

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Keywords: Crudity, Grammaticalization, Auxiliary verbs, Culture, Persistence

Korean has a large inventory of auxiliary verbs that developed from various lexical sources through verb serialization. Auxiliary verbs typically mark grammatical aspect such as Completive, Perfective, Progressive, Ingressive, Iterative, etc. By virtue of their periphrastic nature they have not advanced much along the cline of morphosyntactic reduction, and the participating verbs in the construction tend to retain semantic residue (Rhee 2003). This residual meaning serves as the basis of further development of (inter)subjective meanings.

One of the diverse sources of Korean auxiliary verbs is the semantic class of crudity or lack of sophistication, e.g., *tay-* 'touch', *ssah-* 'pile up', *ceykki-* 'push aside', and *chiwu-* 'put away'. The auxiliary verbs involving them developed to mark, in addition to aspects, the speaker's attitude toward an event, e.g. Excessivity, Recklessness, Irritability, Pejoration, Frivolousness, etc., as illustrated by the following examples of *ssah-* 'pile up':

- (1) *ku-nun pyektol-ul ssah-ass-ta.*
he-TOP brick-ACC pile.up-PST-DEC
'He stacked bricks (e.g. to build a wall).'
(2) *ayki-ka wul-e ssah-nun-ta*
baby-NOM cry-ITER-PRES-DEC
'The baby keeps on crying (e.g. which gets on my nerves).'

Unlike in (1), in which the lexical verb *ssah-* encodes 'pile up', the heterosemous auxiliary verb *-e ssah-* in (2) carries the aspectual meaning of Iterative and, in addition, the subjective meaning of Excessivity and intersubjective meaning of Irritability.

This developmental path, largely applicable to all the aforementioned verbs, exhibits diverse aspects characteristic of grammaticalization, e.g., decategorialization, desemanticization, erosion and extension (Heine and Kuteva 2002), subjectification and intersubjectification (Traugott and König 1991), among others.

However, more intriguing and crucial in the development is the role of culture, in which the events involving the acts denoted by the source verbs are negatively construed. For instance, material piling up (*ssah-* 'pile up') is typically associated with accumulation of objects, which was typically viewed negatively often leading to excessiveness and even moral corruption; physical touching (*tay-* 'touch') was traditionally shunned and regarded as reckless or even incriminating; putting away, especially when encoded by the verb *chiwu-* 'displace' instead of other displacement verbs, was historically associated with the removal of human waste or manure, which involved acts lacking sophistication or refinement. These semantic vestiges of the source lexemes are contributing factors to the development of negative viewpoints.

Recent literature on the role of culture in linguistic structure (Enfield 2002) lends insights to the puzzles that cannot be easily explained otherwise. Drawing upon historical corpus data and making reference to cultural associations, this paper addresses the role of culture in grammaticalization.

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Discursive management of *space* and *textual* deictics in Japanese spatial monologues (and beyond)

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Keywords: deixis, monologue, narrative, involvement

Following ethno-syntactic orientations pursued in Enfield (2002), this article examines indigenously motivated uses of *space/time* and *textual* deixis in Japanese narratives, and propose that highly complex manners that Japanese deictics exhibit could be, at least partially, attributed to different modes of verbalization. In order to address this question, a new type of data is employed from a bodily exploited and emotionally charged activity—monologic description of rock-climbing experiences. Based on a discourse analytic approach, the researcher will argue that the switches among *ko*-(proximal), *so*-(medial), and *a*-(distal) deictics in use are a cognitively/culturally mediated practice for achieving differential evaluations built upon the “figure vs. ground” distinction.

Japanese is widely known as a language with “person-oriented three-term deictic system” (Anderson & Keenan 1985). Specifically, those three terms are *ko*-, *so*-, and *a*- prefixes, among which the *so*-cluster is exclusively associated with the addressee’s territory in dialogic interaction (cf. Kinsui & Takubo 1992, Kamio 1997). The system, however, may also resort to the “distance-oriented” distinction in terms of the speaker’s perception, especially when s/he refers to objects around them in monologic description (Shibata 1980). Given this, the use of Japanese deictics is determined by differential perceptions of discourse participants and the environment. This is where indigenous practice comes into play to cultivate pragmatic effects, not to mention lexico-semantic extensions of deixis (cf. Matsumoto 1997, 2017). In that sense, studies of Japanese deixis have largely neglected the actual behaviors of deictics in discourse (especially in monologues: cf. Hasegawa 2010). This is in part inevitable, given the complex ways in which deictics are used and interpreted—but it is absolutely necessary to incorporate naturalistic data in order to reach more realistic accounts of deictics.

In order to investigate this question, informants were required to achieve a specified verbal task—monologically narrating their rock-climbing experience on a rock-climbing wall. That way, it was possible to focus on how they realized differential perceptions and evaluations by managing spatial/textual deictics online with respect to specific modes of (inter)subjectivity. Building upon the contrastive distributions of those deictics in inner thinking (mainly *ko*- and *a*-), verbalized monologue (mainly *ko*- and *so*-), and dialogue/conversation (*ko*-, *so*-, and *a*-), this article finally proposes a tentative account of how Japanese came to exhibit a “double binary” (Shoho 1981), (or even “triple binary” including *do*-(unknown) prefix), rather than “tripartite,” deictic system.

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Morphological manifestations of hunter-gatherer lifestyle: Word formations and ethno-semantics in Philippine Negrito languages

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Keywords: culture, morphology, denominal verbs, hunter-gatherer, frame semantics

A number of studies have recognized the importance of cultural factors in explaining linguistic phenomena (Hale 1966; Wierzbicka 1979; Enfield 2002; Evans 2003), but their application to a wide area of morphosyntactic phenomena is still limited. To further explore relations between language and culture, this study analyzes denominal verbs in Philippine languages of Negrito (Austronesian) hunter-gatherer people. Among word formation strategies, denominal verbs are in fact the locus of a rich resource of cultural knowledge. For instance, in the Arta language of Philippine Negrito, *mam-laman* (INTR-wild.pig) from *laman* 'wild pig' means 'hunt for wild pigs.' This would not be understood without knowing that wild pigs are a primary hunters' prey.

To attest the possible connection between culture and the interpretation of denominal verbs, I collected data based on my own fieldwork and a literature survey of Arta, Casiguran Agta, Palanan Agta, Dupanangan Agta, and Central Cagayan Agta (e.g. Healey 1960; Headland & Headland 1974). Then semantic frames that stem nouns employ to derive verbs are examined, e.g., animal nouns framed as 'hunt for X' to derive intransitive verbs. Finally, the relationship between the framing patterns and the cultural domains is examined with reference to ethnographers' descriptions (Vanoverbergh 1937; Estioko & Griffin 1975).

Discernible framing patterns are established that presuppose cultural knowledge/practices. First, nouns of culturally prominent targets of fishing, harvesting, gathering, and hunting activities are framed as 'searching/collecting X,' forming intransitive verbs. Second, nouns of animals and supernatural spirits that are said to do harm to humans are framed as 'X attacks on humans,' deriving transitive verbs. Third, nouns of unusable remnants of food in Negrito culture, such as coconut husks and fish scales, are framed as 'remove X,' deriving transitive verbs. Finally, nouns of materials or resources useful in fishing, curing, and hunting are framed as 'make, create something out of X' to derive (in) transitive verbs.

It is also found that foraging domains, i.e. hunting, gathering, and fishing, serve as the richest conceptual resources for creating denominal verbs. The nouns related to the participants, prey, hunting grounds, times, instruments, and hunting or fishing techniques can become verbs to encode relevant activities, such as *mæg-bæbe* (INTR-woman) 'for men to take women on a hunting trip' (Casiguran Agta); *mam-bulan* (INTR-moon) 'do moonlight hunting' (Arta); and *marj-hus* (INTR-fig) 'hiding up in a fig tree waiting to ambush game that might come to eat fig fruits' (Palanan Agta). This coincides with the Negrito people's ethnic character as *hunter-gatherers* long recognized by ethnographers.

This study suggests that an ethnosyntactic approach enables a semantic analysis of denominal verbs, which would not be possible through a culture-free mechanism, e.g., qualia structure. This further implies that frame semantics (Fillmore 1982), if properly combined with anthropological studies, can provide sound empirical grounds for exploring the connection between language and culture.

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From lexical meaning to functional role: the case of complex noun-verb phrases

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Keywords: cognitive typology - grammaticalization - complex noun-verb phrases - placement verbs - Germanic languages

German so-called 'Funktionsverbgefüge' (FVG) are complex noun-verb phrases in which placement verbs (PLVs) are favored, e.g. Germ. *zur Verfügung stellen* ('to make available'), *in Bewegung setzen* ('to put into motion') etc. These FVGs have often been described as fixed grammaticalized units in which the noun carries the main meaning and the verb has just a functional role and is considered to be semantically empty (see among others Fleischer 1997, Helbig and Buscha 2001, Eisenberg 2013).

The use of these verbs is however not arbitrary. In FVGs the original spatial semantics of PLVs is replaced by aspectual and/or temporal semantics ('Aktionsarten'), like inchoativity and causativity (compare von Polenz 1963, Herrlitz 1973, Eisenberg 2013). An analysis of data in the framework of Cognitive Linguistics shows that the selection of these verbs is linked to specific conceptualizations and semantic image-schemas like CONTROL, EXPOSURE, START OF PROCESS, to name just a few. We will describe the use and motivation of PLVs in FVGs, thereby questioning the grammaticalization idea. The conceptualization of prepositions and nouns that are combined with the PLVs is also examined as they sustain the verbal semantics.

These phrases, in which PLVs do typically appear in German, are also quite common in another Germanic language, namely Dutch. A contrastive analysis of these FVGs in both closely related languages German and Dutch will allow us to revisit the original typological class 'Germanic languages'. Both languages have three main PLVs: Germ./Dt. *stellen/stellen* ('to put in standing position'); *setzen/zetten* ('to put in a sitting position'); *legen/leggen* ('to put in a lying position'). The use of PLVs, which at first sight seems very similar in both languages, is characterized by some important differences. For instance, Dutch *stellen* ('to put in a standing position') is less frequently used than its German formal equivalent *stellen*. Dutch tends to generalize the use of *zetten* ('to put in a sitting position') and to make it to a default causative verb (Lemmens 2006). This imbalance does not apply to German, where *stellen* ('to put in a standing position') and *setzen* ('to put in a sitting position') are used to the same extent. However, a contrastive study in the framework of Cognitive Linguistics and with data from the German DeReKo corpora and Corpus Hedendaags Nederlands further shows that these differences do not occur in the same way in complex noun-verb phrases. So does Dutch *stellen* ('to put in a standing position') still appear frequently in highly grammaticalized and lexicalized FVGs. An in-depth analysis of these phrases will show that a perfect analogy between German and Dutch cannot be assumed at all.

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Macro-events in verb-verb compounds from the perspective of baseline and elaboration: Iconicity in typology and grammaticalization

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Keywords: compound verbs, event integration, baseline and elaboration, grammaticalization, iconicity

In Talmy's typology of event integration, a "macro-event" is a complex event which tends to be conceptually integrated as a single event and represented by a single clause. Macro-events are classified into five types (motion, temporal contouring, state change, action correlating, and realization) by the framing event (the main event) and are treated in a comparable way in Talmy (2000). Considering the high lexical integrity (Anderson 1992) of compound verbs (CVs), which could be the best candidates for encoding conceptually integrated complex events, this paper examines CVs representing macro-events cross-linguistically. Further, it argues that macro-events can be classified into two types by "elaboration" (Langacker 2016): augmentation (motion, state change, and realization) and adaptation (temporal contouring and action correlating). These two types of macro-events show distinct behaviors in the order of the framing event and co-event and the representation of the framing event.

According to Langacker (2016), a baseline (B) is already established, in place, or under control. Its elaboration (E) is an operation consisting in augmentation, adaptation, or additional processing activities. For instance, in the case of augmentation CVs like *aruki-tukareru* [Japanese (OV)] (walk-be.tired) 'get tired from walking', V2 *tukareru* (B) is a verb expressing the framing event (state change) with an open slot "Cause", which the co-event V1 *aruku* can fit in as a slot filler (additive, A). In adaptation CVs such as *boln-e-lagnaa* [Hindi (OV)] (say-CP-feel) 'start to say', the framing event V2 is an adaptation (E) that relates B (V1 = co-event) to B' at a higher stratum S₁ (see Figure 1).

Typologically, while the order of verbs in augmentation CVs tends to be "V1: co-event, V2: framing event" regardless of language type, the order of verbs in adaptation CVs tends to match the temporal sequencing of B/E organization (baseline → elaboration) and show a unified order "V1: co-event, V2: framing event" only in OV languages (*bak-a-kalmak* [Turkish (OV)] (look-CP-remain) 'keep looking' vs. *xiě-qǐ* [Chinese (VO)] (write-get.up) 'start writing' and *qǐ-dòng* [Chinese (VO)] (start-move) 'start moving'), owing to the iconic relation between the word order and order of temporal sequencing in adaptation CVs.

Furthermore, only V2s of adaptation CVs representing elaboration form a closed class mostly with grammaticalized verbs that initially express concrete actions. Moreover, in V2s of adaptation CVs like *obie-kiru* [Japanese (OV)] (be.frightened-cut) 'feel extremely frightened', transitive verbs are used for expressions without an object. In these cases, although the meanings of V2s are bleached, their causative meanings are in an iconic relation with operating on a baseline.

These results suggest that the differences in B/E organization iconically emerge as explicit differences in linguistic forms, indicating the validity of the onomasiological approach (looks at the designations of a particular concept) based on B/E organization.

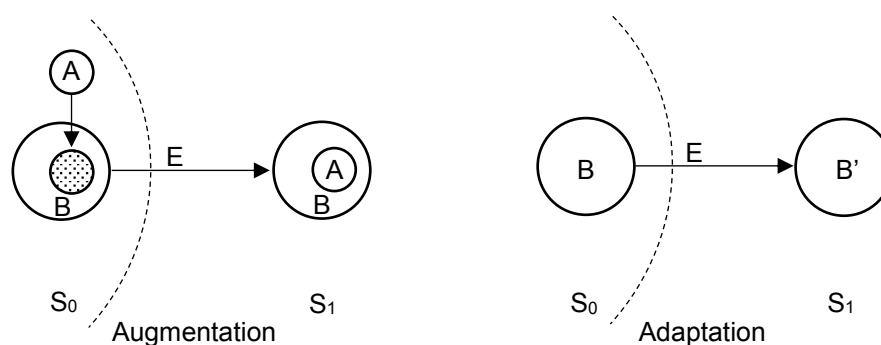


Figure 1. B/E organization of augmentation and adaptation

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The grammaticalization of Pleonastic negation——A case study of “chàdiǎnméi” in Mandarin Chinese

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Keywords: grammaticalization, chàdiǎnméi (差点没), Mandarin Chinese, reanalysis

Pleonastic negation, called paratactic negation (Jespersen, 1917:75) or expletive negation (Espinal, 2000), is a ubiquitous phenomenon across different languages, however, linguists put more focus on Indian-European Languages. As a member of Sino-Tibetan languages, Mandarin Chinese is characterized by lacking morphological changes, having such a phenomenon but facing difficulty for that the realization of pleonastic negation is not represented by certain morphemes but characters such as “méi(没)” and “bù(不)”(as in (1)-(2)).

(1) 差一点儿 没 把 裴 大爷 疼杀
chāyīdiǎnr méi bǎ Péi dàyé téngshā
nearly not make Pei old man pain to death
The old man Pei nearly pained to death.

(2) 险些儿 不 曾 误 了 大事
xiǎnxiēer bù céng wù le dà shì
nearly not once delay PAST important things
nearly delayed important things

The previous studies about “chàdiǎnméi+VP” mainly focus on syntactic structure (Jiang, 2008), pragmatic dimension (Hou, 2008) and recently turn into cognitive field. For example, Zhong&Liu (2015) argue “méi” is an indispensable cognitive marker with discreteness and empathy. Jiang (2008) proposes semantic accumulation and construction integration, denoting that the negative construction emerge from the accumulation and integration of one positive form and one negative form which are semantically reduplicative. Yuan (2012) insists semantic overflow of the implicit negation hidden in “chàdiǎn” could shed some light on the mechanism of pleonastic negation.

What’s more, fewer researchers talk about this issue from diachronic perspective, which implies we need more work from diachronic change. Therefore, gathering data from CCL (Center for Chinese Linguistics PKU), this paper investigates the group members of “chàdiǎn”, i.e. xiǎnxiē(险些), jīhū(几乎) and zhēngxiē(争些) from diachronic perspective, preliminarily founding:

- 1) pleonastic negation was firstly used in Yuan Dynasty; Ming dynasty experienced an crucial explosion period for other members so that all members can be used in pleonastic negation; the whole group entered a mature and stable stage in Qing Dynasty;
- 4) after Qing Dynasty, chà(yī)diǎn significantly carried the function of expressing pleonastic negation.
- 5) the grammaticalization of pleonastic negation is mainly implied by the host-class expansion after the driving of reanalysis; with the difference in labor division, “chàdiǎn” has gradually replaced other members, holding the central position.

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Typology of English and Mandarin: Taking spatial stationary events as examples

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Keywords: Spatial stationary events; Satellite-Framed Languages; Verb-Framed Languages; Hybrid-Framed Languages; complementary typology

Abstract: Talmy (2000b) has stated that typologically both English and Chinese belong to Satellite-Framed Languages (S-Languages). The author uses elicitation experiments to obtain the corpora, and explores the typological characteristics of the representation of spatial stationary events in the two languages. This study contributes to the analyses of the typological features related to the representation of stationary events in the two languages. In this thesis, the Talmyan statement of the S-Language typology of the two languages is revised. This study collects the linguistic data by elicitation experiments using the following two stimuli: Bow-Ped Series and PosB Series. By using these two series, 6 English native speakers and 26 Chinese native speakers are interviewed. And both quantitative and qualitative analyses are conducted to those elicited data. In the analysis, a new type of satellites is put forward, which are the constructional satellites, such as the locative construction of SbePreNP in the sentence *The cloth is in the basket*. By those satellites, some complex components of the stationary events, particularly Site or Path, can be integrated into a complete concept and represented as a single syntactic unit. Consequently, the typology of the representation of stationary events brings about a change to the overall typological picture of the two languages. It is found that: 1) There are two patterns of Path components represented in both languages. One pattern is to represent the complete path information in the locative constructional satellites, while the co-events such as manner or cause are simply represented by the main verbs, as in the English sentence *The cloth is lying across the top of the basket* and its Chinese equivalent *Buliao heng zai lanzi shang*(The cloth is lying on the basket). The other pattern is to represent part of the path information or the vector component in the English main verb *be* or in its Chinese equivalent *zai*, and the general path is expressed in the locative constructional satellites, as in the English sentence *The cloth is in the basket* or the Chinese sentence *Butiao zai lanzi li*(The cloth is in the basket); 2) When the main verbs in the English and the Chinese data of stationary events represent co-events, such patterns manifest the characteristics of S-languages, and when the main verbs in the English elicited sentences are the English copula *be* or in the Chinese elicited data are the Chinese copula *zai*, the patterns in both languages exhibit the features of a Hybrid-Framed typology of both V-Languages and S-Languages; 3) And similar to the Chinese main verb *zai*, the English main verb *be* also represents part of the spatial information of Path. Based on the investigation of the empirical data, the author arrives at the conclusion that either English or Mandarin Chinese demonstrates a complement typology of being both S-Framed and Hybrid-Framed, but not a plain S-Language typology as Talmy has stated. In the meantime, the integrating function of the constructional satellites in the typology of stationary events cannot be overlooked.

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The Grammaticalization of Chinese Directional Verb ‘kāi’: A Constructional Approach

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Keywords: Grammaticalization; Constructionalization; Constructional change; Directional verb; Chinese

Grammaticalization was defined by Meillet (1912:131) as “le passage d’un mot autonome au rôle d’élément grammatical”. Prototypically, grammaticalization is expressed by clines as “content item > grammatical word > clitic > inflectional suffix” (Hopper & Traugott 2003:7).

In Chinese, grammaticalization has long been applied to studies of Chinese grammar since it coincides closely with the proverbial distinction between *shí-cí* (实词, content words) and *xū-cí* (虚词, function words) (Lv 1979; Zhu 1982; Ma 1983). Directional verbs, a closed-class system which can be used either as content words or function words, have attracted much attention (Liu 1998; Liang 2007; Li 2018). This study, as a supplement, adopts a constructionalist approach (Traugott & Trousdale 2013) and explores how Chinese verb ‘kāi’ (开) has transformed from a main lexical verb, as in ‘kāi + Noun’ constructions (meaning ‘open’ or ‘start’), to a directional complement in ‘Verb + kāi’ constructions (meaning ‘away’ or ‘off’).

By retrieving ‘kāi’ in CCL (Center for Chinese Linguistics PKU) corpus, it is found: 1) ‘kāi’ was initially transitive and then took on its intransitive function during Tang dynasty (619-1279); 2) the type frequency and the token frequency of ‘Verb + kāi’ constructions have been progressively increasing throughout the different periods of Chinese; 3) ‘Verb + kāi’ constructions have undertaken both constructionalization and constructional change.

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Typological differences influence motion event perception: Evidence from production, similarity judgment tasks and eye tracking

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The languages of the world show great variation in core schema motion encodings: *Verb-framed* languages (e.g. French) allow mostly for Path lexicalization; *Satellite-framed* (e.g. English) leave Path in peripheral elements lexicalizing Manner of motion instead; some (e.g. Greek) present parallel systems of conflation (Talmy, 2000). It has been argued that such typological differences not only affect how people describe events verbally but also how people behave in non-verbal tasks (e.g. adopt different visual exploration strategies (Soroli 2018), attend to different aspects or follow different criteria for motion recognition (Flecken et al. 2014) and memorization (Engemann et al. 2015)). For others, our cognitive system has a common genetic basis: humans are all equipped with the same set of general conceptual categories that allows for common processing of core features, irrespective of different linguistic or cultural background (e.g. Kvas & Plomin 2006, Chomsky 2014).

The question I address here is the following: Can typological differences influence our non-verbal behavior (the way we perceive and the way we categorize motion events)? In this study I present data from three typologically different languages (English, French, Greek). Participants performed three controlled tasks: (1) a non-verbal similarity judgment task; (2) a verbal similarity judgment task; and (3) a production task, all coupled with eye-tracking for further insights on on-line processing. In experiment 1, participants saw a target-video presenting a motion event performed in a certain Manner and along a certain Path. The target was then followed by two video variants: one Manner-congruent and one Path-congruent. Participants had to choose the variant that looked most like the target as fast as they could. Experiment 2 was the same, except that the target was replaced by a target sentence describing the event. In experiment 3 participants had to describe verbally the scene.

The results show that all groups followed the typological patterns of their native language: French participants preferred to lexicalize Path leaving Manner either unexpressed or peripheral; English participants systematically encoded Manner within the main verb and Path in satellites; Greek-speaking participants alternated their verb- and satellite-framed constructions using lexicalized Path as well as many peripheral devices, preverb configurations and complex Manner-first patterns. French participants were less focal in their non-verbal behaviour than English participants. They made more Path-choices in the similarity judgment tasks, attended more and longer to Path components combining this preference with ballistic (from-source-to-goal) gazes, as opposed to English who paid less attention to Path and followed a rather focal (linear/step-by-step) strategy for visual processing. Greek participants, depending on the context and the salience of the components, alternated their visual strategies, showing however that when verbal input is not explicit, overt attention to specific components may differ in fixation counts but not in visit durations.

Participants were largely influenced by the typological properties of their native language, not only when performing verbal descriptions but also when making their non-verbal decisions: They categorized and shifted attention mostly based on the features of their language but in some cases, when no verbal input was explicitly involved, the language effect was only superficial. These findings confirm, at least partially, the impact of typological constraints on event perception mechanisms.

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Speaker's territory as a factor in the use of deictic verbs and verb affixes:

The cases of Kupsapiny and Newar

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Keywords: space deixis, motion, subjectivity, speaker's territory, video experiment

The present study shows that unlike demonstratives, a COME verb and an affix for 'hither' can be used to describe not only motion toward the speaker in space, but also motion into a space where the speaker is located as well as motion into an area on which the speaker fixates his/her sight, based on the results of a production experiment with speakers of Kupsapiny (a Nilotic language of Uganda) and Newar (a Sino-Tibetan language of Nepal). This suggests that the use of these forms involves the notion of the speaker's territory.

Previous studies on deictic expressions (e.g. Fillmore 1971) have analyzed them as having purely spatial meanings characterizable in terms of the direction of motion relative to event participants. However, there are almost no studies that have examined how they are used based on quantitative data. Recently, Matsumoto et al. (2017) found that the COME verbs in English, Japanese, and Thai can be used for cases where a moving entity moves not necessarily toward the speaker, but into the speaker's territory. The present study elaborates this notion of the speaker's territory by examining two more languages, considering factors that Matsumoto et al. did not look at. It also investigates the use of a deictic affix in relation to the speaker's territory, which was not considered in Matsumoto et al.

We had 13 Kupsapiny speakers and 14 Newar speakers describe video clips depicting motion events that differ in the direction of the moving entity's motion in relation to the viewer. Both languages are highly deixis-salient, almost always mentioning deictic information in describing motion events. Setting aside demonstratives, for deictic information of a motion event, Kupsapiny uses deictic suffixes, which attach to most motion verbs, as well as deictic verbs (as main or participle verbs), and Newar uses deictic verbs obligatorily as main verbs.

We examined how speakers of the two languages express the following types of motion events with these deictic elements: (i) motion into a delineated space (specifically, to the floor) where the speaker is located, (ii) motion out of an enclosure into an open space where the speaker is located, and (iii) motion into the speaker's visual field where s/he fixates his/her sight on a certain entity. We compared the results with those of the speaker's descriptions of motion events not involving these factors, and found that the COME verbs and the 'hither' verb suffix are both used for these types of motion more frequently than their 'thither' counterparts. We also found that in the two languages, these factors can even override the factor of the direction of the moving entity's motion relative to the speaker in a way clearer than in previously studied languages.

Thus, the use of both a COME verb and a 'hither' verb affix can involve the notion of the speaker's territory, which is found to be relevant in a wider range of languages and verbal elements than uncovered before. Deixis is a subjective concept, and especially the use of 'hither' verbal elements tends to be sensitive to a moving entity's motion into the speaker's territory, because such motion could affect his/her interests, and this instigates his/her projection of himself/herself on his/her territory.

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Linguistic deictic meanings beyond gestures: A contrastive study on motion event descriptions in French and Japanese

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Keywords: motion, deixis, gesture, typology, French, Japanese

Background and aims

According to Talmy's typology of event integration (Talmy 2000), both French and Japanese are categorized as verb-framed languages. I revealed in previous studies (Morita 2011, for example), however, that they differ in the frequency of deictic expressions and the syntactic constituents used for deixis; Japanese speakers express deixis frequently by deictic verbs, while deictic expressions are not frequent and prepositional phrases with the first person pronoun are preferred in French. This paper aims to show that gestures can fill this gap, and to argue that gestures have a speech compensation function for spatial deixis. It also elucidates that Japanese deictic verbs have more psychological meaning that cannot be compensated by gestures or overt verbalization of the speaker.

Data and method

The data was collected through a video elicitation experiment. The elicitation material consists of 52 video clips in which a person or an animal moved through various paths with a certain manner of motion. A session involved a pair of participants: one participant watched the video clips and explained the contents to the other participant who did not watch the clips. 12 Japanese speakers (6 pairs) and 20 French speakers (10 pairs) participated, and their narrations and gestures were recorded.

Findings and discussions

French speakers hardly used linguistic deictic expressions. However, in order that the paired participant who did not watch the video may correctly understand the same scene shot under various angles, they used frequently iconic gestures (cf. McNeill 2005); for example, an arm or a hand iconically describes the direction of motion and differentiates the same verbal expression such as *un chien est sorti de sa cage* 'a dog exited its cage'. As long as the physical direction concerned, iconic gestures can compensate the lack of linguistic deictic expressions in French.

Some Japanese speakers used iconic gestures with contradictory verbal expressions. For example, when a dog moved away from the speaker, running out of the cage, it was always described by the movement of a hand from a position close to the speaker's body to a forwarded distal position. Verbal expressions accompanying this gesture have two options: *de-te iku* 'exit-CONJ go' and *de-te kuru* 'exit-CONJ come'. When the andative verb *iku* is used, the gesture meaning and verbal meaning are redundant because they convey the same information. The use of *kuru* is physically contradictory, but psychologically understandable; even though a dog moved away from the speaker as described by the gesture, it comes to the speaker's viewing field, which licenses the use of *kuru* (cf. Matsumoto et al. 2017). This extended meaning of deixis can be expressed neither by iconic gestures nor by prepositional phrases including the first person pronoun in French; the extended venitive meaning cannot be conveyed by *vers moi*, and expressions such as *en s'éloignant de moi* 'going away from me' are truth-conditionally acceptable, but do not convey a psychological meaning of deixis.

Thus, the parallelism between verbal expressions and gestures are limited to the physical aspects of motion events, and only verbal expressions may have extended deictic meanings.

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The encoding of dynamic deixis in motion events: A crosslinguistic exploratory study

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Key words: motion events, dynamic deixis, centripetal motion, centrifugal motion, crosslinguistic study

When encoding *dynamic deixis* in motion events (see Lamarre & al. 2017) speakers of various languages can choose a perspective which entails motion either *toward* (centripetal, hereafter CTP) or *away from* (centrifugal, hereafter CTF) a deictic center (Fillmore 1971, 1975; Gathercole 1977; Wilkins & Hill 1995). By doing so, speakers rely on the linguistic devices available in the language they speak (Slobin 1987, 2004, 2017). However, languages vary not only in the type of devices they have to encode a deictic perspective but also in the availability of such devices for language use (Gathercole 1977; Wilkins & Hill 1995; Nakazawa 2007). While some languages have been shown to be fully (e.g. Spanish, Hungarian) or predominantly (e.g. French, English) deictic, others have been revealed to be non-deictic (e.g. Polish, Russian), as far as motion is concerned (Ricca 1993). These language-specific tendencies observed in previous research have led us to explore the following points with regards to the expression of dynamic deixis in different languages: i) the choice of taking a deictic perspective or not, ii) the preference for the CTP or CTF perspective, iii) the variation of perspective as to the data *genre* such as narrative or dialogue. We investigate these issues through a crosslinguistic study based on different sources of data from English, French, Polish and Chinese.

Firstly, we examine crosslinguistic variation by comparing (1) Chinese and Polish stimuli-based data gathered with native speakers (12 and 14 respectively) using the video-clips called *Trajectoire* (Ishibashi et al. 2004), and (2) English, French, and Polish text-based data extracted from novels. The first analysis reveals that Chinese speakers encode deixis in 31.6% of motion event descriptions, showing a preference for the CTP perspective (23.6% of the data); for Polish speakers, the encoding of dynamic deixis is almost irrelevant as it accounts for 0.3% of the descriptions only. The second analysis based on text data reveals that French encodes dynamic deixis more frequently (53.9%) than English (41.5%) and Polish (32.9%). Interestingly, while French and English tend to take more frequently the CTP perspective (34.2% in French and 27.7% in English), Polish speakers tend to focus more frequently on the CTF motion (24.4%).

Secondly, we examine intra-linguistic variation by comparing (1) stimuli-based and text-based data in Polish, and (2) stimuli-based and TV series-based data in Chinese. In both languages there is a difference between the *genres*, with a tendency to encode dynamic deixis more frequently in discourse than in simple motion descriptions. In particular, in Polish narratives the expression of dynamic deixis represents 32.9% (vs. 0.3% in video descriptions), while in Chinese TV series, it represents 96.6% (vs. 31.5% in video descriptions). We may also note that Polish shows a preference for the CTF perspective (as mentioned previously), while in Chinese there is a difference between the *genres*: both CTP and CTF perspectives are equally used in the TV series, whereas the CTP perspective is predominant in the stimuli-based data.

In this talk, our aim is to further investigate the presence or absence of perspective in deictic expressions across the languages under study and across different *genres*, and try to explore the factors that prompt the deictic perspective taking in our data.

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Cognitive Linguistics and Interpreting in Police Interviews

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Keywords: semantic typology, forensic linguistics, interpreting, motion events, modal verbs

Interpreters in police contexts face different challenges in their interpreting choices. Time pressure, memory skills and note-taking are part of general interpreting skills that may result in additions, omissions and changes of meaning (Hale 2007). In addition to these well known difficulties, cross-linguistic differences can also hinder the translation process and Cognitive Linguistics can help to identify the language contrast that are challenging for interpreters. In particular, semantic typology has been studied in relation to translation (see Slobin 1996, Filipović 2007, 2017a, 2017b, Rojo and Cifuentes-Férez 2017). Applied Language Typology, i.e. the use of the effects that typological contrasts have in professional contexts has been specifically used in relation to forensic contexts and interpreting (Filipović 2017a, 2017b, Author 2018).

This paper focuses on the analysis of Spanish-English bilingual police interviews in California (USA). The normal procedure in California is that a control interpreter transcribes the police interpreter-mediated interviews and adds her own interpreting version to the transcript. The analysis presented here is based on the cases in which the two interpreters give two different translations. The results show different types of inaccuracies in the interpretation, which can be grouped in relation to general interpreting skills (e.g. addition/omission of information, addition/omission of intensity, use of euphemisms) and to typological contrasts. The latter group of inaccuracies include non-agentive constructions (e.g. issues related to the translation of *se* constructions into English, e.g. *se me cayó* 'it happened to me that she fell', translated as *I dropped her* or as *she fell*), Manner of motion (e.g. addition or change of Manner information into English, such as *subir* 'ascend, go up' translated as 'run up') and modal verbs (e.g. issues related to the translation of *no querer* as 'didn't want' or 'didn't mean to'), among others. These language contrasts are difficult to overcome in the interpreting process and can lead to different connotations in the target language in relation to the intentionality, force dynamics, speed of movements, etc.

This research sheds light on the role of semantic typology in the interpreting process. It also emphasises how the study of Cognitive Linguistics can be relevant to interpreters working in the legal context and in other professional settings.

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Fluency Development in Simultaneous Interpreting Performance of Trainee Interpreters: The Perspective of Cognitive Fluency

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Key words: cognitive fluency; lexical access; attention control; utterance fluency; simultaneous interpreting

The importance of fluency, one of the most important criteria in interpreting quality assessment and perception, has been under-estimated in interpreting research, but constructs and contributors of fluency in interpreting output are ambiguous. This study explores the role of cognitive fluency in the fluency development of the L2(English)-L1(Chinese) simultaneous interpreting (SI) output of trainee interpreters under different conditions of cognitive load.

Cognitive fluency refers to the efficient operation of the speaker to mobilize and integrate the underlying cognitive processes responsible for utterance production. Cognitive fluency measures were operationalized as the efficiency (coefficient of variance) of lexical access, lexical retrieval, linguistic attention control (switch cost) and working memory capacity in the current study, which were elicited through behavioral experiments including semantic classification task, word translation task, category judgement task and speaking span task.

Utterance fluency refers to the set of objectively determined oral features of utterances and represents the characteristics a speech sample possesses, e.g. the temporal, hesitation and repair features. Measures of utterance fluency in SI performance were obtained through simulated SI task and it followed a 2 (training: pre/post) * 2 (input rate: low/high) multifactorial design. Twenty-eight trainee interpreters at the initial stage of SI training from an MA interpreting program were recruited as participants. The participants interpreted two speeches simultaneously, one with high input rate and the other with low input rate, at the beginning and end of an SI training period of thirteen weeks. A bilingual corpus of the SI output of participants was built and indicators of SI utterance fluency were annotated systematically in software Elan 5.2. Three dimensions of utterance fluency were explored, i.e. speed fluency (speech rate relevant), breakdown fluency (hesitation phenomenon including unfilled and filled pauses), and repair fluency (repairs, repetitions and false starts).

Multiple linear regression analyses were conducted with SPSS 24.0 to explore the impact of cognitive fluency measures on the development of utterance fluency in trainee interpreters' SI output under conditions of low and high input rate separately. Measures of cognitive fluency were treated as independent variables and measures of utterance fluency development (residuals of utterance fluency measures in the post-test minus those of the pre-test) were taken as dependent variables.

Results indicate that: 1) the explored cognitive fluency measures could explain a large extent of the variance of utterance fluency gains in the SI output of trainee interpreters over an period of thirteen weeks; 2) the impact of cognitive fluency measures on SI utterance fluency development is evidently stronger under conditions of higher cognitive load; 3) the efficiency of cognitive processes involved in the target language production stage have more significant impact on the utterance fluency development than the that of processes involved in the source language comprehension stage; 4) measures of lexical retrieval and working memory generally increase the predicting power of the model to the fluency development of trainee interpreters' SI output. The results have implications for the theoretical framework of cognitive fluency and interpreting pedagogy.

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Cognitive mechanisms of linguistic creativity

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Keywords: deviation, creativity, inferential potential, conceptual attributes metaphor.

In the present paper we explore the cognitive mechanisms of linguistic creativity. We build on the dichotomy *language system creativity vs language users' creativity*. To this end we draw on the analysis of how language system responds to the needs of verbalizing new concepts, on the one hand, and how the language user is creatively involved in the new concept / word formation, on the other. We also hold that creativity is based on confrontation, deviation, and novel combination of existing mental representations. Human creativity requires the combination of previously unconnected mental representations, constituted by patterns of neural activity (Thagard and Stewart 2010).

We argue that when any new meaning is formed we deal with three types of deviation: semantic, pragmatic and cognitive. The first step in the development of a new meaning is pragmatic deviation. The speaker as if invites the hearer to infer the new nuances of meaning, which the word develops due to the unusual use in a novel context. The hearer makes a cognitive effort to infer the new shades of meaning, The individual pragmatic inference in the course of time becomes salient in the speaking community, it is shared and adapted by more than one speaker and becomes conventionalized. And at a later stage generalized pragmatic inference is semanticized into a new coded meaning of a word (cf. Traugott and Dasher 2002).

It is essential for the purposes of our analysis to distinguish between two types of linguistic inferences: pragmatic and semantic ones. The former has to do with a context of a situation; the latter - with the changes in the conceptual structures of the original and new coded meanings. By method of conceptual analysis we explore concept-narrowing, concept extension, and conceptual metaphor, underlying the mechanisms of semantic changes. We draw on the results of our study of 500 new meanings from BNC.

We hold that conceptual attributes vary according to the degree of their centrality, proneness to change and their inferential potential. We prove that cognitive mechanisms of new meaning development involve activation of peripheral mutable conceptual attributes with the high inferential potential.

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Do too many linguistics spoil the research?
Creativity and fixedness in creative uses of proverbial idioms:
A cross-linguistic, corpus-driven study

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Keywords: proverbial idioms, fixedness, creativity, cross-linguistic, corpus linguistic

Both cognitive linguistic and other literature on idioms describes some idioms as being fixed or frozen (e.g. Fillmore et al. 1988, Moon 1998, Gibbs 2001, Croft and Cruse 2004, Goldberg 2006, Langlotz 2006). However, the categorization and other processing required in order to apply a proverbial idiom¹, such as *too many cooks spoil the broth*, which has both a concrete, literal meaning and an abstract, idiomatic meaning, to fit a specific, concrete, contextualized situation in the real world (with its abstract meaning, no less) does not seem particularly simple.

The ubiquitous nature of human creativity (e.g. Kaufman and Sternberg 2010) suggests that speakers will manage to find a way to apply creative solutions to the problem of applying such proverbs, regardless of how fixed or frozen they are. To reveal precisely how they do so is the main goal of this in-progress study, which contrastively examines linguistic creativity in uses of proverbial idioms in English, Japanese, and Korean in order to document the patterns with which speakers of each language employ proverbial idioms creatively, in hopes of contributing to the study of proverbial idioms and of attesting to the profound relevance human creativity should bear on theories of language in general.

Here, I report on the results of a study of the proverbial idiom *too many cooks spoil the broth* and its translational equivalents in Japanese and Korean (*sendō ōku-shi-te fune yama-ni noboru* and *sagong-i manh-eumyeon bae-ga san-eulo ga-nda*, respectively). I employed the Sketch Engine website and queried the largest, web-based corpus available for each language (the so-called “tenten” corpora, because they have more than 10⁹ words). Rather than relying on my intuition to predict types of creative uses, as earlier literature on idiomatic creativity tended to do (e.g. Moon 1998, Langlotz 2006), I extracted most uses of the proverbial idiom in each corpus, including creative uses, by searching for all potential creative constructions and manually sorting the data, resulting in 327 (English), 517 (Japanese), and 667 (Korean) tokens. Then I applied ID tags (Atkins 1987) to the data, labeling fixed forms and creative uses (and, in the latter case, specifying the type(s) of creativity exhibited).

Strikingly, the data reveal that so-called creative uses represent the majority of uses in all three languages: more than half the English and Japanese, and 4/5 of the Korean data were creative uses. Various types of creativity were observed, with English being most likely to employ lexical substitution. Japanese and Korean were more likely to use contraction. However, Japanese speakers focused on the first half of the proverb, and were free to drop only the second half, while Korean speakers were able to drop either half of the proverb.

The results will be discussed in some detail, including specific methods of creativity that speakers of each language employed, or failed to employ, as well as in light of what they reveal about the study of proverbs in general.

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¹ In this paper, the term “proverbial idioms” is used in order to indicate idioms with a “teaching story”. There is no clear cut boundary between idioms and proverbs, but the boundary is gradable. As is well known, the meaning of idioms and proverbs is not predictable from the sum of their components’ meaning.

The two ways to the same interpretation of a novel expression: metaphorical and metonymical categorization

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This study illustrates that, in interpretation of novel expressions, two types of categorization—metaphorical and metonymical processing—can occur even when the same meaning is conjured up in the end of processing.

When interpreting unconventional expressions, we set up analogies between the expression and already established uses (cf. Taylor 1992, 2012). In other words, linguistic interpretation can be analyzed as categorization by construction schemas applicable to the expression we are trying to understand. However, how we categorize unconventional expressions referring to our mental corpus has not been illuminated in linguistics.

In the experiment conducted here, 41 native speakers of English were asked to evaluate their familiarity (from 0 to 100) with 15 conventional uses. All the stimuli included the verb *cut* (e.g., “Aaron cut his ties with his friends”) and were prepared following some dictionaries to cover the whole meaning of *cut*. In the next step, they were asked to try to interpret seven unconventional sentences including *cut* (e.g., “He cut the name”), which were attested, in the preliminary test, to be uncommon for native speakers but relatively easy to imagine the meaning. They were, then, asked to choose from the 15 conventional uses what they felt to be the most strongly connected to each unconventional sentence and to explain the reason.

As a result, there were some cases in which, although an unconventional sentence was interpreted as having the same meaning, different conventional expressions were chosen as the most strongly connected use. For example, the unconventional sentence “He cut the name” was often interpreted as <BREAKING THE CONNECTION TO THE PERSON WHO HAS THE NAME>. However, two conventional uses were mostly selected to explain the meaning. The first answer is “Oscar cut a scene from the new film” (13/41), in which *name* and *scene* are members of the same category what is eliminated from something. The relationship between the source category (i.e., conventional use: *scene*) and the target (i.e., unconventional use: *name*) can be analyzed as metaphorical processing, that is, the target is identified with the source in individuals (Glucksberg and Keysar 1990). The second is “Aaron cut his ties with his friends” (8/41). In this case, the participants would make associations such as [name -> person -> tie]. This process is considered as metonymical processing: looking for the source which is related to, but not identified with the target.

Moreover, we tagged each choice as “Metaphorical Categorization” or “Metonymical Categorization” type. In this experiment, the mean familiarity of Metaphorical Categorization’s sources (89.8) is higher than that of Metonymical Categorization’s sources (85.8) although there is no significant difference in statistical analysis. This would be attributed to the ceiling effect, considering that the means of familiarity in 10 conventional uses were higher than 80 points regardless of processing type. The significant difference between Metaphorical and Metonymical could be observed, employing different methods to measure the entrenchment of each use. Assuming that the source of metaphorical processing is more strongly entrenched than that of metonymical processing, it is hypothesized that metaphorical processing is followed by metonymical processing since degree of entrenchment coincide with ease of activation (cf. Langacker 2008). When encountering a novel expression, to begin with, we look for established uses which can be identified with the target, that is, metaphorical processing; and then if the suitable uses for the interpretation cannot be found, we activate background knowledge of the target and source and attempt to carry metonymical processing out. This study shed light not only on the result of interpretation but on the procedure specifically.

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Unconscious effects of language-specific terminology on spatial concepts in bilinguals

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Categorization is one of the most fundamental cognitive abilities of humans, however, different languages vary radically in how they partition and encode the surrounding physical world through lexical and grammatical devices (Malt & Majid, 2013). For example, despite shared biological constraints and life experiences, people coming from different language backgrounds carve up space in strikingly various ways (Bowerman & Choi, 2001). While English native speakers make an obligatory lexical distinction between support and non-support relationships (*on* for support; *over/above* for non-support), in Chinese, people use a common term '*shàng*' to indicate both relationships (Toh & Suárez, 2017). Learning an additional language usually entails internalizing novel categorical distinctions and restructuring existing ones, and such categorical boundary shift has been demonstrated in a variety of cognitive domains (Ameel, Malt, Storms, & Van Assche, 2009; Flecken, Athanasopoulos, Kuipers, & Thierry, 2015). However, for a long time, spatial concepts (especially support relationship) have been suggested to be so foundational to human experience as to be immune to the influence of language (Munnich, Landau, & Doshier, 2001). Therefore, in this study, we aim to investigate whether and how language knowledge shapes the spatial concepts of Chinese-English bilinguals. We recorded brain activity in three groups of participants (including English monolinguals, Chinese-English long-stay and short-stay bilinguals) while they were performing a visual change detection task in an oddball paradigm. That is, a visual presentation stream of stimuli occurring with different probabilities: standard (80%), deviant (10%) and target (10%). For example, in one block, support relationships would serve as standard stimuli while non-support relationships serve as deviant stimuli; in another block, the role of standard and deviant stimuli would be switched. Each participant would view 4 blocks of 540 stimuli in total, two blocks for between-category (support vs. non-support) comparison and another two blocks for within-category (non-support) comparison. Participants were instructed to pay attention to the shape of the located object instead of the relationship between two objects and to press the spacebar each time when they see the shape of the located object changes from a circle (for standard or deviant stimuli) to a square (for target stimuli). Their unconscious and automatic processing and categorization of visual spatial scenes would be indexed by the visual mismatch negativity (vMMN), a spontaneous and pre-attentive brain response which has been proved to be highly sensitive to category-related deviances relative to standards (Czigler, 2014). Even though there have been intensive studies related to spatial cognition, but it is the first time to investigate early visual stages of spatial categorization using the visual oddball paradigm, and the results will provide fundamental new insights into the plasticity of the bilingual conceptual system by establishing the neural correlates of categorical spatial perception when languages show different categorization patterns on spatial relationships.

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Mapping the body

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Keywords: semantic typology, body representation, linguistic diversity, language reflects thinking

The human body is a universally shared domain of experience, yet the way it is segmented into parts greatly varies across languages and cultures of the world (e.g. Enfield et al. 2006; Majid 2010; Majid & Van Staden 2015; Devylder, 2016). To further understand the segmentation of the human body into parts across the variety of the world languages and cultures we ran two studies with a total of 120 speakers of three unrelated languages (French, Indonesian, and Japanese). More generally these two studies have broader theoretical and methodological implications in the study of linguistic and non-linguistic meaning and lead us to ask important questions about ways to interpret the unsystematic symmetry of language and cognition.

In Study 1, we compared the descriptions of 32 pictures showing people with photoshopped injuries on various parts of their body (e.g. a cut on the foot) by 30 speakers of the three studied languages (10 per language). This non-linguistic to linguistic experiment revealed interesting shared pattern and variations of body representation across cultures. For instance, French speakers never described a cut on the foot as a leg injury, whereas Indonesian participants collapsed the distinction. In contrast, speakers of all three languages marked a formal distinction when describing injuries affecting fingernails or toenails in contrast to the constructions used for all the other descriptions. To determine the existence of a hierarchical structure in the representation of the body and its parts (e.g. forearm is part of the arm) a hierarchical cluster analysis was performed within each language. The results of this analysis show interesting patterns: the Indonesian and Japanese participants make a clear distinction between parts of the upper and lower body, which they grouped together (e.g. arm vs. leg), in stark contrast with the French participants who seem to attribute a particular cognitive salience to joints (e.g. elbow & knee) which leads to a quite different architecture in the representation of their body.

Study 2 consists of an elaboration of the coloring task designed by Majid & Van Staden (2015). 90 participants (30 per language) were given a booklet containing pictures of a whole human body and asked to color-in the body part named on each page, using the list of terms provided by Study 1. The study confirmed some of the results from Majid & van Staden (ibid), but also revealed a number of interesting findings that remained unnoticed in the previous literature. For example, the fact that the Japanese term *ashi* could be written with two distinct characters (足 and 脚), or that there is a body part term in Indonesian (*lengan*) that exclude the [hand] segment as in French (*bras*) or Japanese (*ude*) were previously overlooked. We also found that the order of presentation of the stimuli had no effect on the performance of the participants, hence showing the robustness of lexicalization patterns in the three languages. Methodologically, these two studies draw attention to the pitfalls of using English as a metalanguage in semantic typology: to say that participants collapse the distinction between leg and foot implies to have already evidenced what those culturally loaded terms precisely refer to (and this has not yet been determined). We propose an alternative and more culturally neutral model for future research in the semantic typology of body representation.

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On the motivated polysemy of the Lithuanian **PO** and the English **UNDER**

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Key words: prepositions, motivated polysemy, Lithuanian, English.

Motivated polysemy as the major tenet of cognitive linguistics is well illustrated in a plethora of works on prepositions (Lakoff 1987; Langacker 1987; Tabakowska 2010; Shakhova & Tyler 2010; Šeškauskienė & Žilinskaitė 2015, Stasiūnaitė 2018, etc.). However, the Lithuanian **po** still relies on intuitive explication, not supported by any corpus data, which reflects the traditional line of investigation. The English **under**, acting as the primary translation equivalent of **po**, on the other hand, has received more attention in a cognitive vein (Dirven 1993; Taylor 1993; Coventry et al. 2001; Tyler & Evans 2003), except for the relatedness of its senses. Cross-linguistic studies have not been undertaken either.

Thus, the paper aims at: (1) establishing senses of **po** and **under** as (2) related and (3) comparing these two semantic networks. In order to achieve this, 1000 concordances are taken from the Corpus of Contemporary Lithuanian Language (CCLL) and 1000 from the British National Corpus (BYU-BNC). The fiction section is selected to illustrate a wide range of meanings. The Principled Polysemy Model (Tyler & Evans 2003), used as the main methodology, distinguishes between senses conventionalized in memory and their contextual variants produced for the purpose of local understanding. It also suggests prompts for primary sense identification: earlier attested meaning, predominance in the semantic network, use in composite forms, etc. Contextual clues are also an important factor.

The results reveal that the primary sense based on a proto-spatial scene of the Figure (F) underneath the Ground (G) functions as a direct and/or indirect derivational basis for a variety of senses of **po** and **under**. Some of them are concrete and distinguished according to the types of F and G and their relationships (functional, geometric, etc.), and/or relations between F/G and the viewer. In meaning extension, which is explicated in the framework of metaphor and metonymy, some elements manifest an increase in the level of abstraction or become backgrounded due to other elements relevant for the spatial scene. The comparison of the two networks reveals that **po** and **under** differ in the number and positioning of the senses, which hinders their substitution in some contexts. The discrepancies may be influenced by the neighbouring/contrasting categories and/or the nature of the languages.

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When locational expressions are not locational: the case of Japanese demonstratives

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Keywords: locative expression, landmark, semantic extension, Japanese, Basque

Particular conceptions have sufficient cognitive salience that they often function as the prototypes for grammatical elements (see Langacker 2008: 97). We present evidence from Japanese as well as Basque that suggests that a certain kind of spatial relation is the conceptual archetype of locative expressions across languages.

Japanese demonstrative pronouns *koko*, *soko*, and *asoko* are commonly described as denoting locations as opposed to objects, often without further explication (see Teramura 1968, Takubo 1984, and Moriyama 1988 among others). We demonstrate when and why these locational demonstratives (hereafter LDs) can refer to objects that do not function as locations, thereby revealing how we conceptualize locations.

LDs can denote the spatial landmark (SL) of an IN/ON relation. The sentences in (1) each describe the location of the addressee's key in relation to the landmark of an IN/ON relation.

(1) *kinoo mise-ta {bessool/hondanal/kuruma}*, *asoko ni kimi no kagi ga ar-u yo.*
(yesterday show-PST {cottage/bookshelf/car}, that.place LOC 2SG GEN key NOM exist-PRS SFP)
'The {cottage/bookshelf/car} I showed you yesterday, that's where your key is.'

Some objects, however, can be referred to by LDs even when they do not serve as landmarks. For example, you can sometimes use *asoko* to refer to something you designed, but not always, as shown in (2). An LD can refer to something other than a landmark if its referent is an **entity that has ample space for a human being and is fixed with respect to a reference frame** (hereafter a **locational object** or **LO**). Fixed entities without ample space for humans, such as bookshelves or utility poles, cannot be referred to by LDs unless they serve as landmarks. Nor can mobile entities with ample space for humans (e.g. vehicles).

(2) *kinoo mise-ta {bessool/*hondanal/*kuruma}*, *asoko wa boku ga sekkei si-ta.*
(yesterday show-PST {cottage/bookshelf/car}, that.place TOP 1SG NOM design do-PST)
'The {cottage/*bookshelf/*car} I showed you yesterday, I designed it.'

LDs in Japanese can thus refer to both SLs and LOs. We propose that the LO use constitutes an extension from a particular variant of the SL use, one where the trajector is human and the landmark is fixed. A similar extension can be found with the locative genitive case in Basque, which typically marks a SL as in (3a). It can also indicate that the noun phrase it is assigned to refers to a LO that participates in a non-locative relation (e.g. part-whole, which is exemplified by [3b]). Notice (3c) illustrates that the case cannot mark part-whole relations whose trajector is not a LO. (See Aurnague 1998 for details.)

(3) a. {Etxe/oto}-ko gatua	b. etxe-ko teilatuak	c. ?oto-ko bortak
{house/car}-LOC.GEN cat.the)	(house-LOC.GEN roofs.the)	(car-LOC.GEN doors.the)
'the cat in the {house/car}'	'the house's roofs'	'the car's doors'

These facts clearly show that the concept of LO functions as the category prototype for locative expressions in Japanese and Basque. The commonality across those geographically and genetically distant languages strongly suggests that the concept has universal cognitive salience. In support of this suggestion, we attempt to show that localizers in Chinese and locative nouns in Ainu can be revealingly analyzed in terms of LO.

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Cultured Meat or Frankenfood? Toward an Expanded Account of the Education-Persuasion Tension Intrinsic to Conceptual Integration

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Keywords: conceptual blending, somatic marking, new technology, science communication

Conceptual blending enables the compression of complex information to “human scale” (Fauconnier & Turner 2002: 312) via the construction of novel analogies between cognitive input spaces that are otherwise distinct. Alternatively, blend constructions can be used “to provoke a particular normative *feeling* rather than to facilitate value-neutral apprehension” (Slingerland 2005: 580–581, emphasis in the original). These two functions of blending can be summed up as education (“human scale” compression) and persuasion (normative “somatic marking”). Although the literature features many case studies in which both would seem to be equally implicated (see e.g., Oakley & Pascual 2017), a deliberate, expanded account of the ways in which the two function both in tandem and in tension is called for. This paper addresses that gap with a focus on the communication of science and the ontological status of emerging technologies. We argue that a focal analysis of the education-persuasion dynamic at work in the emergence of novel blends in this domain not only stands to enrich the theory of conceptual blending but also stands to contribute to better practices in science communication. We test this hypothesis by exploring both the verbal and visual techno-rhetoric of an emerging technology known as “cultured meat”: the nascent laboratory production of edible muscle tissue from cell cultures, motivated in response to entangled ecological crises such as global warming and factory farming.

Known by its blend-savvy detractors as “frankenfood”, cultured meat stands little chance of mass appeal without the construction and propagation of equally powerful novel analogies and moral visions (Ferrari & Lössch 2017, Schwarz-Plaschg 2018). To gauge the status of potential progress in this regard, we use methods of qualitative content analysis (systematic identification of manifest and latent content and their categorization) to code three recent mass-media video presentations for conceptual blends involving two general types of mental spaces: production technologies and edible products, noting in the process, via critical and structural discourse analyses, the various ways in which either persuasive or dissuasive educational strategies are in play and the various ways in which the presumably value-neutral goals of science education function in tandem and in tension with the personal-affective goals of normative persuasion. Muscle cells are framed as “exercise junkies”, for example, wanting “to contract even in a petri dish”: In this blend, cellular biology is integrated with weightlifting, aiding the presenter to explain cultured meat production while simultaneously persuading viewers to grant the naturalness of muscle cell contractions in a petri dish. Following a presentation of our findings, including the identification of three key neologisms or overarching blends, we conclude that an expanded account of the roles played by both somatic marking and human-scale compression in conceptual blending is called for. In the end, high-stakes novel blends must be negotiated intersubjectively if they are to succeed in overcoming attitudes such as fear and revulsion toward represented objects. The imaginative experience of living within the blend is, in such cases, just as much about establishing trust and extending agency as it is about typical normative appeals to desire-based motivations such as the avoidance of sanctions or the need for self-validation (Yanovitzky et al. 2006: 2). And, while still necessary, this involves more than the manageable compression of bewildering complexity.

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METAPHORS OF FORMAL LEARNING, EDUCATION AND KNOWLEDGE AMONG GHANAIAN STUDENTS: THE CASE OF KNUST

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The paper examined the metaphorical structure of the notions of formal learning, education and knowledge in Ghana within the framework of the Conceptual Metaphor Theory (CMT), put forward by Lakoff and Johnson (1980). The aim was to identify any underlying conceptual metaphors in the written expressions of selected students at the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, on these notions. It also sought to examine the types of the conceptual metaphors, to identify any motivational factors underlying the metaphors from the different groups of students, and to explore any cross-cultural similarities and differences between the metaphors identified and those identified in Chinese (Jin & Cortazzi 2008; and Cortazzi & Jin 2011) and in Japanese (Berendt 2008 & Hiraga 2008). One hundred and five participants were purposively sampled to provide descriptions of the notions of formal learning, education and knowledge. The analysis revealed thirty-eight conceptual metaphors of learning, education and knowledge. Twenty-one (21) of these were structural metaphors and seventeen (17) were ontological metaphors. The analysis also revealed that the class levels of the students are motivational factors in their conceptualisations of the notions. The analysis revealed that metaphors that refer to activities and entities which denote the notions of *effort* and *struggle* such as LEARNING IS A STRUGGLE and EDUCATION IS AN ADVENTURE were predominant in the expressions of first year students, while those that suggest “endlessness”, such as EDUCATION IS AN ENDLESS ENTITY or KNOWLEDGE IS AN ENDLESS ENTITY reflected in the expressions of students in the third and final years.

The analysis also revealed a high degree of similarity between the data from Ghana and those from the Japanese and Chinese cultures. The metaphor LEARNING IS A KEY which had been identified in the language of Chinese students (Jin & Cortazzi 2011: 121) was also identified in the Ghanaian context. Again, the metaphor LEARNING IS A JOURNEY, which was identified in the Ghanaian context was also identified in Japanese (Hiraga 2008: 56-60). There were, however, a few cross-culture variations. These were discovered at more detailed aspects of the source and target domains. The notion of “struggle”, for example, occurred as a source. In the Ghanaian context, we identified the metaphors LEARNING IS A STRUGGLE and EDUCATION IS AN ADVENTURE. In the Japanese context, the notion of *struggle* is reflected in the metaphor LEARNING IS WAR (Berendt (2008). Moreover, whereas *education* is conceptualised as a vehicle in Japanese (Hiraga 2008: 60), in the Ghanaian context, it is *learning* that is conceptualised as such. Again, whereas we identified the metaphor EDUCATION IS A SEED in the Ghanaian context, Jin & Cortazzi (2011: 121) identified the metaphor LEARNING IS FARMING in the expressions of Chinese students. Again, whereas EDUCATION IS A PERSONALITY ENHANCER in the Ghanaian context, LEARNING IS POLISHING in the Japanese language (Berendt 2008: 96). Again, whereas in the Japanese data “LEARNING IS A VALUABLE THING” (Berendt 2008: 95), in the Ghanaian context, EDUCATION IS WEALTH.

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The Cultural Models of “Happiness” in Chinese : Metaphor, language and identity

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Key words:

Cognitive Sociolinguistics, Metaphor, Cultural Model, happiness in Chinese, cultural identity

Dominated by the global Anglo-international discourse of happiness, the semantics of “happiness” in local culture has been greatly ignored or misinterpreted (Carsten 2014; Wierzbicka 2014). From a cognitive sociolinguistics approach, this research not only presents a systematic study on the cultural models of happiness in local Chinese culture but also looks into its social-cultural impact: how they are metaphorically constructed, how they are lexicalized and evolved, how do they relate to the core traditional Chinese values and ethos, how they play a role in constructing the cultural identity of nowadays Chinese about who they are, and what social effects these traditional cultural models might bring in the new context of the rapidly developing Chinese society. In doing so, two Chinese characters, **Xingfu** (幸福) from modern Chinese and **Le** (樂) from ancient Chinese are chosen as the counterparts of the English word *Happiness*. A corpus-based analysis is performed based on data from two Chinese corpora, the corpus compiled by the Centre for Chinese Linguistics by PKU (CCL) containing 477 million characters from both ancient Chinese and modern Chinese and the Leiden Weibo Corpus (Esch 2012) containing 101.4 million words from China’s most popular microblogging service, supplemented by the analysis of 167 four-character idioms of happiness from *Contemporary Chinese Dictionary* (2016) and aided by *Xingfu* survey among Chinese subjects. The study evidently shows that the core elements of the local semantics of *xingfu* markedly differ from the Anglo-international discourse of happiness, that cultural metaphors are guiding Chinese conception of happiness such as *happiness is music* embodied in the metonymy-based metaphorical use of **hexie** (和谐, harmony of music) as a feature of **Yue** (樂, music) to understand the abstract subjective experience **Le** (樂, happiness), that family is a core element in Chinese conception of individual’s *xingfu* involving a harmonious family relationship characterized by **Xiao** (孝, filial piety), that the local semantics of *xingfu* prescribes a sociocultural norm of various prototypical events culturally considered as happiness with many of them based on primary metaphors, gender/cultural metaphors or metaphors of collective happiness, and that the entrenched cultural models of *xingfu* constructing the cultural identity of the Chinese are posing challenges towards *xingfu* of both the young and the middle-aged generations in the new social-economical context.

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Constructing attitudinal stance via metaphors: a multi-perspective cognitive approach toward politically contested events

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Keywords: metaphor, political discourse, personification, predicative and empathetic functions, Ukrainian crisis, Lithuanian media

The philosophical viewpoint of anthropocentrism is manifested in the idea of Croft's *Extended Animacy Hierarchy* (2002). One of its implications is that animate entities tend to be perceived as being higher or having a more positive evaluation than inanimate. Personification can be looked at as a cognitive mechanism, performing a number of rhetorical functions in political discourse. From a cognitive perspective, the personification metaphor provides a coherent system of structuring our experience (Lakoff & Johnson 1980/2003, 1999), whereas from a rhetorical perspective, metaphor is viewed as an argumentative tool aimed at communicating attitudes, arousing emotions and persuading the audience (Chilton 2004; Charteris-Black 2014; Hart 2014; Musolff 2016, etc.).

Based on the data from Lithuanian media dealing with the Ukrainian crisis, the paper argues that animation, or personification, of countries makes them stand out as having more power and taking an active stance in political events. It also explores how systematic usage of metaphors contributes to performing predicative, i.e. conveying positive and negative attitudes, and empathetic, i.e. triggering emotions, functions via the animation of the countries.

A corpus of Lithuanian media texts on Ukraine comprising 102 046 words was constructed. The choice of texts was limited to opinion articles and commentaries because they present not only factual information but also offer an attitudinal perspective. The study was carried out within the framework of Critical Metaphor Analysis (CMA) (Charteris-Black 2004). In our case it means that the Ukrainian crisis was investigated from three different perspectives: Ukraine, the European Union and Russia. CMA suggests a three-step metaphor analysis procedure: first, cases of personification of Ukraine, European Union and Russia were identified by employing an adapted MIPVU (a metaphor identification procedure suggested by Steen et al. 2010) (linguistic level); second, the personifications were related to cognitive metaphorical scenarios they follow (cognitive level); finally and most importantly, the metaphors were analysed from a rhetorical perspective, i.e. investigated how they communicated attitudes and emotions towards events in Ukraine (rhetorical level). The findings indicate that the Lithuanian media metaphorically constructs Ukraine, the EU and Russia as HUMAN BEINGS quite frequently by putting emphasis on contrasting scenarios with different entailments. For example, Ukraine is mostly presented positively as a human being who embarked on a journey to the EU and needs support, though some scepticism whether it is capable to change is voiced. The EU is presented as a supporter and Ukraine is seen as a friend, companion and partner. However, personified Russia is viewed as the antagonist, thus acquiring mostly negative evaluation (aggression, irony, etc.). Thus, the paper analyses how personification perform the functions of communicating diverse attitudes and attempting to trigger the reader's emotions and attitudes towards the crisis in Ukraine.

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Metaphorization in Grammatical Gender

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Keywords: Conceptual Metaphor; Grammatical Gender; Categorization Pattern; Highlightedness; Linguistic Relativity

The present paper seeks to argue for the involvement of conceptual metaphor (Lakoff & Johnson 1980) in the formation of grammatical gender. It is proposed that in assigning a gender to the nouns which are inanimate, transference of the characteristic of 'animacy' takes place, i.e. the ascription of gender to inanimate objects is metaphorical. Following the terminology of conceptual metaphor literature, in case of gender ascription to inanimate objects, the source domain then is 'animate objects', and the target domain is 'inanimate object' and the 'animacy' feature is mapped onto the target domain. The form of the higher level metaphor would be INANIMATE OBJECT IS AN ANIMATE OBJECT.

Grammatical gender is defined as a system whereby the class to which a noun is assigned is reflected in the form assumed by other elements (verbs etc.) that are syntactically related to it (Matthews 1997). In the present context, I examine three languages: English, Bangla and Hindi. The first two do not have grammatical gender marking while Hindi is a grammatically gendered language. A couple of examples from Hindi would show this feature:

1. *gʰər* *bən rəha* *hɛ*
 house.NOM.MAS make be.PROG.MAS be.PRS.3.SG
 'The house is in the making.'
2. *gəri* *chəl rahi* *hɛ*
 car.NOM.FEM move be.PROG.FEM be.PRS.3.SG
 'The car is moving.'

The gender ascription can be seen as phonologically marked on the verbs of the sentences (*rəha* vs *rahi*). Sentence (1) would then involve a lower level metaphor like INANIMATE OBJECT IS A MALE and along the same line it would be INANIMATE OBJECT IS A FEMALE for sentence (2). The speakers of languages with grammatical gender make use of the gender metaphor more frequently than those without gender. In this context, it should be noted that languages without grammatical gender (e.g. English, Bangla) also make use of this metaphor. An example from English would show such use:

3. My computer is sick today.

The idea of interpreting grammatical gender is important in explaining grammatical phenomena in natural languages. The usage of metaphorization could be underlying a large number of grammatical phenomena, and grammatical gender is one such which involves metaphorization. A cross-linguistic study of the effects of grammatical gender (Mukherjee, 2018) reveals that Hindi and Bangla speakers differ in their object categorization which is influenced by the presence vs absence of grammatical gender in their languages. Hindi speakers make use of the gender metaphor more than Bangla speakers as a result of their language structure. The proposed idea is that it is the frequency in the use of the metaphor INANIMATE OBJECT IS AN ANIMATE OBJECT that gets entrenched and thus becomes highlighted in the conceptual system and affects cognitive processes like categorization. This substantiates the conceptual nature of the metaphor. This also enables us to compare it to other spatial metaphors used in languages (Boroditsky et al. 2000) which by their frequency of usage affect cognitive processes of the speakers. Similar studies in the domains of other grammatical phenomena could eventually lead us to a unitary conceptual process which can explain the grammatical processes of natural languages.

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Cross-linguistic metaphorical representation of the #MeToo movement: Communicating attitudes

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Keywords: metaphor, Critical Metaphor Analysis (CMA), #MeToo movement, attitudinal perspective, Lithuanian vs. English.

In recent years, the #MeToo movement has spread virally as a hashtag used on social media in an attempt to demonstrate the widespread prevalence of sexual assault and harassment. Critical Metaphor Analysis (CMA), initially developed by Charteris-Black (2004, 2014) and later extended by such scholars as Musolff (2004, 2016), Koller (2006), De Landtsheer (2009), Hart (2010), etc. is one of the approaches that allows investigating social issues of concern. In this case, the #MeToo movement as a social issue is looked at from CMA perspective. CMA is a blend of Cognitive Metaphor Theory and Critical Discourse Analysis which aims at identifying how metaphors are used to describe socially-contested issues and how they reveal speakers' hidden intentions and attitudes (Charteris-Black 2014: 174). Also, CMA is concerned with different functions metaphors may perform. A predicative function, being one of many, is most likely to explain how socially sensitive issues are communicated (Charteris-Black 2014: 204-207; Musolff 2016: 4). In other words, it implies positive or negative attitudes expressed towards certain issues. Thus, the paper aims to study how predicative function of metaphor manifests in the discourse of contemporary social concerns cross-linguistically and cross-culturally. In other words, the paper looks into how different attitudes towards the #MeToo movement are communicated via metaphors in Lithuanian and English media and how they shape prevailing public attitudes.

To achieve the aim of the study, a three-step metaphor analysis procedure (Identified→ Interpreted→ Explained) was employed in order to determine how metaphors reflect and shape attitudes towards the issues raised in the #MeToo movement cross-linguistically and cross-culturally. For this study, two corpora of media texts comprising 113, 765 words (Lithuanian) and 120, 826 words (English) were constructed. The first step – metaphor identification – was performed using Antconc programme. The search through keywords and applying MIPVU allowed establishing metaphorical collocations. In the second step – metaphor interpretation – metaphors were interpreted by relating them to possible metaphors in thought. Both steps provide descriptive statistics. In the final stage – explanation – metaphors were analysed from a rhetorical perspective, which means that it was attempted to look into how the predicative function of metaphor operates in the #MeToo discourse cross-linguistically and cross-culturally. The findings of this evidence-based application grounded in contemporary social concerns demonstrate that in both languages the scenarios of NATURAL PHENOMENON, FORCE AND PERSONIFICATION are at work when attitudes towards the controversial issue are communicated. However, different development of the same metaphorical scenarios was identified and the paper will discuss this in detail.

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Grammaticalization of temporal meanings in Japanese and Spanish With special reference to the antonymy in “EARLINESS” and “LATENESS”

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Key words: grammaticalization, space, time, earliness, lateness

In this paper, we attempt to investigate grammaticalization with regard to the semantic development from spatial concepts to temporal concepts in Japanese and Spanish. We deal with the lexical items in both languages, which exhibit the polysemy of spatial and temporal meanings. In particular, we focus on the fact that antonymy in temporal meanings as the time preceding or EARLINESS and the time following or LATENESS coexists with “*saki*” ‘ahead’, “*mae*” ‘before’, “*ato*” ‘after’, “*ushiro*” ‘back’ in Japanese language, respectively.

Concerning the mechanism to give rise to antonymy involving temporal meanings of EARLINESS and LATENESS, we make use of an object moving in one direction such as a train in order to account for how the spatial concepts can be held responsible for temporal concepts. In fact, the first car located in front of the train passes one point earlier than rest of the cars located in rear parts, which allows us to understand that the spatial concept of front is relevant to EARLINESS and back (rear) is relevant to LATENESS, respectively.

With reference to the opposite case, as one (a conceptualizer) goes along the path, the space left behind can be conceived of as past or EARLINESS in temporal meanings after the movement, whereas the time to reach the point ahead can be future or LATENESS from one’s current location. We exemplify the fact that spatial concepts of front and back are related to both EARLINESS and LATENESS in temporal meanings.

As to coexistence of antonymous polysemy in Japanese, the lexical item of “*saki*” typically referring to the tip of an object exhibits temporal antonymy such as “*saki ni kita*” (came earlier), “*korekara saki ni*” (in the future (later)). The mechanism of polysemy we have explained in the preceding section can be applied to the polysemy of ‘*saki*’. As the tip of a ballpoint pen can easily turn around, the spatial concept is relative to the vantage point of a conceptualizer. Thus, we postulate the relativity in space is the motivation concerning antonymous polysemy of EARLINESS and LATENESS. However, we have not found the lexical item in Spanish with coexistence of antonymous polysemy.

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Old English subject-verb word order: An intertextual comparison

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Keywords: Old English, word order, foregrounding/backgrounding, information structure, discourse-oriented diachronic linguistics

The pragmatically oriented word order of Old English (OE) has much more flexibility than the word order of later periods. Scholarly attention has shifted from a purely syntactic study of OE word order to an assessment of what kinds of function or pragmatic motivation underly various word order patterns in OE (Hopper 1979; Bech 2001; Kemenade & Los 2006, to name a few). The role of verb-second word order has received particular attention (Los 2012; Cichosz 2018, among many others), as this is central to OE syntax, which can best be described as ‘topic-first syntax’ (Los 2012: 41). However, there are also other word order patterns in OE which are no less frequent and need further exploration.

The purpose of this paper is to investigate two types of subject-verb word order patterns in OE: SVX and XSV (verb-medial), as in (1) and (2) respectively. Both SVX and XSV have subject-verb order, which typically serves to provide backgrounding information that is often characterized by the imperfective aspect; these patterns are in contrast to verb-second word order, which has a foregrounding function characterized by the perfective aspect (Hopper 1979; Fleischman 1990).

- (1) **He wæs** ðære burge biscop Mediolana
‘He was the bishop of the city of Mediolana [Milan]’ (comart3,Mart_5_[Kotzor]:Ap5,A.2.520)
- (2) On ðæm dæge **God gereste** fram his weorce
‘On that day God rested from his work’ (comart3,Mart_5_[Kotzor]:Ma24,A.2.450)

The primary goal of this paper is to shed light on the neat division of labour between the SVX and XSV word order patterns, which share the backgrounding function in discourse, and approaches the analysis from a quantitative perspective. The paper will examine the two types of word order in terms of types of subject, the situation types of the verb and the types of clause elements. It will present data derived from selected texts in the *York-Toronto-Helsinki Parsed Corpus of Old English* (Taylor et al. 2003); the data are collected from various texts, including narrative, exhortative and explanatory writings. The paper will show that the usage of SVX and XSV word order varied according to the type of texts. It will also compare the data with the existing studies of the verb-second word order (e.g. Bech 2014; Cichosz 2018). The paper will argue that XSV behaves differently from SVX mainly due to the clause-initial element, which in terms of information structure occupies the most important position in the clause.

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From Manner to Temporal Uses: Historical Changes of the English Subordinator *As*

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Keywords: historical linguistics, polysemy, diachronic semantic change, shift in focus, *as*

The English subordinator *as* is known to be polysemous in Present-Day English (PDE) (e.g. manner, time, and cause). The general semantic continuity between the temporal and causal uses is already pointed out by Traugott and König (1991) through the diachronic semantic study of *since*, but that of the manner and temporal uses is uncertain. This paper, therefore, clarifies their semantic continuity and reveals what factor engendered these different uses.

In the historical perspective, not all of those uses have been available since the Old English (OE) period. The manner use was already available in the OE period whereas the temporal use was not found until Middle English (ME) (cf. *The Oxford English Dictionary*)

This paper, based on my corpus research, shows that there has existed an intermediate case since the OE period, as in (1).

- (1) Hi ða þa bydelas and feala oðre, *eallswa* hi to sceatte hopedon, ferdon
they then those heralds and many other as they to prize hoped went
'Hoping for the prize, those heralds and many others then went [and sought the Christians].'
(cosevensl,LS_34_: OE)

In this case, the *as*-clause expresses the subject participant's inner state or supplementary action accompanying the primary one. This situation has semantic continuity with the manner use in that both focus on the way the overall event unfolds. Also shared, but backgrounded between them is the notion of simultaneity: the accompanying feeling/action or manner is inextricably integrated to the primary action expressed in the matrix clause. The difference is that as opposed to the manner use, the notion of comparison disappears in the case in question: the *as*-clause no longer functions as the standard for comparison, neither does the matrix clause the object for comparison.

The above situation also shares with the temporal use the notion of simultaneity: the two events expressed by the *as*-clause and its matrix clause concur. The difference lies in the degree to which the two concurring events are integrated. For example, the events in (1) are facets of a single higher-order event while those of the typical temporal use are separate, different events. In other words, as the degree decreases to which the two events are integrated into an inseparable, higher-order event and they start to be regarded as separable, the aspect of simultaneity, which is backgrounded in (1), gradually becomes foregrounded.

In summary, a situation such as (1) offers a bridging context between the manner and temporal uses and its existence facilitates the development of the temporal use. This paper provides a new finding about a possible semantic extension observed in polysemous subordinators (e.g. *since* and *while*) as well as the semantic development of the subordinator *as*.

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A pragmatic construction of two constructions: A corpus-based case study on *just because*

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Keywords: *just*, *because*, *just because*, grammaticalization, truncation, discourse marker

In the realm of prescriptive grammar, noun clauses (i.e., the nominal structure; henceforth NS) have three forms of initiatives in the canonical system (Quirk *et al*, 1985): 1) *that*, 2) *wh-*, and 3) *if/whether*. Yet a relatively recent emergence of an NS form of a non-canonical system proposed by Hirose (1991) has been widely and frequently used: [*Just because* the data satisfy our expectations]_{SUBJ} does not mean they are correct. Instead of using *that* to initiate an NS (i.e., [*That* the data satisfy your expectations]_{SUBJ} does not mean they are correct.) or leaving *because* as an adverbial conjunction and using an *it* as the subject of the sentence (i.e., [*Just because* the data satisfy your expectations], *it* doesn't mean they are correct.), the sentence pattern *just because...doesn't mean...*, henceforth JB-X DM-Y (Bender & Kathol, 2001), has gained its NS position despite the role of *because* as an adverbial adjunct (Hirose 1991, and Hilpert 2007). The semantic properties and the constructions of *just* and *because* have been well investigated (For *just*, see Quirk *et al* 1988, Tobin 1995 and Hoye 1997; for *because*, see Jespersen 1949 and Bender *et al* 2001.); however, the construction *just because* (henceforth *JB*) as a whole has yet to be addressed.

The present study, based on the British National Corpus (BNC) and the JB-X DM-Y structure and its syntactic properties as well as its semantic properties, aims to 1) shed light on the probable underlying constituents of how the JB-X structure was nominalized and grammaticalized, and further came into being, and 2) investigate the pragmatics in use — the truncated *JB* structure — to see how *JB* can function in discourse as a discourse marker.

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Constructionalization of *Have it (PP) that* Construction as English Evidential Strategies

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Keywords: *Have*-construction, constructionalization, evidentiality

The present study explores the process of constructionalization of the following two constructions: impersonal, non-participant subject construction “*have it that*-construction” (henceforth, “HITC”) as in (1) and personal, participant subject construction “*have it PP that*-construction” (PP: prepositional phrase; henceforth, “HIPTC”) as in (2). Both constructions have been developed as finite complement constructions, unlike prototypical *have*-construction, and their constructional meanings are related to speech and thought representation. These constructions have been developed as “evidential strategies” (Aikhenvald 2004) in English. Previous studies only analyze HITC, and most of them only conducts synchronic analysis (Brugman 1988, 1996; Ikarashi and Honda 2014; Ureña Gómez-Moreno 2014). The process of historical development of HITC and HIPTC has never been analyzed in previous studies.

- (1) HITC: Rumor has it that he was shot.
(2) HIPTC: I have it on good authority that he was shot.

The findings of the present study are as follows. The historical development of HITC and HIPTC reflects subjectification. HIPTC seems to have been conventionalized relatively early; the process of constructionalization of HIPTC occurred in the seventeenth century and the tokens look quite similar to those in PDE. The constructionalization of HIPTC can be driven by analogy of relevant indirect evidential constructions with personal subjects (e.g. *hear*-, *gather*-, *take it*-construction, etc.).

As for HITC, the construction in PDE conventionalizes hearsay meaning such as information based on rumor and legend (cf. Ureña Gómez-Moreno 2014), but in the early period of the development, tokens of HITC denote information based on more specific, written sources such as religious texts (e.g. *the scripture*, *gospel*) or proverbs. The earlier version of HITC denoting quotation reflects *have*'s prototypical meaning of possession. This collocational expansion in subject NP type is regarded as a typical phenomenon occurred after the process of constructionalization, “host-class expansion” in post-constructionalization constructional change (Traugott and Trousdale 2013).

In these constructions [*have it*] should be analyzed as a chunk (cf. Bybee 2010) forming complement-taking clause (cf. Boye and Harder 2007). While these finite complement constructions have the verb *have* and impersonal *it* (Langacker 2009) in common, they differ in the status of their clausal subject: (canonical) participant and (noncanonical) setting-like subject. In OED the meaning of *have* in HIPTC is described as “to have learned (from some source)” and that of HITC, “To assert, maintain; to phrase it, put it (with reference to the manner)”. The semantic variation of these *have*-constructions can be characterized by profile shift.

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The Current Usage of the Quotative *be like* in British English

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Keywords: spoken British English, the quotative *be like*, gender, grammatical subject, dramatic effect

This study investigates the usage of the quotative *be + like* in current British English. The quotative *be + like* is a colloquial expression that introduces direct quotation of speech and thought (Romaine & Lange, 1991). For example, "I was like, 'Mary, what are you doing?'" (*ibid*, p. 242). It first became a subject of interest in 1980s (cf. Butters, 1982), and was researched through the 2000s. However, these studies mainly focused on American English, and there has been less research conducted over the last ten years. As a result, there is still little known about the expression's present usage differences between Anglophone countries. To elucidate on the current usage of the quotative *be + like* across English variants, this study analyzed how and by whom *be + like* is used in recent British English, specifically in regards to questions concerning the gender of the speaker, the grammatical subject of *be + like*, and the function of this expression. The data were collected from British YouTube clips uploaded from 2016 to 2018. Although most videos are based on the conversations between two or more people, a few are monologues. The topics range widely: documentaries on social problems, interviews to famous figures, young generation's lifestyles or memoirs. In the data, 100 examples of the quotative *be + like* were found in a sample of 54 speakers.

Regarding the gender difference, British people do not associate *be + like* with a particular gender as shown in Buchstaller (2006). The sample comprised of speakers from clips was divided into three cohorts: Female, Male, and Other. Note that in one program, a speaker did not identify as either Male or Female; this speaker was put into the category of Other. Results showed 9 out of 33 Female speakers (27%), 14 out of 20 Male speakers (70%), and one Other speaker used the quotative *be + like* at least once in their utterance. Though large samples will be necessary for statistical analysis, it can be concluded that both female and male speakers use the quotative *be + like*, and in similar ways.

In contrast to the research landscape twenty years ago, current research shows British English now accepts the use of *be + like* with the third person subject. While 44 examples (44%) were used with the first person singular subject, 29 examples (29%) were used with the third person singular. Thus, the present data suggests an increase in prevalence of the usage quotative *be + like* with the third person singular subject since Tagliamonte and Hudson (1999) found that *be + like* was prevalent only in first person usage in British English. Again, although more samples may be needed from the statistical point of view, it seems that the quotative *be + like* has gradually become one of the common options for quoting other's speech and thought over the past two decades.

As a function, *be + like* is used especially for the dramatic representation of how the utterance or thought is expressed visually as well as verbally. It has been considered that the quotative *be + like* is a way of reporting speech and thought vividly (Romaine & Lange, 1991). In addition to the use of *be + like*, gestures, facial expressions, and changes in tone of voice or prosody often accompanied the quotation in the data. This suggests quoted speech introduced by *be + like* goes beyond the mere literal representation of direct speech to a more multi-dimensional reproduction of the nonverbal aspects of spoken communication. Moreover, 21 examples documented hypothetical rather than actual utterances, including nonverbal aspects of what and how the utterance or inner thought would be made in the hypothetical situations. Gestures, facial expressions, and vocal features appeared in these examples as well. Thus, *be + like* represents not only what was said but also how the utterance was or would be said, regardless of whether the utterances were actually made. In this sense, the quotative *be + like* allows listeners to more directly experience the situation in which the utterance is relevant.

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Temporally extended self in children Linguistic and psychological views on the development of future time references

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Keywords: children, Cognitive Grammar, time, Usage-based Approach to Language Acquisition

This presentation explores how Finnish-speaking children between 2½ and 8 years of age develop in using linguistic expressions of time. The focus is on the linguistic and psychological development in children's talk about the future time events. The presentation highlights these aspects from a larger study (Surakka 2019) devoted to discover how children acquire time related speaking and thinking. The data for this study contains 1,144 expressions of time produced by 11 children (at least three children representing each age group) and it was obtained by audio recordings and a diary method in everyday interaction events between children and adults familiar to them. The theoretical emphasis of the study bases on Cognitive grammar (e.g. Langacker 2008), Usage-based approach to language acquisition (Tomasello 2009) and the theory of Temporally extended self (TES, see Moore & Lemmon, ed. 2001).

According to the study (Surakka 2019), children show awareness of how to locate expressions of time in their utterances already at the age of 2½ years. Also, the linguistic choices made into those syntactic locations by children are typical expressions of time that are used also in conventional spoken Finnish. However, the usage-based accuracy of the expressions of time construed by children vary noticeably depending on the conceptual domain they elaborate. The early time frame elaborations used in the data mostly parse the speech time or the immediate past or future. The ones elaborating the domains of PAST or FUTURE TIME FRAME are a few in number and typically inaccurate or unspecific by content – expressions of the future time, for instance, are basically constructed by means of adverbs *kohta* 'soon' or *huomenna* 'tomorrow', both in unlimited proportions. In the other end of the given age range – when children are 7 to 8 years old – the number and the variety of accurately used concepts of future time are high in the data. As the conceptual domains of time are highly diverged already, the eldest children followed-up manifested an ability to coordinate complex temporality in their speech and to refer to events that are, for example, far in future.

The components of the theory of TES offer a psychological base for understanding the results introduced. According to TES, a temporal conception begins to get organized when children start to perceive themselves in time and distinguishing 'now' from the other time frames. The early understanding of 'not now' is constructed by means of the experiences about how people act in the world. The models of using language, having conversations and telling narratives support children in acquiring the ways of referring to the events as objects of memory that combine extrinsic facts and inner experiences. Objects of memory, on their behalf, construct a conceptual background as a resource of children predicting future events. As an example of this, in my data, even seven-year-old children show to understand that preparing for certain annual events conducts the exact patterns that were followed also last year. On the other hand, children of three years of age already use the linguistic means of modality in their utterances with future references, which reflects that they understand the uncertainty regarding the future scenarios. The presentation gives details along with data samples about how the different phases of such psychological development are reflected on the grammatical development of the expressions of future time in the data.

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The Role of Aspect During the Acquisition of Verb Morphology in Russian: From Item-Specificity to Proficient Use

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Keywords: language acquisition, aspect, acquisition of verbal morphology, Russian

Usage-based accounts of language acquisition propose an item-specific stage during which grammatical forms and syntactic constructions appear with a limited number of lexical items (e.g. Lieven et al. 1997; Tomasello 2003). The Aspect Hypothesis (as formulated in Shirai & Andersen 1995) posits that early aspect use is characterized by a strong correlation between aspect and tense. Children preferably use imperfective aspect with present tense and perfective aspect with past tense (e.g. Li & Shirai 2000); these correlations are also present in adults, but to a lesser degree. This was shown to hold for the acquisition of verbal morphology in numerous languages. Here, we analyze the development of the verb system in Russian in preschoolers. In Russian, aspect is a central feature of the verb system; each verb is obligatorily either imperfective or perfective. Perfective verbs typically express nuanced lexical meanings, while imperfectives are lexically less specific. Verbs of both aspects have the same grammatical markers for the other categories (tense, person, number, mode). The goal of this study is to (i) establish phases in the development of verb use and (ii) compare the lexical and grammatical flexibility of verb forms in the two aspects during these phases.

Our **data** stem from a longitudinal corpus of weekly recordings (1h) of four Russian children (recorded for 24-36 months, aged 1;3-1;11 at the start of recordings). The corpus contains 2 million morphologically annotated words from the target children and surrounding speakers.

In **analysis 1**, we establish phases in acquisition by conducting a segmented regression on the growth curves of the verb form increase in each child's inventory. The analysis of the form use in the individual phases reveals that during the earliest phase (phase 1), children use forms item-specifically and the forms correspond to the predictions made in the Aspect Hypothesis. Perfective verbs tend to occur in the past and as imperatives, while imperfectives occur mostly with non-past and infinitive morphology.

In **analysis 2**, we focus on the development during phase 2 by computing the entropy of lexical items and grammatical markers used with verbs of both aspects over time. This allows us to evaluate how quickly children approach the flexibility of use displayed by surrounding adults. For verb forms of both aspects we see a quick increase in entropy towards the level of surrounding adults and a rapid development of form use across the entire paradigm, implying that the children in our sample start using verbs of both aspects with a variety of forms early during phase 2 and rapidly abandon the item specific tendencies of their early production of phase 1.

Results of this study confirm earlier findings of a strong association between aspect and tense in the earliest phase of language acquisition (Stoll & Gries 2009). At the same time, we also show that Russian children display a high degree of flexibility of combinations of stem and morphemes across the entire paradigm early on and are by no means restricted to the use certain forms with a specific aspect. The Aspect Hypothesis holds only for the earliest form use and might not reflect the greater saliency of the combination of *perfective+past* or *imperfective+present*, but instead merely mirror adult input distributions. They quickly converge towards the distributions found in adult input. We discuss whether this can be analysed as the effect of semantic saliency or merely of distributional clues.

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Schemas in first language acquisition: A German traceback study.

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Keywords: first language acquisition, traceback method, German, Construction Grammar, low-level schemas

It has been observed that when children begin to use multi-word expressions they produce utterances they have not previously produced in that way or heard in the input in exactly the same manner. According to a usage-based approach (Tomasello 2003) these more complex structures are, however, limited in their distribution, because their patterns are organized around individual lexical items and phrases. At this stage the grammatical development is not considered global, but can be characterized as insular, in which individual structures change separately from others. The beginning of this creative and productive use of language need not necessarily be attributed to the internal application of abstract meaningless rules. Instead, it is assumed here that in the phase of multi-word utterances lower-level schemas, with lexically fixed elements and variable slot categories that can be filled creatively will be established. Thus, a child first acquires concrete linguistic constructions and then proceeds to summarize them into more abstract structures. The different slot types are seen as the result of a categorization process, which is empirically understandable by using the traceback method (Lieven et al. 2009).

As yet, there are no known traceback studies that focus on German first language acquisition. Therefore the method is applied to German data. The data consist of four high-density developmental corpora. The children were recorded for seven weeks at the age of 2;1. The mothers made one-hour tapes in relatively typical play interactions in their homes five days per week. This resulted in 35 hours recording per child. The recordings were then transcribed in CHAT format (MacWhinney 2000). To demonstrate how multi-word utterances are composed from previously-formed utterances without considering a set of meaningless generative rules the corpora were divided into two parts: a test corpus, which contains the target structures to be traced back and a main corpus, which contains the component units. The repetition and/or combination (lexical or syntactic modification) of these component units should form the target structures. The analysis was carried out automatically by using an algorithm in combination with the German version of CLAN (Koch 2017).

Using the traceback method between 85 and 95 percent of the target utterances could be traced back. These result is very similar to the English studies (Dabrowska/Lieven 2005; Lieven et al. 2009; Vogt/Lieven 2010). In most cases the utterances were based on low-level schemas using a slot category for referents. But in contrast to the English results other slot categories played a bigger role at the same age. Especially a kind of process-slot seems to be more relevant for German at that age. It will be discussed to what extent typological aspects of German in combination with a usage-based approach are able to explain the results of the study.

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Crosslinguistic paths of pragmatic development: *actually* and *en fait* in British and French children

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Key-words: discourse markers; first language acquisition; pragmatics; corpus linguistics; contrastive linguistics

Diachronic studies of the development of discourse markers generally suggest that there is a metaphorical use of the semantic load of a lexeme (M1) which leads to M2 in a unidirectional way, from propositional to textual and expressive uses (Traugott 1982; Sweetser 1990). In the case of *actually*, for instance, the adverbial evolved from a propositional meaning of factuality (“in reality”, “effectively”) to contradiction, topic change and even hedging uses (Defour et al. 2010). This evolutionary tendency has, however, not been observed in first language acquisition of discourse markers: Sprott (1992) points out that *because*, *so*, *and*, *but* and *well* are first used interactionally as part of the exchange and action structures, and only subsequently ideationally to express propositional relations (cf. Kyratzis & Ervin-Tripp 1999).

Crosslinguistic studies of discourse markers have repeatedly illustrated that discourse functions are not distributed equally across languages and registers (see the papers in Aijmer & Simon-Vandenberg 2006). In particular, cognates such as *in fact* and *en fait* only partially mirror each other’s functional spectrum, leading to transfer effects in second language learners (Buysse 2018). The present study takes a crosslinguistic approach to the use of two adversative discourse markers, viz. *actually* and *en fait*, by British and French children. These expressions share the same core meaning and a number of propositional and pragmatic functions (Mortier & Degand 2009). The research questions are: What are the functions of *actually* and *en fait* in child data up to age five? Do expressive (interactional, interpersonal) uses of *actually* and *en fait* occur in the early stages of language development, simultaneously or even before propositional (literal, semantic) ones?

Occurrences of *actually* and *en fait* were extracted from the CHILDES database, particularly the Paris (Morgenstern & Parris 2007) and Lyon (Demuth & Tremblay 2008) corpora for French and the Wells (Wells 1981), Manchester (Theakston et al. 2001) and Thomas (Lieven et al. 2009) corpora for English. We used a coding scheme which distinguishes between two functions (adversative and elaborative) and three domains (propositional, textual, expressive) to explore patterns of usage of these markers and to look for any regularities in the way that they are acquired. We checked for inter-rater reliability, refined our criteria, and carried out quantitative and qualitative analyses of the data. We first compared the rates and functions of the two markers in their first year of acquisition (age 2). We then conducted two longitudinal case studies, focusing on an individual English and French child (Thomas and Madeleine), to trace the development of the functional uses of *actually* and *en fait* from ages 2 to 4.

A total of 28 “en fait” (0.36 per thousand words) and 47 “actually” (0.19 ptw) were extracted from two-year-olds, in addition to the 60 cases (1.76 ptw) in Madeleine and 127 (0.25 ptw) in Thomas across a three-year span. Preliminary results suggest that the pragmatic functions of *actually* are used by children as young as two years old, but the same is not true of *en fait*, which is almost exclusively propositional in the early years. By contrast, *en fait* seems to acquire a textual or “narrative” function to a much larger proportion than *actually*. Qualitative analyses of co-occurrence patterns and scaffolding effects partially explain these differences. Confounding factors such as activity-type and parental input (Van Veen et al., 2009) are discussed.

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The prosodic features of the interactional particle *yo* in student-professor conversation

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Keywords: prosody, Japanese interactional particles, social constructivist, discourse theory

Japanese interactional particles (IPs) like *ne* and *yo* play a significant role in establishing interpersonal relationships between interlocutors, and are also indispensable in social contexts (Cook 1992; Morita 2005; Maynard 1993; McGloin 1990; Saigo 2011). Although they have been hardly studied except for Eda (2000), Hiramoto-Sanders (2002) and Shimotani (2006), the prosodic features of IPs crucially signal speakers' affective attitudes. The present case study investigates the discourse functions and prosodic features of *yo* in student-professor conversation from the perspective of social constructivist discourse theory (Ochs 1993, 1996). It especially examines how speakers' use of *yo* constructs social identity which covers "a range of social personae that include social status roles, positions, relationships, and institutional and other relevant community identities one may attempt to claim or assign in the course of social life" (Ochs 1993: 288). Six one-to-one informal conversations (i.e., a total of 2.5 hours) between a university student and a professor were examined. The intonation of *yo* was analyzed using *Praat* software. Following Shimotani (2006), unmarked *yo* was identified in information-oriented discourse (i.e., whether or not mutual understanding between interlocutors exists), and marked *yo* was identified in affect-oriented discourse (i.e., whether or not a differing viewpoint between interlocutors exists).

The findings demonstrate that the use of *yo* by professors and students exhibits different patterns. While students tended to use *yo* with a falling pitch [+fall] in performing pre-story telling with most cases unmarked information-oriented discourse (Excerpt 1), the professor often used *yo* with a rising pitch [-fall] providing an opinion or advice with most cases unmarked information-oriented discourse. Excerpt (2) shows that the professor's utterance indexes her professional stance as an advisor. The marked *yo* in more affect-oriented discourse, on the other hand, was very rather rare and appeared, for instance, in one of the professor's utterances as shown in Excerpt (3). Here, the professor urged her student through the use of *yo* who had a 'dream' of working at an airport to have travel experience so that she could understand what it really means to work there. Overall, the findings from this study underscore the importance of mutual understanding between interlocutors which motivates the use of *yo* [+fall], and indicate that the prosodic feature in IPs is an essential linguistic resource used to construct speakers' social personae such as story-teller or advisor.

Table 1: Frequency of *yo* [+fall] and [-fall] in student-professor conversation

	+Fall	-Fall	Quotation	Not clear	total
Students	36 (60%)	5 (8.3%)	15 (25%)	4 (6.7%)	60 (100%)
Professors	22 (34%)	35 (56%)	4 (4%)	2 (2%)	63 (100%)

(1) *teate-ga aru-n-desu-yo* [+fall] / '(those who go to school using a bullet train) get some allowance.'

(2) *bakuzen-to-shita ukemi-de shigoto kimecha-ikenai-yo* [-fall] / 'you mustn't passively decide your carrier with such a vague motivation.'

(3) *icchae-ba ii-n-da-yo* [+fall] / 'you should really go.'

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A Study of Reported Speech by Preschool Japanese Children: Implications for Theory of Mind

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Keywords: theory of mind; reported speech; metarepresentational ability; syntax; narrative; Japanese

In this paper, we mainly analyze reported speech in Japanese narratives, which are told by 10 four-year-old Japanese children while reading a picture book (Berman & Slobin, 1994). In discussing the results, we also refer to the corresponding English-speaking children's narratives (Hickmann, 1993). As a conceptual framework, we draw on semiotic anthropology (Lucy, 1993) and theory of mind (ToM) (Astington, 2006; Naito, 2004; Perner et al., 2005). Our point is argue against a "linguistic determinist" position in which the development of metarepresentational abilities presupposes mastery of the syntax of complementation (e.g. "He thinks the chocolate is in the cupboard") (de Villiers, 2005). Against the determinism, we argue that metarepresentational abilities should not be simply measured by the degree of morpho-syntactic complexity.

Our empirical focus is on a "re-enacting mode" in Japanese discourse in which there is no explicit marker for reported speech (RS) as an "un-framed" type of quotation (Hickmann, 1993). In the literature on Anglo-American children, when they can structurally separate reported content from reporting context with framing devices such as verbs of saying, they are considered to be more "developed". Thus, the re-enacting mode, which shows no boundary between reporting context and reported content, is seen as "less developed".

Although our results are consistent with Hickmann's (1993), who found that there is a clear preference for the re-enacting mode and the descriptive mode in the four-year-old English-speaking children's narratives, we argue against the assumption that "the more formally explicit, the more developed". Specifically, we found that in Japanese, 34 tokens are instances of the re-enacting mode in 251 clauses. Considering that Japanese adults also use framing devices in RS less frequently than English-speaking adults, we argue that Japanese children's metarepresentational abilities are not "underdeveloped" just because of the lack of morpho-syntactic marking. Instead, the marking of Japanese reported speech is more contextually-oriented and less formally-explicit. Assuming that development in metarepresentational abilities is often implicit at the preschool stage and generally comparable across cultures (Naito, 2004), we support a "non-determinist" position in ToM (Perner et al., 2005). In conceptual terms, RS should be theorized as part of a multi-modal system with both functions of "intra-individual" representation and "inter-individual" communication (Astington, 2006).

In sum, we suggest that metarepresentational abilities should be measured from a semiotic perspective by taking the notion of "context" ecologically, which requires different kinds of data across languages and cultures.

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Tipo (Like)... do you get me?

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Keywords: mental spaces, intersubjectivity, space builder, grammaticalization, vagueness.

Tipo is a Spanish noun referring to a representative example of an object, or to the class to which it belongs:

(1) yo no sé si este *tipo* de entrevistas sirven para que uno se ponga a dar cátedra. (CSCM)

The meaning of class in *tipo* and other semantically related expressions allows them to express vagueness. From this vague meaning, different pragmatic and adverbial functions have been identified for *tipo* in Argentinian Spanish (Mihatsch ms.), and for *kind of* (Margerie 2010), *sort of* (Mihatsch 2007), and *like* in English (Andersen 2001). These functions include approximation (2), attenuation (3), and quotation (4):

(2) ... porque querían creo que en la universidad querían hacer *tipo* charlas (ColaBA)

(3) yo también, pero me fui porque *tipo* me harta *tipo* la pibita ella ahí (ColaBA)

(4) conversando en el colegio oh eh ah *tipo* hola hola quién sos (ColaBA)

This analysis calls to question what has been labeled the quotative marker function. While it is true that we find examples like (5):

(5) hoy apenas salió el teaser se lo mostré a una amiga... y cuando acabó estaba *tipo*: “me encantó, está rebuena la canción si los viste? Ah está increíble” (Twitter 2018)

We come across examples like (6) as well:

(6) soy la única que cancela lugares? *tipo* voy y me acuerdo de cosas malas q pasaron y no quiero volver más (Twitter 2018)

The analysis in this study demonstrates that the quotative marker function observed in *tipo* is just an instance of a broader function, namely, the ability to create mental spaces (Fauconnier 1994; Dancygier 2012). It also supports the hypothesis that *tipo* is a marker of shared viewpoint, allowing both interlocutors to share the same experience (Sweetser 2012), and that its core function is intersubjective by nature, aiding our ability to take someone else’s perspective (Verhagen 2005).

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Socio-cognitive approaches to analyzing spontaneous interactions

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Keywords: Construction Grammar, multimodality, conversational language, intersubjective alignment

The language of spontaneous dialogue is an indispensable resource for elucidating the enormously complex patterns of language production and reception. While it has largely remained outside the scope of cognitive linguistics (CL), the focus of attention in this research domain has recently started shifting, taking more and more to "the road beyond the quantitative turn" (Janda, 2013). Current studies have begun emphasizing the intersubjective nature of language and there is a growing interest among CL practitioners in the social aspects of language (cf. also Geeraerts' 2016 label "socio-semiotic commitment" particularly appealing in the context of one of CL's theoretical frameworks: Construction Grammar (CxG; Fried & Östman, 2004)). The importance of integrating socio-pragmatic aspects – in addition to issues of semantic content – in an adequate analysis of linguistic structure has been one of the CxG's basic tenets from the start (Fillmore, 1974/1981), although constructionally grounded analyses of spontaneously produced conversational language remain relatively scarce. The goal of this session is to draw focused attention to the complexities of conversational language and the theoretical and methodological challenges inherent to the nature of interactional communication, with special attention to the potential of CxG as a specific framework.

The composition of the session reflects several strands of research that characterize most recent developments relevant to the sessions' goals: (i) growing interest in multimodal accounts of conversational language, aimed at integrating sound, gesture, eye gaze, etc. into capturing the speakers' communicative competence; (ii) general shift from a purely qualitative approach toward using quantitative evidence, embracing the methods of experimental psychology and neuroscience while maintaining the advantages of observational research (e.g. Holler et al., 2016; de Ruiter & Albert 2017); (iii) sustained attention to developing CxG as a tool for articulating the rich mental representations of conversational language, including the idea of multimodal CxG (Zima & Bergs, 2017). We thus aim at bringing together researchers who will contribute various complementary perspectives to an integrative study of conversational language, connected through the overarching *socio-cognitive* approach and tapping into the analytic resources provided by CxG. Among the issues addressed is the challenge of the scarcity of naturalistic data, inter-individual variation, intersubjective alignment of interlocutors, neurophysiological correlates of certain aspects of intersubjectivity, and the degree of constructional generalization supported by the descriptive analysis of individual instances, observed in a number of different languages.

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Sound patterns as interpretive clues in spontaneous interaction

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Keywords: conversational language, grammar of interaction, grammatical patterns, phonetic patterns, Construction Grammar

This paper addresses a universally rather neglected aspect of the “grammar of interaction” (e.g. Evans & Watanabe 2016): the correlation between grammatical patterns and their phonetic behavior. The study of spontaneously produced spoken interaction has been attracting increasingly focused and systematic attention within cognitive linguistics but not much is as yet understood about the role of phonetics. In this exploratory corpus-based probe, we try to identify specific recurring prosodic and segmental features associated with a particular syntactic structure and its distinct interpretations. Based on the findings, we then sketch a way of capturing this dimension of conversational language in an integrative representation, using the tools of Construction Grammar.

The corpus-based exploration involves a specific structure commonly occurring in conversational Czech: a type of clausal insubordination (Evans 2007) introduced by the marker JESTLI, used for expressing speakers’ subjective stance with differences in polarity (1a vs. 1b), in contrast to the syntactic use of JESTLI in embedded Y/N questions (2), which is its original function. Previous research (Fried 2009) has identified a spectrum of discourse functions associated with the use of JESTLI in different contexts. Using those findings as a starting point and the phonetically annotated corpus of conversational Czech (Ortofon) as our empirical base, we work with the hypothesis that there will be a predictable relationship between the functional variants in (1) and (a cluster of) specific sound parameters (intonation, temporal properties, degree of speech reduction; Zíková & Machač 2014). We also hypothesize that particular prosodic and/or segmental features might signal a relative distance between the original interrogative function in (2) and the target interpretations in (1) in terms of their semantics and pragmatic force.

Based on the generalizations that can be drawn from the attested correlations, we propose a multilayered constructional representation that helps capture the relationship between the syntactic, semantic, pragmatic, and phonetic patterning in the form of clusters of recurring features – i.e. constructions.

The paper thus takes a first step toward a more complete analysis of the JESTLI patterns in Czech, and suggests a path toward a better understanding of the phonetic nature of subordination in general. On the theoretical level, the paper’s contribution is two-fold: (i) It offers a basis for developing the conceptual and analytic tools for detecting and identifying sound patterns that might serve as systematic interpretive clues associated with specific syntactic structures. (ii) In this respect, the work also has implications for developing Construction Grammar toward becoming a truly multimodal conceptual and analytic tool that can capture the speakers’ knowledge which underlies natural conversational behavior.

- (1) a. *vypadala pěkně blbě, [...] jak dyž je vopařená, **jesí se vopalovala, nebo co**,*
‘she looked pretty dreadful, [...] as if she got scalded, **I-guess maybe** she’d been sunbathing, or something’
b. *ale **jesí jim vláda uvolní peníze***
‘but **I-suspect** the government **may not** provide money for it [=extending a subway line]’
- (2) *ale už tam není, no, já nevím, **jesí jí někdo zničil***
‘but it’s gone, y’know, I don’t know **if** somebody destroyed it’

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Artificial Conversational Agents to Investigate the Neural Bases of Conversation with fMRI

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Keywords: Neuroscience, Conversation, Artificial agent, Robot

We present an approach to investigate the neural bases of conversations with fMRI using an artificial agent as control condition. Whole brain activity is recorded with functional Magnetic Resonance Imaging (fMRI) while participants discuss either with a human confederate or a conversational robot. This gives access to local brain responses, including in deep brain structures invisible to other neuroimaging techniques, during the conversation. The present data comprises the recording of 22 participants forming the corpus, and includes, in addition to fMRI data, speech recorded from the participant and interlocutor (human or robot), videos of the interlocutor and eye movements of the participant.

Investigating the neural bases of natural conversations is a timely, but complex, endeavour. It addresses one of the main challenge of social neuroscience today, namely second person neuroscience, in which real(istic) interactions between two people are under scrutiny (Schilbach et al., 2013). Three independent potential methodological difficulties need to be addressed. First, how to get usable data given the constraints of neuroimaging techniques; second, what experimental paradigm is required, in particular what can conversations be compared to (“contrasted with”, in neuroimaging jargon); finally, what analysis tools can allow us to make sense of such complex, multidimensional, recordings?

Here we briefly present an experimental approach, described in more details elsewhere (Rauchbauer et al., 2019), designed to solve the three issues. First, functional magnetic resonance imaging (fMRI) is used to record whole brain activity, as it is less prone to artefacts related to muscle movements than electric or magnetic surface recordings. Participants lying supine in the scanner have their head firmly held by foam at the temple level to allow mandible movements necessary for movement. Real-time noise cancelling microphone and in-ear audio stimulation allows conversation despite the loud scanner noise. Second, an experimental paradigm includes a cover-story to hide the real purpose of the experiment, as well as an artificial agent, the conversational robot Furhat (Al Moubayed et al., 2012), used as a control condition. The assumption is that only interactions with a fellow human will lead to the adoption of an intentional stance and hence to natural interactions (Dennett, 1989), while conversation will take place with both agents. Finally, machine learning methods will be developed to investigate causal relationships between the behaviours recorded and time courses of activity in brain areas.

We recorded a total of 25 conversations, 22 being used in the analysis. Preliminary results (Rauchbauer et al., 2019) confirm significant differences between brain activity associated with the nature of the conversational agent, human or robot, possibly associated with social engagement. Current analysis makes use of transcribed conversation to relate brain activity with articulation irrespective of the agent being interacted with, human or robot. Further work will explore the verbal and non verbal aspects of the conversation in relation to brain activity.

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A parametric multimodal approach to subordination in conversation

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Keywords: subordination; syntax; prosody; gesture; spontaneous speech

As a synthesis of several multimodal studies on different types of syntactic subordinate constructions, we propose a multiparameter framework for modelling subordination in spontaneous conversation. Subordinate constructions have long been described in linguistics as dependent elements elaborating upon some primary features (Huddleston & Pullum, 2002). However, Cognitive Grammar has challenged this view in showing that syntactic embedding often only reflects the starting point speakers choose to convey their message (Langacker, 2008), and represents only one parameter in a composite message, in which information is not presented in isolation but in a contiguity relationship (Ruth-Hirrel & Wilcox, 2018). While the independent pragmatic actions of subordinate constructions have been highlighted (Ford, 1997; Ehmer, 2016), few studies have focused on the articulation of prosody and gesture with the different communicative modalities in their production process.

Subordinate constructions are practices in interaction that offer an interpretative reconstruction of discourse. The different syntactic types of subordinate constructions refer to different interpretative frames in the speaker's experience. The selection of these interpretative frames is expressed by the different amount of prosodic and gestural boundary cues produced in co-occurrence with each syntactic type of subordinate construction.

Restrictive relative clauses mark an identity of interpretative frames between the main and subordinate clauses, with no break in prosody and gesture between the main clause and the subordinate construction.

Adverbial clauses enlarge the interpretative frame of the main clause, with a higher break index in prosody than for relative clauses, but a lower one for gesture.

Appositive relative clauses open a new interpretative frame compared to that of the main clause, which is marked by a higher prosodic and gestural break index. Two continuations are possible after the production of the appositive clause: either the interpretative frame of the main clause is resumed, or the interpretative frame of the subordinate clause is continued.

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Visualizing discourse functions: The case of list constructions in Israeli Hebrew

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This paper aims to examine how speakers of Hebrew make simultaneous use of multiple interactional modalities to produce a stretch of talk as a *list*. *List construction* will be defined as a pattern consisting of a set of any linguistic elements (listees) that are syntactically and functionally parallel, while the structure as a whole has a single communicative intention (Inbar, in press). As noted by Selting (2007: 488), prosody is one of the constitutive means used by speakers to systematically construct lists and by recipients to identify them. For example, the listees in open lists usually have similar intonation contours, whereas in exhaustive lists, the last listee is marked differently than its predecessors. However, list constructions show a high degree of functional variation, and various functions of lists in discourse may be marked by various gestural patterns that make these functions visible.

The data for this study were primarily obtained from a 20-hour corpus of television interviews in Hebrew, including over 50 speakers. The constructions were recognized based on the syntactical and functional parallelisms of the listees. Then we indicated the recurrent gestural patterns associated with these constructions, and examined the functional distribution of these patterns.

It turned out that the revealed gestural patterns were systematically associated with particular functions of lists in discourse, such as detailing specific categories, emphasizing specific category members, and building ad hoc categories while focusing on the members of this category or on the category itself. Thus, the analysis of gestures coordinated with list constructions in spoken Israeli Hebrew reveals another strategy that makes list constructions visible, and allows the interlocutor to identify their discursive functions explicitly.

Moreover, the analysis of the visual track of these gestures is closely connected to the role of the construction in discourse. For example, cyclic gesture, used when the speaker is referring to an ad hoc category and focusing on that category rather than on category members, may be seen as a metaphorical delineation of the category boundaries. By listing on his fingers and as-if-counting them, the speaker focuses on category members in order to present a complete detailing of the specific category or to mark significant or unexpected category members.

In conclusion, the present study shows that syntactic, prosodic, and gestural features interact with each other during the production and interpretation of multimodal utterances. Different gestural forms may distinguish between pragmatic aspects of list constructions that are not expressed in Hebrew grammatically; thus, the study of gestures coordinated with lists can contribute to a systematic analysis of these constructions at different levels.

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Interplay of information structure, pitch contour, and gesture in spontaneous interactions

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Gestural and prosodic units align in a specific way: the beginning of the gesture stroke usually slightly, but systematically precedes the onset of the corresponding prosodic unit, reflecting the co-expressive power of co-speech gestures. These effects have been observed with prototypical iconic gestures (Ferré, 2010) as well as with beat gestures marking the focal part of the sentence (Ebert, Evert, & Wilmes, 2011).

In our contribution, we aim to broaden the perspective from the study of foci to more information structure categories so as to detect a range of conventionalized patterns in the alignment of gestures and intonation units that are involved in marking information structure. Adopting the perspective of Multimodal Construction Grammar (Zima & Bergs, 2017), we have analysed recordings of Czech spontaneous interactions (16 speakers, 80 minutes in total) extracted from a developing multimodal corpus of Czech. We have coded almost 5000 utterances for gesture-prosody-language alignment, annotating (i) the timing and the form of gesture strokes, (ii) intonation contours, detected both acoustically and auditorily (Ward, 2018), and (iii) 4 information structure values (topic, contrastive topic, focus, contrastive focus as well as other potentially relevant linguistic properties of accompanied structures (e.g. lexical frequency, parts of speech, specific structural properties, e.g. topicalization constructions, presence of focus markers, and discourse activation). In the quantitative analysis, we used a mixed-effects regression model with the information structure categories, the above mentioned linguistic properties and gesture forms as fixed effects, and individual speakers as random effects.

The gesture-speech temporal coordination varies significantly, with a slight inclination of focus gestures to precede the speech in contrast to no such effect on topic. More specifically, we show that in both contrastive topics and foci, the gestural marking is more frequent and/or more clearly articulated. When topicalization is reflected in the linguistic structure (i.e. in specific types of conventionalized topic constructions, e.g. topic infinitives or right-dislocations in Czech), co-speech gestures are attested more often than with more standard topics. Gestural movement is significantly slower when accompanying topics. The “topical” gestures are also more open and flatter when compared with co-speech gestures accompanying focus which tend to be more “abrupt”, accentuated and/or bounded. This gestural patterning aligns with specific intonational contours in the 4 information structure categories under investigation, pointing to a complex co-expressive system of information structure. In this view, we bring new evidence for gesture being a means of embodied communicative dynamism (Firbas, 1992) which signals the informativeness of the accompanied expression by the amount of energy involved in the performance of the gesture.

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Constraining Constructions: Resonance and Structure in Interaction

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Keywords: Dialogic Syntax, Resonance, Construction Grammar, Conversational Interaction

The goal of the study is to contribute to the discussion on the complex relationship between context and constructions in interaction. Specifically, it explores the constraints which impact the usage and manipulation of syntactic structures. While previous studies focus on the role of communicative context in defining the meanings and usage patterns of various syntactic constructions, the current study investigates the reciprocity between linguistic context and constructional form. The term 'linguistic context' is used as it emerges from the theoretical framework of Dialogic Syntax (Du Bois, 2014). The central mechanism in this framework, *Resonance*, is a process by which grammatical resources are re-used in interaction to serve intersubjective functions, e.g. of alignment and disalignment (Du Bois, 2007). Linguistic context is thus created on the fly, and its manipulation is subject to the ongoing process of activating affinities between utterances.

The current analysis shows how resonance as a functional mechanism not only creates affinities between utterances but how it is constrained by the properties of the constructions used. The study explores the following hypothesis: Resonance of constructions is motivated by the intersubjective features of the interaction, particularly alignment between interlocutors, and by the specific syntactic features of the construction being resonated. For example, different levels of agreement or disagreement in adult-adult conversations in Hebrew (Dori-Hacohen, 2017) will involve different patterns of resonance: with higher levels of alignment in discourse (as in the case of agreement between interlocutors), the resonated construction will be less creatively reproduced, with fewer deviations from the local linguistic context. At the same time, the more complex the construction, the more opportunity will it provide for flexible and creative resonance. Such creativity, in turn, allows for the emergence of new, ad-hoc constructions (see Brône & Zima, 2014).

The study thus aims to show that constraints in conversation are not only the function of discursive processes but also of structures being used, and to elaborate on the way by which we may integrate notions of interactionally-based social cognition into accounts of grammar. As such it follows in the footsteps of the complementary notions that discourse drives syntax (e.g., Thompson & Couper-Kuhlen, 2005), while at the same time syntax shapes discourse (e.g., Du Bois & Giora, 2014).

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Using virtual reality to study language evolution

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Keywords: language evolution, linguistic adaptation, linguistic niche, virtual reality

Why are there different languages and how arbitrary is their variation? It has been suggested that at least some of the cross-linguistic variation can be explained by language-external variables such as the social, physical or technological environment in which languages are embedded (Bentz et al. 2018; Lupyan & Dale, 2016). However, many proposed links (see, e.g., Lupyan & Dale, 2016) are purely correlational. In order to make causal claims and avoid ‘spurious correlations’ such findings have to be integrated with other methodologies such as experiments that can be used to test hypothesized causal links (Roberts, 2018). One approach is to use artificial languages in laboratory experiments to uncover cognitive biases or general mechanisms shaping the structure of languages as they are learned, used, and transmitted (see Tamariz, 2017 for a review). Some have shown that languages are indeed sensitive to the referential contexts or communicative situation in which they evolve, e.g., with regards to what meaning dimensions become specified or which category systems evolve (Winters et al. 2015; Nölle et al. 2018). One problem is that such experiments are usually extremely simplified and abstract ‘communication games’ or artificial learning situations (e.g., isolated pictures with labels presented on a screen), which therefore may lack ‘ecological validity’. Here we present a new approach that tries to overcome this issue by providing participants with more naturalistic tasks in Virtual Reality (VR) that allow for higher ecological validity while still providing tight experimental control. We showcase a series of studies that demonstrate how VR can be used to test how languages adapt to the physical world: One case study addresses whether topographic features in the local environment (such as a slope or a dense forest) can motivate the use of competing spatial reference frames to describe spatial locations of objects. Linguistic fieldwork has suggested such a relationship, but a causal link is yet to be demonstrated (Majid et al., 2004; Palmer et al., 2017). VR tasks allows us a way to study spatial language use in large-scale environments under tightly controlled conditions that structurally resemble more abstract communication games, while at the same time providing more naturalistic viewpoints and communicative goals. This allows us to test whether changing environmental variables in otherwise identical tasks can motivate the use of different frames of reference (e.g., viewpoint-based vs. environment-based) as preferred by different speech communities. Beyond the obvious domain of space, we also discuss further research questions and manipulations afforded by VR. One exciting new avenue for language evolution research is the use of realistic environments that behave slightly differently from the real world to test the robustness of linguistic universals under different conditions. This could help us assess whether cognitive biases that seem to affect the distribution of universals are simply innate or rather result from learning inside and in interaction with a specific environment. In sum, VR experiments can overcome limits of traditional paradigms and give us a deeper perspective on how language relates to human cognition and situated behaviour.

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The effects of prosodic cues on word segmentation in an artificial language learning task

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Keywords: prosody, word segmentation, artificial language learning, pauses, final lengthening

Prosodic cues such as pauses, durational adjustments and changes in pitch play a crucial role for the perception and cognitive processing of words in an otherwise continuous stream of speech. They increase the salience of certain sound elements ('figures') in relation to a less salient ground, and can serve as syntactic boundary cues. Facilitating word segmentation and word learning, they play an important role in language acquisition and language processing (Fletcher 2010). Still, cognitive linguistic research has so far focussed on prosody only rarely, and particularly the relative importance of the different boundary cues has not been explored in much detail.

We pitted various prosodic boundary cues against each other to measure their effects on word segmentation. We predicted pauses to be more salient cues for listeners than durational cues or pitch cues, as the pauses' high decrease in signal amplitude makes them the most prominent breaks in the speech stream (Tyler & Cutler 2009).

We present results of an artificial language learning experiment, inspired by Saffran et al. (1996), in which 200 German native speakers were exposed to a continuous speech stream consisting of sequences of artificial trisyllabic words. There were different transitional probabilities between word internal syllables and syllables at word boundaries, and these already provided some statistical cues for segmenting the stream into words (control condition). To test the effects of various prosodic cues, we enhanced the transitional probability cues with prosodic cues on the final syllable of each artificial word. This yielded five different test conditions, in which the final syllables were either a) followed by a pause, b) lengthened, c) shortened, d) changed to a lower pitch, or e) changed to a higher pitch. In a subsequent lexical decision task, the participants classified stimuli as either words or non-words of the artificial language, and we compared the effects of the different cues on their performance.

We found that participants could distinguish words from non-words with statistical cues only, though their performance remained moderate. Having the final syllables additionally followed by a pause, lengthened or lowered in pitch increased the participants' performance, whereas a higher pitch on the final syllables did not have any effect. Interestingly, shortening the final syllables had a negative influence on the correct segmentation of words, which implies that statistical frequency cues can be overridden by conflicting prosodic cues.

In contrast to our predictions, durational lengthening and pitch lowering served as boundary cues equally well as pauses. This might be related to the fact that pauses can be quite rare in normal speech events, and only occur at major syntactic boundaries. This is especially true of fast speech (Fletcher 2010). Other cues, such as final lengthening or pitch lowering, might compensate for the lack of pauses and serve as boundary signals instead. As these cues therefore occur more frequently and more consistently than pauses in everyday speech, people might attend to them at least as much as to pauses, despite their lower acoustic salience (e.g. Bybee 2007).

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A Cognitive-Interactional Approach to the Evolution of Linguistic Im/politeness

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Keywords: Cognitive Pragmatics, Language Evolution, Linguistic Im/politeness, Interaction, Interdisciplinary Integration

In recent years there has been growing interest in the pragmatic dimension of language evolution (Scott-Phillips 2015; Tomasello 2008). This ‘pragmatic turn’ in evolutionary linguistics can also be seen in the increased interest in the evolution of im/politeness as a social practice, an area that has heretofore largely been neglected. Previous research has focused on the evolution of linguistic im/politeness from the perspectives of ethology (Waciewicz, Żywiczyński, & McCrohon 2014; Żywiczyński 2012), formal semantics (Vogel 2014), and sociocultural development (Bax 2011). More recently, we have proposed that it is a fruitful research endeavour to look at this question from a cognitive-interactional perspective (Pleyer & Pleyer 2016).

In this paper we want to extend this cognitive-interactional approach by investigating the evolution of linguistic im/politeness from the perspective of Cognitive Pragmatics and Cognitive Linguistics and integrate this approach with other relevant disciplines. Cognitive pragmatics can be described as the study of the cognitive aspects of the construal of meaning- in-context, focussing on the general cognitive-pragmatic principles, abilities and processes from the perspective of Cognitive Linguistics (Schmid 2012). It is closely related to a more general movement in Cognitive Linguistics to focus more strongly on interactional conceptualization in discourse (e.g. Zima & Brône 2015; Fischer 2017; Hart 2015; Croft 2009). This movement therefore parallels the growing interest in the pragmatic dimension in evolutionary linguistics (Pleyer & Winters 2014).

The overall goal of the research programme proposed here is it to explore the evolutionary and cognitive foundations of linguistic im/politeness as well as its evolutionary and social-interactional functions. For this, it is crucial to give both a phylogenetic as well as an ontogenetic account of these foundations and functions. Therefore, in our paper we will present and investigate the phylogenetic and ontogenetic foundations of linguistic im/politeness. Specifically, we will look at the following topics:

- a) the existence of a cooperative framework within a Community of Practice (Eckert & McConnell-Ginet 1992; Tomasello 2019), which is a necessary pre-condition for the emergence of linguistic conventions, including linguistic impoliteness,
- b) the emergence of conventionalization (Schmid 2016) and normativity (Tomasello 2014) on the biological, cultural, and ontogenetic timescales of the complex adaptive system of language (Steels 2011; Kirby 2012),
- c) the interactional, dynamic emergence of structure and conventions in discourse (Pleyer 2017; Galantucci 2005; Tamariz 2017; Zima & Brône 2015), and
- d) the cognitive, interactional, and evolutionary functions of linguistic impoliteness (Culpeper 2011, Waciewicz, Żywiczyński & McCrohon 2014)

For all four of these topics there is a wealth of research from disciplines such as linguistic im/politeness studies (e.g. Culpeper, Haugh & Kádár 2017; Culpeper 2011) Cognitive and Usage-Based Linguistics (e.g. Traugott & Trousdale 2013, Fischer 2017), Cognitive Pragmatics (e.g. Schmid 2012), interactional linguistics (e.g. Zima & Brône 2015), language acquisition research (Matthews & Krajewski 2015), evolutionary anthropology (e.g. Tomasello 2008; 2014; 2019), experimental semiotics (e.g. Galantucci, Garrod & Roberts 2012), and evolutionary linguistics (e.g. Tamariz 2017). All these different disciplines have important contributions to make to a cognitive-interactional approach to the evolution of linguistic im/politeness. But so far they have not been integrated in order to elucidate such an approach. The present paper is meant as a first step towards such an integration.

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The cognitive basis of desubjectivizing constructions: The use of the periphrases *haber/tener que + infinitive* in Spanish

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Keywords: cognition, desubjectivization, periphrasis, salience, sociolinguistics, variation

The confluence of cognitive linguistics and sociolinguistics has become evident in recent times because the two approaches share many basic commonalities in the study of variation. From a cognitive viewpoint, linguistic variation is built on general principles of human cognition and also on the interaction of participants with the physical environment. Meaning in morphological and syntactic variants is a multi-layered phenomenon encompassing cognitive properties that give rise to pragmatic-discursive values which otherwise exhibit social and situational distribution among participants. Thus, morphological and syntactic variants can be considered meaningful and socially conditioned choices.

The purpose of this paper is to investigate the relationship between the patterning of linguistic choices or variants and the meaningful use of such variants in particular contexts by different kind of speakers. We depart from the assumption that morphosyntactic variants are choices constructed in a meaningful way that reveal perceptions of real-world events, projected stylistically into the domain of discourse and interaction.

The variants that will be analysed in the present investigation are the impersonal Spanish periphrases *haber que + infinitive* ('it should be/it must be + infinitive') and *tener que + infinitive* ('have to + infinitive'). By means of cognitive salience, each variant conveys a gradual desubjectivizing or impersonal meaning. Grammatical elements that are known or predictable under the attention focus of speakers or participants are considered as *salient* (Croft & Cruse 2004: 46-50; Langacker 2009:112). Due to the possibility of inferring a human agent, the periphrasis *tener que + infinitive* is more salient than that of *haber que + infinitive*. Since *haber* is an impersonal verb in Spanish, it is mandatorily conjugated in third person (*hay que, habrá que, habría que...*). Thus, the referent of this construction is less salient. For that reasons, the periphrasis *haber que + infinitive* will convey a more desubjectivizing meaning than *tener que + infinitive*. These different degrees of salience will create different desubjectivizing or impersonal meanings that will serve to accomplish different communicative goals in interaction.

To analyse these variants, the present research will use the *Corpus Interaccional del Español* (310,759 words), which comprises a wide range of communicative genres and communicative situations. The analysis will be both qualitative and quantitative and will be accomplished by measuring the weights of the occurrences of each variant and the crosstabulations between them by using *Rbrul* package (Johnson 2009).

Results will show that speakers use each periphrasis as a desubjectivizing choice for the accomplishment of their communicative purposes, and that such uses exhibit an unequal sociolinguistic distribution across different kinds of interactions. The periphrasis *haber que + infinitive* promotes a desubjectivizing and deontic style. It tends to appear in written texts in which the absence of a specific or addressed audience makes it possible to perform the deontic meaning without being impolite, or rather, to pursue other communicative functions like giving advice or recommendations. *Tener que + infinitive* is used as a desubjectivizing resource mostly when used in third-person and in combination with clitic *se* (*tiene que hacerlo; se tiene que hacer*).

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Usage-based approach to computer-mediated Estonian-English-Japanese communication

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Key words: cognitive contact linguistics, usage-based approach, multilingual communication, code-copying, Estonian-English-Japanese

This paper investigates Estonian-English-Japanese multilingual communication within the framework of usage-based approach to contact-induced language change (Backus 2015). Applying a usage-based approach enables the analysis of morphosyntax and lexicon under the same terminological framework, as morphosyntax and lexicon are not separated (Verschik forthcoming). This can be the case with Japanese insertions that affect Estonian morphosyntax. Code-copying and code-alternation cases are analyzed, utilizing Johanson's code-copying framework (2002), as it is compatible with usage-based approach and treats all contact phenomena as various types of copying.

The combination of these languages is rare, with very few users (Estonians who speak English and Japanese). The data consists of both synchronous Facebook messages (private chat, group chat and public posts), as well as asynchronous forum and blog posts, with about 10,000 tokens in the corpus. As the corpus is small and it is necessary to identify contact-induced impact, qualitative analysis is applied for observing changes, their entrenchment and conventionalization. I concentrate on Japanese-Estonian and Japanese-English copying in cases where elements of all three languages are present. In some cases it is impossible to establish the basic language as they are intertwined and alternation is frequent.

The paper analyzes what kind of items and combinations thereof are likely to be copied, which can be if they are semantically specific, have strong expressive connotation or are relevant for organisation of discourse (pragmatic particles). Japanese has a complex system of register markers, and when Estonian-speakers have mastered them, they tend to copy the markers into Estonian and English. This may occur because their perception has changed and they feel a necessity to mark politeness in a Japanese way (*i.e.* pragmatic gap) (Verschik 2010). In addition, mediated copying is common, where English copies in Japanese are copied back into English or Estonian, with a slightly different, often more specific meaning. A bottom-up approach allows to identify emergence of new copies, their entrenchment and conventionalization in the language use of the micro-community, in hopes of a cross-fertilization between the fields of cognitive linguistics and contact linguistics.

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Self-Perception, Hegemony, and Postcolonial Background: English outside its Natural Environment

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Keywords: English Hegemony, self-perception, Expanding Circle, adstratal relationships

Due to historical, economic, and cultural factors, English has found itself capable of expanding well beyond its territory and, in the process, has acquired a certain hegemonic quality that, in some speech communities, has placed it on a pedestal above the native language. Kachru (1985) identifies three concentric circles in which English exists; however, this paper is only concerned with the Expanding Circle where it is spoken as a foreign language. It attempts to observe the differences in the manner in which English is perceived within the so-called Expanding Circle based on the Postcolonial history of the community under observation. It employs an experiment based on Bem's self-perception theory (1972), which hypothesizes that people base their attitude upon observing their own behavior. The experiment involves university students between the ages of 18-30 from Austria and Egypt who listen to three-minute audio files of their own native language, English spoken in accordance with the norm-providing model, English spoken with an accent consistent with their native language, and their native language spoken with significant English borrowing. The topic of the audio file, a short description of the speaker's impression of Vienna and Cairo respectively, depending on the speech community being tested, was selected as an unbiased, impersonal topic that will not act as an additional variable in how the participants judge the audio file. The participants are required to judge the speakers in terms of intelligence, confidence, and charisma. Afterwards, a short interview is conducted with the participants in their native language, followed by another in English. During the interviews, the participants are required to judge their own performance based on the same aspects upon which they judged the speakers in the audio files. The results of the experiment are expected to provide an overview of how, if at all, the new generation of English-speakers in the two communities may view English as superior to their own native language, especially in a context where it acts as an adstratum, based on the postcolonial history of the speech community or the lack thereof.

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Healthcare challenges in memes. A comparative analysis of American, British and Polish humor

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Keywords: humor, healthcare system, cognitive frame, conceptual integration, discourse

Healthcare systems around the world are currently struggling with rising healthcare costs and a growing demand on healthcare delivery. The purpose of the present paper is to analyze the common perceptions of healthcare challenges in the US, Great Britain and Poland, as depicted in Internet memes. For this purpose, a corpus of 300 Internet memes (100 from each country) was collected and analyzed. The memes were identified with the help of Google graphic browser, using a list of pre-defined search terms in English and Polish.

The results of the analysis indicate that healthcare accessibility is the main recurrent theme in memes from all three countries. However, there are clear differences in the way healthcare issues are framed in American, British and Polish humorous memes. The differences in selection of cognitive frames cannot be explained by the differences between the actual healthcare systems alone; they are also linked to the distinctive conceptualizations of the purpose and societal goals of healthcare systems. American jokes concerning healthcare are strongly associated with opposing partisan political discourses: Democrats vs. Republicans, while Polish jokes referring to the same subject matter cannot easily be linked to any political option.

Some of the frames used in analyzed memes can only be found in American humor, e.g. the frame of communism, which appears in the humor associated with the Republicans' point of view. Other are typical for Polish jokes, such as the meal frame, often invoked through photographs of inadequate hospital meals. British humor uses the frame of American healthcare system as a point of reference and warning, whereas American humor refers to Canadian healthcare system to criticize the American one. In spite of those differences, the analysis shows interesting similarities in conceptual integration networks across all three sub-corpora. For instance, the frame of medical treatment is often integrated with the frame of Photoshop editing or imprisonment.

The analysis is based on the theory of cognitive frames (Fillmore 1985), which humor researchers often take recourse to (see Ritchie 2005), as well as conceptual integration framework (Fauconnier, Turner 2002), also used to investigate humor (see Coulson 2005; Libura 2017). The perspective recently proposed by Attardo (Attardo 2017) is also taken into account.

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Using structural priming to test links between constructions: Caused-motion sentences prime resultatives

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Keywords: Construction Grammar; structural priming; representation; caused-motion; resultative

Cognitive theories of grammar (e.g. Croft, 2001; Goldberg, 1995; Langacker, 1987) view speakers' linguistic knowledge as a hierarchically structured network of form-meaning pairings, or constructions. Different kinds of links have been suggested to relate constructions in this network with one another, but few empirical attempts have been made to test the psychological reality of those relations. Extending Branigan and Pickering's (2017) recent arguments for using structural priming to investigate linguistic representations, this paper reports on a priming study which tests similarities and differences between constructions to derive insights about their underlying relationships.

Many constraint-based theories assume that the linguistic network is organised by one central linking mechanism: 'inheritance', the taxonomic relation between superordinate and subordinate constructions. Goldberg (1995) suggests a further sub-classification of inheritance links into four types: instance, subpart, polysemy and metaphorical extension links. For example, she argues that the caused-motion construction in (1) and the resultative construction in (2) are related via a metaphorical extension link.

- (1) Bill rolled the ball down the hill.
- (2) Herman hammered the metal flat.

Goldberg's account, however, relies mainly on theoretical arguments and lacks empirical corroboration. Psycholinguistic evidence is needed to address the following questions: (a) Are caused-motion and resultative sentences instances of distinct but related constructions?; (b) Which psycholinguistic correlates can be used to identify distinct types of links between constructions?

I present the results of an online experiment testing structural priming effects between caused-motion and resultative sentences (see (1) and (2) above). The study used a novel experimental design combining self-paced reading with speeded acceptability judgments. 159 native speakers of English were presented with 24 prime-target pairs: prime sentences were either resultative, caused-motion or unrelated constructions; targets were always marginally acceptable resultative sentences. A linear mixed effects model with random effects for items and subjects revealed that participants read resultative sentences on average 18.8 ms faster after having been primed with caused-motion sentences than after reading unrelated constructions ($\beta = -0.02$, $SE = 0.006$, $t(3411) = -3.24$, $p = .001$). This suggests that resultative and caused-motion are different but related constructions (question (a) above). Surprisingly, however, no priming effect was found between resultative primes and resultative targets, pointing to limitations of the experimental design.

Based on these mixed results, I discuss some of the challenges for creating structural priming experiments of this sort, for example regarding priming modality (production vs. comprehension), choice of priming method and 'lexical boost' (i.e. verb repetition) between prime and target. Moreover, I argue that further structural priming experiments will reveal whether differences in the size of priming effects can be reliably used to distinguish between types of constructional links (question (b) above). Once these challenges are addressed, structural priming promises to provide a powerful tool for advancing our models of the structure of the linguistic network.

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Empirical approaches to competing future constructions: Converging evidence from corpus and experimental studies

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Keywords: Future constructions, alternations, corpus linguistics, experimental semantics

Investigating speakers' choices between competing constructions has proven highly insightful in assessing the semantics of constructions, but also in approaching the interplay between different factors that determine speakers' choice between constructions (see e.g. Goldberg 2006). In this talk, I focus on the variation between two different ways to express future events in German, namely the *werden* + Infinitive-construction and the futurate present (see e.g. Hilpert 2008, Hacke 2009). Sentences like (1) and (2) can arguably be used interchangeably in German.

- (1) *Ich gehe morgen ins Kino.* (lit. 'I go to the cinema tomorrow')
 (2) *Ich werde morgen ins Kino gehen.* ('I will go to the cinema tomorrow')

However, the two variants can be argued to exhibit subtle differences in meaning. Firstly, given that *werden* + Inf. conveys epistemic stance, the variants might differ in the degree of certainty with which the speaker expects the event to occur. Secondly, given the explicit encoding of the future meaning in (2), the second variant might convey a greater (subjective) temporal distance. The present study focuses exclusively on the latter aspect, i.e. the temporal interpretation of the variants. To investigate this aspect, a corpus study is combined with an experimental approach.

For the corpus study, future-related sentences were extracted from the DWDS Core Corpus of the 21st century (DWDS21), following Hilpert's (2008) approach of using temporal adverbials as an indicator for future-relatedness. The sample was cleaned manually and coded for a number of variables: the use of *werden* + Infinitive vs. futurate present, the sentence type (main vs. subordinate clause), voice, and temporal distance (operationalized in a very simplistic way, using a binary distinction near/distant future). According to a quantitative analysis using conditional inference trees and random forests, all these factors emerge as significant predictors for the choice between the two constructions. This supports the hypothesis that *werden* + Infinitive is used to encode a larger temporal distance.

In order to assess whether sentences framed using the *werden* + Infinitive-construction are also *interpreted* differently compared to sentences framed in the futurate present, an online study was conducted using *jsPsych* (de Leeuw 2015). Participants were asked to judge how far in the future a specific event will take place using a continuous slider. They did so for 12 different stimuli sentences, which varied (i) between *werden* + Inf. and the futurate present and (ii) between near-future and distant-future events, encoded using four different temporal adverbials. The data were analyzed using linear mixed-effects modelling, with the distance estimate as response variable, the temporal adverbial and the grammatical framing as predictor variables, and the subject as well as the lemma of the full verb as random effects. The results, however, show that the grammatical framing does not significantly affect participants' estimates of the temporal distance of the events to which the stimuli sentences refer. Instead, only the temporal adverbial has a significant affect on the distance estimate. However, the experimental approach should be extended to stimuli that do not contain a temporal adverbial in order to test whether or not the two constructions entail differences in interpretation in the absence of overt markers of temporal distance.

Even though some questions remain open, the two studies outlined here can help characterize the semantics of both constructions in more detail and give clues to syntactic, pragmatic, and extra-linguistic factors that determine their variation.

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The status of alternations: a lexical-constructional interface

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Keywords: alternations, argument structure constructions, distributional semantics, lower-level generalisations

This paper discusses the status of alternations with argument structure constructions (ASCs). The central question is: how much information is shared by the two members of an alternation and to what extent the alternation is part of speakers' linguistic knowledge? In lexicalist approaches, the semantics of the verb are said to predict their use in alternating argument structures (Levin 1993); constructionist approaches, in contrast, often downplay the status of alternations and foreground surface generalisations (Goldberg 2002). Recent work in construction grammar (Cappelle 2006, Perek 2015) has suggested that members of an alternation are 'allostructions' that can be subsumed under a more schematic 'constructeme'.

This paper evaluates these hypotheses for the causative alternation in English, based on a large set of data drawn from COCA, comprising 29 verbs from 5 semantic domains. This yielded 11,554 extractions: 4,481 non-causative and 7,073 causative constructions.

While the meaning of ASCs is often directly related to the verbs that occur with these constructions (cf. Goldberg 1995; Stefanowitsch & Gries 2003 *inter alia*), we show that for the causative alternation one should also pay attention to the Theme, the entity undergoing the event, which occurs in subject position in the (intransitive) non-causative and in object position in the (transitive) causative construction, as shown in (1).

1. a. The *building* burned.
- b. The arsonist burned the *building*.

Regularly, however, one of the two constructions is impossible with certain verb-theme combinations, as in (2).

2. a. *His *promise* broke. / The *day* broke.
- b. Thomas broke his *promise*. / *The *sun* broke the day.

The Theme thus plays a crucial role in a verb's alternation potential. The role of the Theme is evaluated in two ways. First, we measure the degree to which the Themes overlap between the two constructions (Lemmens, *forthc.*). Secondly, we use vector-space models and distributional semantics to measure the semantic proximity of Themes across alternations (Romain 2017). Our analysis shows that alternations are verb-sense sensitive and that lower-level generalisations are crucial to our understanding of the mechanisms at play in alternations with ASCs. In other words, alternations do not hold across the different uses of a verb nor can one generalize on the basis of the surface form only without taking the Theme into account. Our analysis of the Themes reveals that it is the generalisation of the Theme's properties that is the key to understanding the (verb-sense dependent) causative alternation.

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Ordered and unordered constructions: The role and representation of word order in Construction Grammar

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Keywords: Construction Grammar, word order, information structure, grammatical relations, notation

Word order plays a central role in expressing grammatical relations, information structure, or other meaningful features of expressions. Yet, scarcely little has been written about word order in the context of Construction Grammar (henceforth CxG) up to date. To the extent that a tradition exists, word order has been discussed in terms of ordering constructions “which determine the linear order of sentence constituents that is not necessarily tied either to constituent structure or to valence requirements” (Fried & Östman 2004).

The paper points out the need to make the distinction, at a general level and in the CxG notation, between ordered and non-ordered constructions: constructions which consist of component parts which may be in different orders depending on other constructions which they unify with, on the one hand, and constructions which consist of component parts in a fixed and pre-defined order, on the other.

An example of an ordered construction is the English transitive sentence construction: it requires that the main constituents—the subject, the verb, and the object—be in a fixed order. An example of a non-ordered construction is the Finnish transitive sentence construction: it allows, at least in principle, all possible permutations of the main constituents, though under different information structure restrictions.

On a closer analysis, the division turns out not to be clear-cut, however. Both in principle and in practice, constructions may underspecify the order of their components to any degree. Word order is like any other potential quality of a conventional construction: it may or may not be a defining feature of the construction, and it may be specified fully, partially, or not at all. Representing partially ordered constitutes a challenge for the notation, however.

The paper compares two possible solutions. One is based on features in Attribute Value Matrixes, notably the features Adjacency, Precedence, and position. With these features, constituent order can be represented in sufficient flexibility and accuracy, at least in most cases, but the representation may be somewhat difficult to perceive or comprehend. The other solution is based on graphical representation, e.g. with shades of black and gray and/or solid vs. dotted lines used for representing fixed vs. free positioning of constituents. This representation is much easier to perceive but may not be flexible enough for all purposes.

Overall, word order has a number of functions in the CxG view of the language system. Therefore, the chosen representation should not limit the possible functions of word order variations in too narrow a fashion. This is naturally allowed for by the inherent flexibility of the CxG framework: whether word order restrictions are represented as features in AVMs or as properties of constituents in a pictorial way, they can, in principle, be freely associated with any other features. This is in line with the general CxG tradition of not imposing a priori restriction on what is possible to be expressed within the framework.

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Constructionists are not at all easy to please

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Keywords: adjectives, construction grammar, family of constructions, generative grammar, valency

The discussion of the difference between *John is easy to please* and *John is eager to please* was one of the key issues of generative grammar (Chomsky 1964, Chomsky 1981, Rezac 2006), but it has hardly received any attention in constructionist frameworks so far. If we want to demonstrate the superiority of the constructionist approach to language, we can obviously point to areas which have been neglected by other models of language and which can be handled well in the constructionist framework – the fact that certain syntactic patterns carry meaning (and thus qualify as constructions, Goldberg 2006) and the “deperipheralization” of partly schematic constructions such as the *the X-er the Y-er* construction (Fillmore, Kay & O’Connor 1988) or the two-of-us construction (Herbst 2015) are cases in point. At the same time, however, it is necessary to address issues which are central to other theories. This is the reason why this paper lays a focus on adjectival infinitive constructions and investigates to what extent they lend themselves to a constructionist treatment.

On the basis of a colostruational analysis (Stefanowitsch & Gries 2003) of the syntactic pattern SUBJ_{personal} BE Adj *to*-infinitive clause and the data contained in the *Valency Dictionary of English* (2004) it will be argued that a number of constructions can be distinguished, for example:

- the *X-is-difficult-to-answer* cx (expressing an evaluation of the difficulty of performing an ACTION on an AFFECTED),
- the *they-are-willing-to-pay* cx (expressing a person’s attitude towards a GOAL),
- the *X-was-brave-to-say-Y* cx (a construction that is factive and expresses an evaluation of a person in the light of something they have done),
- the *X-was-surprised to hear* cx (evaluating a person’s emotions as caused by some external stimulus).

All in all, six different constructions will be identified and characterized in terms of their meaning and their collo-profiles, i.e. a frequency-driven indication of the items occurring in each construction. It will be argued that although there is some overlap between the constructions identified (which could be taken as an argument for subsuming some of them under a family of constructions), such a constructionist approach offers a more adequate account of adjectival complementation in English.

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Frame-based constructional approach to argument structure satisfaction via unselected adjuncts

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Keywords: Construction Grammar, Frame Semantics, FrameNet, adjunct, argument structure

This paper presents cases in English and Japanese of unselected adjuncts satisfying argument structure, arguing for an approach that combines construction grammar and frame semantics. Traditional approaches to argument structure (AS) combine lexical or constructional specification with general principles on the role realization (Fillmore 1968, Goldberg 2005, Grimshaw 1990). We argue for another mechanism: unselected adjuncts may provide semantic content sufficient to satisfy AS requirements. The account continues the effort of Goldberg & Ackerman (2001) of recognizing disparate phenomena (focus, relevance, and presupposition) that contribute to argument structure well-formedness. We couch our account in frame semantics, in particular recognizing core and non-core roles. (Fillmore 1982, Matsumoto 1997, Fillmore & Baker 2009).

In case 1, extraposed temporal clauses satisfy a core role. FrameNet's Stimulus_focus frame (embarrassing, funny) allows an extraposed STIMULUS (1), but equivalent information can be realized as a (non-core) temporal modifier that mentions the emotion-causing event (2).

In case 2, we see the in-that-X construction, which provides specification/elaboration on a predicate (3). Consider the Similarity and Uniqueness frames: they have a core PARAMETER role, which if not overt is interpreted as indefinite (4). Including in-that satisfies this requirement (5). In-that-X contributes the same meaning in (3) and (5), while filling a core semantic requirement in (5).

In case 3, Japanese adjunct *node* ('because') clauses are used with communication frames such as Telling and Warning. Examples in (6, 7) show the *node* clause conveying the reason for the speech act as well as its content, i.e., the core role MESSAGE, which is syntactically absent.

These patterns add a new category to the growing list of ways to create well-formed clauses. The range of lexical and syntactic patterns motivates combining language-specific constructions with general frame-semantic principles to understand how core AS requirements are satisfied. This supports viewing AS as integrating inferential processes against a rich background of lexical meaning.

- (1) It was embarrassing [that he came into my room / for him to have come into my room].
- (2) It was embarrassing [when he came into my room].
- (3) The tree is tall [in that most other examples of its species are extremely short].
- (4) Their proposals are similar/unique (in some indefinite/unspecified way).
- (5) This proposal is similar/unique [in that it requires an unprecedented amount of money].
- (6) *X kyoozyu gosonpu Y ni okaremasite wa #-gatu #-niti ni goseikyo saremasita node tutusinde osirase itasimasu.* [Lit. 'Because Prof. X's father Y passed away on [date], (we) inform/tell (you).']
We respectfully inform you that Profesor xxx's father yyy passed away on [month/date].
- (7) *X-eki made tomarimasen node go-tyuui kudasai*
station till stop-POL-NEG **because** be.careful POL [Lit. 'Because this train will not stop until X-station, be careful.'] Be warned that this train will not stop until it stops at X-station.

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Poster session on the Aug. 8th

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T05	Ch. Yang	A Cognitive Study of Nominal Predicate Constructions in Mandarin	cognitive grammar
T06	Y. Yang & Y.-N. Wang	Evidential Perception Verbs and (Inter)subjectivity in English and Chinese	cognitive grammar
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T09	S. Namboodiripad	A gradient approach to flexible constituent order	cognitive grammar
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T20	R. Kim	Effects of L1 Typology to Performance of L2 Statistical Preemption: Korean EFL learners reject 'The lifeguard swam the boy to the shore' more strongly than Chinese EFL Learners	second language
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T26	Y. Pan	Multimodal Metaphors and Metonymies in Dynamic Multimodal Discourse: A Case Study of China's National Image Promotion Documentary	multimodality
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T28	B. Anible & L. Ferrara	Depicting new referents in Norwegian Sign Language	sign language
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T30	R. Polo-Sherk	Basics of a Theory of the Expression of Thought in Language	semantics
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T33	M. Liu & Zh. Wang	A Relevance-Theoretic Approach to Mistranslation	translation
T34	L. Crible & V. Demberg	Production and perception of underspecified connectives: the effect of genre	pragmatics
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T38	N. Arimitsu	In-out orientation for expressing the self and others in Japanese: a case of “uchi” vs. “soto”	pragmatics
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T43	B. Birdsell, N. Tatsuta & H. Nakamura	Curiosity is [image]: A crosslinguistic analysis of metaphor production and interpretation using a multimodal task	metaphor
T44	Hs.-L. Hsu, H.-L. Lai & J.-Sh. Liu	ECONOMY metaphors in political discourse	metaphor
T45	P. Amarinthnukrowh & Y. Sawanakunanon	"The way we corrupt": an experimental approach to metaphorical framing	metaphor
T46	A. Sopina, E. Sigette, F. Krykhtine, X. Yuan & A. Volosiuk	Metaphor Interpretation: a Quest for Cross-cultural Variation	metaphor
T47	Y. Choi, E. Kim & Y. Jeong	How do Mirror Images in Editorial Cartoons Reflect the SELF Metaphor?	metaphor
T48	Y. Jin	A Synchronic Comparative Analysis of Emotion Metaphors of 悲 (bei) /SADNESS in Chinese and German memorial texts	metaphor

A Cognitive Semantic Analysis of Exteriority in Mandarin

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Keywords:

The work represented here investigates the concept of Exteriority in modern Chinese. The concept of Exteriority in Chinese is denoted by two terms: chu (出) and wai (外), which are assumed to be dynamic and static respectively. In Chinese, the senses of chu are flexible and complicated. Cognitive linguistic theories tell us that meanings of polysemous words can be characterized by metaphor, metonymy, and different kinds of image schemas. (Lakoff, 1987; Johnson, 1987; Sweetser, 1990) Under this view, the senses of polysemous words are not idiosyncratic and arbitrary but structured systematically. Metaphor, metonymy and image schemas are traditionally known as means by which a central sense of the polysemy can be extended.

In modern Chinese, the word class of chu is always unspecified. The received opinion of the word class of chu is that it is a directional verb. (Huang Borong, 2017; Liao Xudong, 2017) This kind of verbs are added to lexical verbs as complementary components, which can be represented as the pattern "verb + directional verb". However, the semantic connotations of directional verbs are so flexible that we can not simply classify them into one category.

The directional verb is invariably a sought-after research topic in the literature. Other directional verbs such as "shang"(up) and "xia"(down) have been intensively studied while researches on chu, particularly on "v+chu" pattern, are far from enough. Nearly most of them put emphasis on the grammaticalization of 'chu' in modern Chinese. (Hu Xiaohu, 2012; Shen Min, 2014; Guo Shanshan, 2014; Gao Fengliang, 2018; Kuang Pengfei, 2018) Few of them aim at analyzing the semantic extension of chu, let alone drawing the lexical network of it.

We start out with identifying the basic meaning of chu and its extended meanings, such as arrival, leaving, moving out, etc. Working with hundreds of instances of chu-phrases collected from an online corpus (ccl.pku.edu.cn), we divided them into two patterns: One structure is "v+chu" and the other is "chu+n". In sum, this paper tries to make sense of the links of its meanings and draw the semantic network of chu.

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Similative Plurality and Its Related Functions: The Case of Japanese *X toka*

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Keywords: multifunctionality, semantics, pragmatics, discourse, typology

This study presents cognitive-semantic analyses of *X toka*, one of the similative plural constructions in Japanese. The SPL is a type of plural construction meaning ‘X and similar things’ (Daniel 2005). In this construction, heterogeneous entities are grouped on the basis of their similarity, and the referents are ranked according to their saliency, with only the focal referent(s) X being denominated.

Some functions of *X toka* in the literature include: (i) exemplification [Example 1], (ii) hedging to attenuate the speaker’s commitment to information [2], (iii) hedging to attenuate the force of speech act [3], (iv) and highlighting [4] (cf. Taylor 2010). Previous studies have also indicated that the exemplification function is reminiscent of other functions of the construction (Satake 1997; Amano 2001; Barotto 2018) and that these functions are interrelated (Sunakawa 1999; Kajitani & Lee 2011; Horasawa & Okumura 2015).

The current study analyzes these previously illustrated functions using a cognitive approach and shows that they are facets of the exemplification function construed in different ways. The analyses also show that different functions of *X toka* form a radial functional continuum, stemming from more objective exemplification to more (inter)subjective functions. Moreover, the study examines other less frequently discussed functions of *X toka*, such as topic-marking (Nakamata 2007) [5] and self-mockery (Suzuki 2001) [6] and shows how they can also be explained in terms of the proposed model.

This study contributes to the current knowledge of the functions of *X toka* and other SPLs in Japanese (e.g., *nado*). It also has implications for the studies of the SPLs in different languages, such as general extenders and echo-reduplications. Finally, it expands our understanding of the configuration of similative plurality and other functions in conceptual space.

Examples: (The underlined terms indicate X.)

- [1] keeki toka no amai mono ga suki da. ‘I like sweets such as cakes, etc. (other sweets).’
 [2] nyokki toka iu no wo tsukutta. ‘I made something called gnocchi (or something like that).’
 [3] esu-enu-esu toka de shiriatte... ‘I met her through Social Networking Service...’
 [4] saabee toka yatterarenai. ‘I cannot do be doing (such a thing as) a survey.’
 [5] nee are toka doo natta? ‘Hey, what happened to that thing? (lit. That thing, what happened to it?)’
 [6] “isshoni ikanai?” toka itte. “Won’t you go with me?” (such a thing) I say (just kidding).’

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Highlightedness in Conceptual System

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Keywords: Highlightedness; Cognitive Abilities; Linguistic Relativity; Conceptual System; Categorization

This paper proposes the notion of *Highlightedness* which is based upon the frequency of structures used in a language. Highlightedness is the phenomenon resulting from the entrenchment of particular language structures in our conceptual system, affecting the conceptual representation and making it available for non-linguistic cognitive abilities to be able to use it. Highlightedness can be defined as the availability of a particular linguistic structure and its associations to other cognitive abilities for use. For the purpose of the current paper, the notion of highlightedness is substantiated drawing from the issues of linguistic relativity. The two main empirical examples provided are of Frame of Reference and Grammatical Gender. Studies by Boroditsky et al. (2000), Bassetti (2007), Forbes et al. (2008) etc. establish that the presence or absence of Grammatical Gender affects our cognitive abilities. Mukherjee (2018) shows that speakers of Hindi (with Grammatical Gender) categorize inanimate objects adhering to their language structure, whereas Bangla (no Grammatical Gender) speakers assign gender more randomly. This finding calls for the involvement of frequency of usage of grammatical gender. The same is applicable for the studies in the domain of Frame of References. Pederson et al. (1998) and Levinson et al. (2002) conducted a series of surveys on a large number of languages and found that if a language uses one frame of reference more frequently than the other, then, its speakers employ the more frequent frame of reference in other problem solving tasks. In both the cases, it is the more frequent linguistic structure which is made available to the other cognitive abilities through highlightedness. The paper attempts to discuss highlightedness from a relativistic point of view to show how highlightedness evidently manifests in language.

Now, it is not the case that highlightedness manifests only in these domains. It is not just a linguistic phenomenon but a conceptual one. The bifurcation between lexical elements and grammatical elements can also be considered under the purview of a conceptual domain where highlightedness comes into play. As Talmy (2000) suggests, the bifurcation of lexical and grammatical categories is a continuum of concepts encoded linguistically, yet language exhibits two distinct classes of linguistic units, namely the closed class grammatical elements and open class lexical elements. It is to be noted that the concepts which are encoded in closed class words and open class words cannot be strictly considered as lexical concepts or grammatical concepts. Then what is the difference between the lexical concepts and grammatical concepts. It is proposed here that highlightedness operates within the categorization of concepts to be encoded into open class elements in language. It is also discussed how highlightedness, as a conceptual phenomenon, operates in other linguistic phenomena like metaphorical expressions, polysemy, grammaticalization, etc.

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A Cognitive Study of Nominal Predicate Constructions in Mandarin

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Keywords: nominal predicate construction; Mandarin; cognitive grammar; schematicity

The nominal predicate construction(NPC), which has long been recognized as one of the sentence patterns in Mandarin, is characterized by two adjoining nominal phrases, N1 and N2, with one as the subject and the other the predicate, like in the following example: *mingtian*(tomorrow) *xingqitian*(Sunday)(It's Sunday tomorrow). As this example indicates, *mingtian*(N1) is a nominal phrase designating a thing and *xingqitian*(N2) is another nominal phrase designating another thing related to N1 where N2 is presumed to have some tinge of adjectives or even verbs. Definitely there exists a relation of predication between the two nominal phrases. However, this is not evidential enough to show that the combination in question is a sentence. It differs from an appositive construction where N1 and N2 work together as an independent component of a sentence, such as in *mingtian xingqitian de shihou women zai qu ba*(Let's go tomorrow Sunday), where the appositive construction *mingtian xingqitian* functions as an adverb of time; It isn't an elliptical sentence for *mingtian shi xingqitian*, in which the linking verb *shi* is supposed to be omitted owing to some contextual factors. Based on Langacker's cognitive grammar, this paper discovers that N2 cannot be rendered as an adjective or verb (which will blend the borderlines between different word classes) but belongs to the same schema with N1. In this schematicity, N1 occupies the core and N2 denotes one of its peripheral elements such that N2 functions as one of the possible properties of N1. The formation of this construction is initiated by the fact that N1 and N2 are activated or profiled(in the Langackerian term) simultaneously in a particular scenario such as in a short brief statement of a fact. For example, one can introduce himself to another in an interview by using a nominal predicate construction like *wo, jiaoshou*¹. The comparison with the appositive construction and the *N1 shi N2* construction reveals that the nominal predicate construction is not a sentence in the traditional sense and it, together with the single utterance construction, appositive construction, *shi*-construction, *you*-construction, existentials and other force dynamic constructions, constitutes a continuum of the Mandarin syntax. The reason that N2 can bear aspectual or tense forms, e.g. *wo*(I) *ye*(also) *jiaoshou*(professor) *guo*(tense:past)(I was also a professor), is that the thing represented by nominal phrases can also exert changes in a longer time span, just as the process instigated by verbs.

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¹ There is always a pause between N1 and N2 in NPC in spoken Mandarin. Pragmatically, this gives an emphasis mood to make sure about the present fact. Cognitively, this shows that N2 is a secondary feature among all the features of the schema of N1.

Evidential Perception Verbs and (Inter)subjectivity in English and Chinese

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Key words: Visual perception verbs; evidentiality; subjectivity; intersubjectivity

Perception verbs—verbs referring to visual, auditory, tactile, olfactory, gustatory perception, can not only denote the perceptual act but also serve as the speaker/writer's evidence of an asserted proposition. As for evidentiality, visual perception verbs encode the source of information of the speaker/writer, indicating that the offered information is visually perceived by the speaker/writer or a larger speech community (Whitt 2010, 2011). Based on Langacker's strata of basic evidential system (2017), the information provided by the speaker/writer can either be direct evidence (visual evidence) or inference. This research is a contrastive analysis of evidential perception verbs between English and Mandarin Chinese, attempting to elaborate the similarities and differences of visual perception verbs when they express evidential meaning and signal subjectivity and intersubjectivity.

In this paper, *see* and *look* in English and *kan+X* in Chinese have been examined in terms of frequency of usage, frequency of evidential usage, and ways of expressing evidentiality, and the cases without evidential meaning are ruled out. The sentences with evidential perception verbs are further classified into sub-groups according to the complementation patterns. The criteria of classification include the complements, subject-oriented (a perceiver as the grammatical subject) vs. object-oriented (a percept as the grammatical subject), subjective vs. intersubjective evidence (personal vs. collective, implicit vs. explicit viewer), as is shown in the following example:

(1) 路过第五个套院时，我们看到院子里躺着十几个伤兵。(Finite Complement Clause, Subject-oriented, Collective, Explicit)

In the fifth courtyard, we saw a dozen or more wounded soldiers lying on the ground.

(2) “为什么？它看起来像个无害的艺术品。”一名军官说。(NP, Object-oriented, Personal, Implicit)

“Why? It looks like a harmless work of art.” an officer said.

(3) 鲁大海（忽然）刚才我看见一个年轻人，[Ø]在花园里躺着，[Ø]脸色发白，[Ø]闭着眼睛，[Ø]像是要死的样子，听说这就是周家的大少爷，我们董事长的儿子。(Direct Object with a Subject Topic Chain, Subject-oriented, Personal, Explicit)

HAI (with sudden scorn): Just now as I was coming in, I saw young man in the garden. He was lying there with his eyes closed and his face so pale that I shouldn't think he'd last much longer. And they tell me this is our chairman's eldest son.

The findings of this research have shown that both Chinese and English can express evidential meaning in a large number of complementation patterns, but there are still many distinctions: Chinese has more complementation patterns than English, and the evidential usage in Chinese is of greater diversity in some patterns. Besides, the SO perception verbs occur much more frequently than the OO perception verbs in English, but the results in Chinese opposed to that in English. The topic construction is another major difference, which only occurs in the Chinese corpora. Furthermore, there are many attestations of Chinese subject-oriented verbs that have no explicit viewer, in which the conceptualizer is backgrounded, and a more objective stance towards the communicated information is evoked.

A Cognitive Analysis of Japanese Cause/Purpose Expressions: Contrast with English and Thai

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Keywords: cause/purpose expressions, connectives, construal, mental path, time iconicity

The view of causality as a matter of subjective construal has been gaining ground in recent research (Dancygier 2009). I will rely on this point of view and analyze some Japanese, English and Thai cause/purpose expressions. In what follows, A is a preceding clause and B is a following one on time axis, and C/P stands for Cause/Purpose. Examples are given in the order of Japanese, English and Thai. They are agglutinative, inflectional and isolating languages, respectively. Two types of C/P expressions are examined. One ([1]) is based on the word order along time iconicity and construed as C/P, because B describes a result/purpose. The other ([2]) is without time iconicity and correlates with mental path, tense, etc. Examples [1] / [2] and two types of construal of [2] are shown below.

[1] C/P expressions with the same connective in word order along time iconicity.

(1) C: “-**te**, **and/to**, φ (no connective in Thai because of its serialization)”.

a. “-**te**, **and**, φ ”: Kare-wa furoba-de subet-**te** koron-da. (He-TOP bathroom-LOC slip-**te** fall down-PST). He slipped **and** fell down in the bath. Kháo lûn φ lómlonj nai hõnõj ?àap-nám (He slip φ fall down in room shower).

b. “-**te**, **to**, φ ”: Kanojo-wa kangekishi-**te** nai-ta (She-TOP be-moved-**te** cry-PST). She was moved **to** tears. Kháo rúusèk prathápcai φ lànj námtaa (She feel emotion φ shed tears).

(2) P: (“-**te**” cannot describe a purpose), **and/to**, φ ”.

I’ll go **and/to** see a movie. Chán pai φ duu nãj (I go φ see movie).

(3) C/P (constructed in the same form): “(no expression in Japanese,) **so**, **thǔn**”.

I was saving money for three years **so** I could buy this car. Chán kèp nən yùu 3 pii **thǔn** sùu rôt khan níi dãi (I save money DUR 3 years **arrive/to** buy car CLF this possible).

[2] C/P expressions with the same connective in word order without time iconicity.

<N> “N **tame-ni**, **for** N”: correlates with mental path.

(1) C: Noomu no **tame-ni** nanimo mie-nakat-ta (thick mist GEN **tame** -PTCL nothing could see-NEG-PST). I could see nothing **for** thick mist.

(2) P: Kare wa seikatsu no **tame-ni** hataraiteru (He-TOP life-GEN **tame**-PTCL work). He works **for** his living.

<V> “V **tame-ni**, **phrǒ?** V ”: correlates with tense.

(1) C: Watashi wa ie o kat-**ta** **tame-ni** hataraiteru (I-TOP house-ACC buy-**PST** **tame**-PTCL work). **Phrǒ?** sùu bân **pai léxo** chán thamñaan (**phrǒ?** buy house **PST** I work). (I work because I bought a house.)

(2) P: Watashi wa ie o ka-**u** **tame-ni** hataraku (I-TOP house-ACC buy-**FUT** **tame**-PTCL work). **Phrǒ?** **ca** sùu bân chán cun thamñaan (**phrǒ?** **FUT** buy house I then work). (I work to buy a house.)

<N> is the case of a noun with a connective. “**Ni** (PTCL)” and “**for**” describe the direction of mental path of an answer to “why”, that is, “for (the reason/purpose of) ~”. The mental path has one direction (e.g. a rabbit in the left figure cited from Wittgenstein 1958: 194). When N means “a benefit” to get, it is construed as P in Japanese, and also in English, that is, “Purposes Are Desired Objects” (Lakoff and Johnson 1999: 53). On the other hand, when N doesn’t have such a meaning, it is construed as C. The construal has two ways (as a rabbit/duck in the left figure).

In the case of <V>, when verbs with connectives are marked by “-**ta/pai léxo (PST)**/-**u/ca (FUT)**”, they are construed as C/P. This is the same way of construal as [1].

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The semantics of Japanese passives: When and why do they have adversative meanings?

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Keywords: involvement, adversative interpretation, action chain model, *ni* / *niyotte* passive, Japanese

Japanese has two primary means of specifying the agent in its passive construction, which is accordingly subdivided into the *ni*-passive and the *niyotte*-passive, each named after the form attached to the agent noun phrase. Kuno (1983) invokes the notion “involvement” in an attempt to explain the adversative interpretation associated with some *ni*-passives. Despite its appeal, his analysis leaves two crucial questions unanswered: (1) exactly what it means for the *ni*-passive subject to be “involved” in the action denoted by the base verb and (2) why the degree of “involvement” associated with the verb correlates with the likelihood of the adversative interpretation in the way that it does. Kuno’s (1986) further attempt to account for the difference between the *ni*-passive and the *niyotte*-passive by means of his empathy hierarchy is also not insightful enough, not least because it fails to explain exactly how the two passives differ in how they construe the (sometimes identical) events described. Drawing on the action chain model proposed by Langacker (1990, 2008), this paper is intended to demonstrate that Kuno’s involvement corresponds to the part of the chain (hereafter A) where the agent acts on the patient, rather than the part (hereafter B) where the patient changes as a result or the entire chain (hereafter C), thereby explaining why the *ni*-passive gets associated with the adversative interpretation when it does. Building on these findings, we also show how differently the *ni*-passive and the *niyotte*-passive construe the events described.

When the semantics of the base verb clearly involves A, the *ni*-passive does not evoke the adversative interpretation, whether or not B is also involved; otherwise (i.e. when A is either not salient or absent altogether), it is interpreted adversatively. This can be explained as follows. Passive sentences in general serve to highlight B without driving A entirely out of focus. Consequently, in order to construct a well-formed *ni*-passive with a base verb that does not imply B, B has to be brought in by some other means. Since the salience of A and the presence of B are strongly correlated in the world as we view it (i.e. in our cognitive model of the world), B can readily be read into the *ni*-passive when the base verb has a salient A component. It is when A is either not salient or absent that the adverse effect produced by the agent on the referent of the subject fills the role of B.

Ni-passives can thus be formed from verbs lacking both A and B. By contrast, the vast majority of *niyotte*-passives are formed from verbs that involve C (i.e. both A and B). This makes the correlation between the salience of A and the likelihood of the adversative interpretation irrelevant to the *niyotte*-passive. Retained-object passives clearly show the difference between these two types of passives. (1a) is a *ni*-passive sentence. Therefore, when the object is Taro’s hair, namely A and B exist, it can be interpreted as a neutral passive. When the object is Hanako’s hair, namely neither A nor B exists, it is obligatorily interpreted as an adversative passive. Being a *niyotte*-passive sentence, (1b) requires its verb to involve both A and B, making Taro’s hair the only candidate for the object, which means that the sentence is obligatorily interpreted as a neutral passive.

- (1) a Taro-ha hanako-ni kami-wo ki-rare-ta
Taro-TOP Hanako-DAT hair-ACC cut-PASS-PST
(Lit.) “Taro was cut his / her hair by Hanako” “Taro’s / Hanako’s hair was cut by her.”
- b Taro-ha hanako-niyotte kami-wo ki-rare-ta
Taro-TOP Hanako-NIYOTTE hair-ACC cut-PASS-PST
(Lit.) “Taro was cut his / *her hair by Hanako” “Taro’s hair was cut by Hanako.”

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A gradient approach to flexible constituent order

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Keywords: constituent order, language contact, language change, experimental methods

Flexibility of constituent order varies across languages, and languages change in how flexible they are, both gaining (Friedman 2003) and losing (Croft 2003) orders. I propose that cross-linguistic variation in flexibility could be gradient, meaning that, rather than there being two types of languages, flexible or rigid, every language exists on a cline, from more to less flexible. I motivate an experimental measure of flexibility which allows for cross-linguistic comparison while also, I argue, preserving a foundational assumption of Radical Construction Grammar (Croft 2001), that all constructions are language-specific. I define what I mean by flexible constituent order in usage-based terms, present experiments from five languages using this measure (Avar, English, Korean, Malayalam, and Spanish), and show that it can capture in-progress rigidification of constituent order (Croft 2003) in the context of language contact.

While corpus frequencies have been the preferred approach to determining flexibility of constituent order (e.g., Dryer 2013), appropriate corpora do not exist for most of the world's languages, and the discourse-specificity of non-canonical orders means that flexibility can be under- or over-described using methods like elicitation (Thomason 2001). In such cases, psycholinguistic methods can complement corpus data, giving a measure of relative entrenchment, for example (Backus 2015). I use acceptability judgment experiments, in which participants rate each variant of the six logical orderings of subject, object, and verb in a neutral discourse context, mixed in with a range of other sentences which vary in their structure. I assume that more acceptable orders are also more entrenched for participants, and so this method yields measures of the differences between more entrenched orders and less entrenched orders. Flexibility is defined as the relative difference in acceptability between orders for each language, with languages that have smaller differences between orders being characterized as more flexible. I show that this measure accounts for known crosslinguistic variation in flexibility (capturing that English is less flexible than Malayalam), while also revealing new crosslinguistic comparisons which can complement existing descriptions (Korean is the least flexible, followed by Malayalam, and Avar is the most flexible of all; data collection for Spanish is ongoing).

Finally, I show that language contact contributes to further entrenchment of SOV order in both Korean and Malayalam, arguing that this is an example of ongoing rigidification of constituent order. I compare the contact situations, and consider why contact might result in reduced flexibility in these cases. The high-contact Malayalam speakers are young people who grew up in Kerala, India where English is an inextricable part of daily life, while the high-contact Korean speakers are English-dominant individuals who grew up in the United States. On analogy with "frontier conditions" posited by Nichols (2017), I discuss the potential for common contact outcomes under "globalization conditions" and "immigrant conditions," thus explaining these similarities in language change via commonalities in patterns of language use. Constituent order has been found to be a highly borrowable aspect of language (Bickel et al. 2017), and contact has been shown to affect flexibility (Heine 2008). Taking a gradient approach to flexibility, considering all constituent orders as relevant (abandoning a core-periphery approach to linguistic analysis), and investigating the effects of ongoing contact on constituent order allows us to (a) work towards a usage-based explanation for why it might be that constituent order is so susceptible to change, and (b) further understand what underlies the typology of constituent order.

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A Study of Alternate Detachable Construction in Chinese Idioms

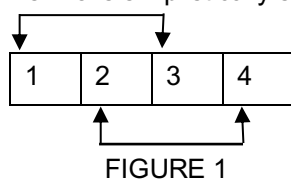
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Key words: Chinese idioms; Alternate Detachable Construction; Detachment; Recombination; Interaction between coercion and inheritance

Based on *Electronic edition of V4.00 Version of Chinese Dictionary* as the closed corpus, using data and data-driven methods, this research first finds the abundant existence of Alternate Detachable Constructs in Chinese idioms, amounting to almost one fourth in all, and verifies that alternate detachment mechanism is entrenched in the thinking mode of Chinese people which is responsible for the flourishing of alternate detachable constructs in Chinese four-character idioms. What the alternate detachment mechanism is like is simplistically sketched in FIGURE 1,



in which numbers 1-4 are employed to stand for the four linear structural slots in Chinese four-character idioms and the two symmetrical solid arrows indicate the alternate imbedding ways (1-3 & 2-4 alternate slots) for the detached elements from the original two-character words.

Accordingly, the alternate detachable construction is formed by detaching elements from at least one two-character word and then embedding into the alternate slots of detachable constructions. The imbedded elements then recombine to form new structures with the former 1-2 slots and the latter 3-4 slots being structurally and semantically symmetrical. Take “南征北战(Nan Zheng Bei Zhan)” (fight up and down in the country) for example, in which the original phrases“南北(NanBei)” (North and south) and “征战(Zhengzhan)” (fight and crusage) are detached and embedded into the 1-3 & 2-4 alternate slots to form a new four-character idiom which means more than the simple combination of “征战” and “南北” as “征战南北”. It is worth mentioning that the infrequency of other types of detachment modes such as 1-4 & 2-3 slots of detachment can be roughly ascribed to the inclining rhythmic characterization in Chinese and its dependence on symmetrical structures in forming new words and clauses. Statistically, there are 5 types of internal grammatical structures (i.e. verb-object coordinative ADC, endocentric coordinative ADC, subject-predicate coordinative ADC, verb-complement coordinative ADC 5. the repeating coordinative ADC) and 15 detachment modes (i.e. 1.CADB 2.CACB 3.CBDA 4.CBCA 5.ACBD 6.ACBC 8.A1A2B1B2 9.A1B2B1A2 10.B1A2A1B2 11.B1B2A1A2 12.AABB 13.ACDB 14.BCDA 15.A1A2B2B1).

According to the views of Cognitive Linguistics, the intrinsic meaning of a linguistic unit is closely related to the meanings of its constituent parts and the way in which these parts are arranged. This study, within the frame of Constructive Grammar, by means of analyzing the mechanism of detaching and recombining of the internal structures in Alternate Detachable Construction in light of multiple coercion-inheritance model (MCI model), and further elucidating their characteristics of syntax and semantics, finds that detachment and recombination are one of the basic means of constructing idioms in Chinese. What's more, the research empirically proves the notion that conventional meanings of idioms ascribe greatly to the meanings of their constituent parts and the way in which these parts are arranged. Specifically speaking, it is by way of reconstructing the constituent parts under the mechanism of alternate detachment that the conventional constructional meaning is formed.

On the argument realization of Mandarin inverted resultative constructions and its motivation

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Key words: construction grammar; Mandarin inverted resultative constructions; argument realization; coercion; motivation

Mandarin inverted resultative constructions (MIRC) refer to those resultative constructions in which the thematic assignment of the causing verb^① is inverted, i.e. the patient of the causing verb is projected as the subject of the construction, while the agent of it is the object, as in (1). In this example, the agent of the causing verb “he”(drink) is Laowang that is realized as the object of the sentence, while the patient (“na-ping jiu”(that bottle of liquor)) is realized as the subject.

(1) Na-ping jiu he-dao-le Laowang.
That-CL^② liquor drink-fall-PERF Laowang.

Laowang drank that bottle of liquor and then fell down as a result.

Obviously, such thematic arrangement does not conform to “the Uniformity of Theta-Assignment Hypothesis”(Baker 1988). Li (2013) contends that the argument realization of MIRC results from the interaction between the individual thematic relation expressed by the verbs and the composite thematic relation expressed by the whole construction which has two arguments, i.e. the Causer and the Causee, and the causing verb contributes a role to the Causer and the resultative verb contributes to the Causee. However, the causing verb of MIRC usually has two thematic roles but only one is needed by the Causer. Then how to choose between the two thematic roles? And where does the other one go? These questions are not explicated in Li (2013). Based on Li (2013), Zhang and Ma (2016) point out that semantic roles of the causing verb are selectively projected onto the syntactic positions, compacted and highlighted. But how are they selected and compacted? It is still unknown. This is where this study intends to go into.

This study analyzes the argument realization of MIRC and its motivation within the framework of cognitive construction grammar, drawing implications for the argument realization of argument structure constructions. Close examinations of data show that (1) the meaning of the verbs interacts with that of the construction: the agent of the causing verb is shaded due to the coercion of the construction; the patient is fused with the Causer and realized as the subject while the experiencer of the resultative verb fuses with the Causee and is realized as the object, and during this fusing process, cognitive factors are the motivations; (2) the argument realization of MIRC is also constrained by language users' construal as it is found that the object of the construction can be realized by different semantic roles owing to different construal, which indicates that there are inadequacies in cognitive construction grammar, which needs to be combined with the theory of cognitive construal in order to adequately explain the argument realization of argument structure constructions.

^① In MIRC, there are a causing verb, which expresses action and is usually transitive, and a resultative verb (sometimes it can also be an adjective), which shows the result and is usually intransitive.

^② Abbreviations: CL, classifier; PERF, perfective aspect

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The Cognitive Analysis and of the Productive Orientation of Subject-predicate Constructions in Mandarin

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Keywords: subject-predicate construction; cognitive grammar; derived analysis; theme orientation; productive orientation

This study investigates and discusses the subject-predicate constructions in Mandarin, and tries to seek for several common features preliminarily, which is considered as a project with little hope of success by Fillmore et al. Based on the cognitive grammar, the paper analyzes the syntactic and semantic features of some main Chinese subject-predicate constructions, and presents the derived relations between them. Then, a relation network is built on the basis of the prototype theory and the interactional and derived model. We also discuss the different levels in dynamic meaning of the constructions. In the end, compared with English, the paper declares a theme orientation exists in the productive process of the subject-predicate constructions in Mandarin after the discussion about the clausal grounding elements.

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**“It is important *but* not necessary”:
Investigating *but* constructions in native vs non-native corpora**

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Keywords: constructionist approach, corpus-based study, contrastive connective, academic writing, L2 learning

This paper aims to compare and contrast *but* constructions in 200 native speakers' (NS) and 200 EFL learners' (FL) argumentative writing in the International Corpus Network of Asian Learners of English. Commonly known as a contrastive connective, *but* serves as a link between words, phrases, clauses or segments of text. In terms of its semantics, though, there has been no agreement on the exact number or categorization of *but*. This study attempts to examine the issue from a constructionist point of view, which conceptualizes constructions or form-function mappings as the building blocks of language. Drawing on usage-based arguments, it is contended that the meanings of *but* may be identified both on the micro-level to involve the connective and specific lexical elements, on the macro-level to include grammatical categories and on the discourse level to reflect the theme or genre features of the writing. Moreover, it is believed that the distribution and probabilities of *but* constructions may distinguish the native and non-native use of *but*.

This study utilized the concordancer software AntConc 3.5.2w to analyze the distribution and patterns of *but* construction, which was defined in terms of the types of collocates such as nouns, adjectives, verbs or clauses that were identified to the right of *but*. From the top ten most frequent collocates of *but*, we selected items that had a high Log-likelihood score. Meanwhile, the function of *but* construction was determined by the role it played in the discourse where the construction was identified. The result shows that there is linguistic and conceptual evidence of *but* constructions in both native and learner corpora. In terms of distribution, *but* ranked 52 as one of the most frequent words used by NS next to *and*, *if*, *or*, *so*, and *because* while it was listed 33 as the second most frequent connective next to the 7th ranked *and* in FL's corpus. That is, FL relied on fewer types of connectives and used *but* far more frequently than NS in their argumentative writing.

On the micro-level, we identified *but I* and *but it* to be the most prominent in NS's corpus while FL's writing featured *but also*, *but it*, *but I*, and *but not* constructions. On the macro-level, NS used *but* most frequently to connect two independent clauses in which their *but I* construction often occurred in conjunction with verbs of cognition such as *think* or *know* or of perception like *feel* or *believe* to express their personal stance or evaluation against a possible counterargument. On the other hand, FL's *but I* or *but it* construction particularly those appeared in the sentence initial position was often used to reject a point made in the prior text or highlight the necessity of certain actions. The major distinction of FL's writing was the high occurrence of the partially filled idiomatic construction *not only*but also**, which was primarily used to strengthen the writer's debate against a point under discussion. In terms of its use by 4 proficiency levels of learners, we found that as learners progress to a higher level, their use of *but* decreases. Interestingly, structures that are not common in NS's writing such as *but also* or *but not* were most prominent in higher level learners' writing. Overall, many of the learners' *but* constructions differed from those of NS's and some of their uses remain non-native even after they have progressed to a higher level. To supplement our findings, characteristics of the use of *but* constructions in the learners' native language, Mandarin Chinese, and its influence on the learners' *but* constructions are also discussed.

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The Characteristic of Chinese Popular Constructions from a Cross-linguistic Perspective

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Keywords: Constructions, Chinese, popular words, cross-linguistic, characteristic

With the development of the Internet age, there are many popular words in Chinese every year, including many popular constructions. In recent years, many of the popular Chinese constructions have come from other languages, such as the “Foxi”, which originated from a Japanese magazine, and “pick”, which is derived from a variety show in South Korea. After entering the Chinese language, these exotic popular words will naturally change with the characteristics and development of Chinese language and become Chinese constructions.

These changes include: a) part of speech conversion. For instance, “Foxi” is a Japanese word, which describe a type of Japanese male who like to be alone and put our interests and hobbies first. In Japanese, this word is an adjective, however, it also can be an adverb after entering the Chinese.

b) semantic generalization. For example, “pick” is an English word, but the reason why it came to China and became popular is a variety show from South Korea. Firstly, when “pick” is a noun, it means the person or thing chosen or selected, whereas, it gradually produces a new meaning that is the person who I loved or idolized. And this meaning is more widespread and popular in Chinese’s daily life.

c) use frequency burst growth over a period of time, and then smooth and so on. Basically, almost every Chinese popular word experienced same explosive growth in use. Some gradually fade away, others are kept in daily life and remain vitality.

These are the basic features and patterns of Chinese popular constructions from other languages. And these words became an important part of Chinese language.

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Frame-Based Adjectives: A Proposal for the Third Type of Adjective

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Keywords: Frames, (Non)Predicating-Adjective, Domain, Metonymy, Context-Dependency

In some A-N expressions, although the adjectives are apparently the same as predicating adjectives, they behave like non-predicating adjectives such as *sick room*, *bright tastes*, *sad cigarette*. This study focuses on such A-N expressions and argues that the relevant non-predicating adjectives can be characterised as 'Frame-Based Adjectives' (hereafter, FAs). In relation to the subsequent nouns, FAs are metonymically interpreted based on our frame knowledge (cf. *Frame Semantics* (Fillmore (1982))).

Generally, when an adjective is combined with a noun, the adjective can be divided into the following two types: *predicating* or *non-predicating* (Levi (1978); cf. Sullivan (2013)). Predicating adjectives are characterised as being modified by degree adverbs (e.g., *very*, *somewhat*) and describing the properties of the referent of the noun, i.e., *referent-modification* (Bolinger (1967: 20-23)); e.g., *a very young lady*; *a lady who is young*. Non-predicating adjectives, by contrast, cannot be modified by degree adverbs (e.g., **a very industrial output*) and do not predicate (e.g., **the output is industrial*) (Bisetto (2010: 66)), but rather classify or identify a specific type of noun, i.e., *reference-modification* (Bolinger (1967: 14-20)); e.g., *digital/mechanical output*. From a cognitive-semantic point of view, Sullivan (2013) analyses A-N metaphoric expressions and differently calls the non-predicating adjectives 'domain adjectives', which elaborate on a type of the noun and directly identify the conceptual domain by their classifying function (e.g., *mental exercise*, *spiritual wealth*). There are in fact some A-N expressions that do not attribute to none of these two types (i.e., predicating-Adj. and domain-Adj.).

For example, the A-N *sick room* does not literally indicate that *the room* itself is *sick* (*??a very sick room*; *??the room is sick*), but rather it is *a room for the sick*; i.e., *sick* metonymically means *sick people*. In this sense, the adjective *sick* classifies a type of *room* (cf. *living room*, *dining room*). However, we cannot decide whether such adjectives are predicating or non-predicating because of their morpho-syntactically and semantically idiosyncratic behaviour. In addition to Sullivan's (2013) two types of adjectives, I claim FAs as the third type of adjective to deal with this issue.

I will demonstrate the notion of FAs for the following A-N expressions: synaesthetic expressions (e.g., *bright tastes*, *loud colours*), transferred epithets (e.g., *sad cigarette*, *sleeping car*), or other general A-N phrases (e.g., *deep learning*, *weak generativist*, *strong lexicalist*). I will further contend that the nature of adjectives, i.e., *conceptually dependent elements* (Langacker (1987)) can be maintained. I claim that adjectives which are not semantically self-contained or identified in relation to the subsequent nouns, tend to be more dependent upon our frame knowledge or the relevant context. In other words, we metonymically construe the meaning of A-N expressions when they represent such a semantically incongruous modification, as vigorously argued by Ishida (2018). Some A-N expressions like *sick room* are however context-freely interpreted because they are conventionalised (i.e., lexicalisation) (e.g., *hard disk*, *yellow pages*; cf. Bauer (2003: 135), Booij (2002: 314)). These phrases are already established as a compound by the effect of metonymy, as Brdar (2017) and Bauer (2018) strongly argue.

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A Diachronic Constructional Analysis of the Word Order Restriction Japanese: A Mismatch in Grammatical Constituency

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Keywords: constructional change, noun/verb synchretism, nominal clause, multiple-inheritance:

Construction Grammar has it that language is a system of constructions, each of which is a pairing of form and meaning of any size and of any level of schematicity. This broad definition, however, underspecifies what exactly the “form” should be, which is a potential problem when a construction is larger than a simple phrase, and different kinds of formal information are involved. This paper explores the word order restriction exhibited by the nominal clause in Old Japanese (OJ) and demonstrates that the restriction reflects a curious mismatch of two different types of formal specification: the syntactic realization of arguments and a partial morphosyntactic template functioning as a filter. Proposing a multiple-inheritance analysis to accommodate this duality, I argue that the template, which loses effect in Early Middle Japanese (EMJ), is motivated by the language users’ processing strategy.

While word order is relatively free in Japanese, detailed examinations of *Man’yōshū*, which is virtually the sole source of data of OJ, have independently discovered that a topic and a focus, as well as an accusative object must precede the subject case-marked with [no/ga] (Yanagida 2005). This restriction, interpreted as specifying the word order or the configurational structure of the clause, has inspired various analyses in generative grammar. Watanabe (2002), for instance, takes it as a sign of focus (or *wh-*) movement, (cf. also Yanagida 2005). However, the configurational approach grossly undermines the fact that the restriction constrains only the order of phrases with an explicit case/discourse marker. Thus, a zero-marked object, for instance, can occur after the subject NP. The sensitivity to surface morphological form presents a challenge to usual syntactic analyses, and has escaped proper treatment, but I claim that is at the heart of the issue, and present a multiple-inheritance solution in Construction Grammar, where the two kinds of formal specification are inherited separately.

Given that the subject marker [no/ga] is homonymous with the genitive case in OJ and EMJ, the morphosyntactic template is clearly reminiscent of a simple NP: no case/discourse-marked phrase is allowed between the genitive and the head. A similar kind of noun/verb synchretism, as well as the mixed properties in the diachronic shift of a nominal clause, is widely observed crosslinguistically (Heine 2009), but what is curious in the present instance is that the nominal template seems only activated by the presence of the case marker on the subject, which marks the left edge of the template; otherwise, the arguments are free to occur as in a usual clause. This raises a question about the nature of this restriction, and why (part of) a clause must conform to a particular morphological pattern.

To answer this question, I call attention to psycholinguistic experiments on Japanese, which have suggested that a case marker can give a clue to syntactic parsing (cf. Miyamoto 2002). One study, which examined the issue of nominative/genitive conversion, a related construction in Present-day Japanese, reports that the genitive case makes the participant expect a simple NP, triggering a garden path effect when it actually marks the subject argument (Yuhaku & Nakai 2010). Drawing on these results as indirect evidence, this paper hypothesizes that the word order restriction is motivated by language users’ processing strategy: when the ambiguous genitive case [no/ga] is encountered, the nominal template is activated. This not only causes a temporary processing difficulty in OJ, but has resulted in a stronger avoidance of verbal case-marked phrases, until the nominal clause acquires more “verbality” in EMJ

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Logical metonymy constructions in Czech and Dutch

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Keywords: logical metonymy constructions, qualia structure, corpus-based analysis, Dutch, Czech

The paper surveys distribution and constraints of the use of one type of predicative constructions usually labelled *logical metonymy constructions* (lmc) within Cognitive Linguistics, cf. English example sub (1) below. These constructions represent a source-in-target type of metonymy (Littlemore 2017) because they induce a conventionalized interpretative shift from object- to event-complement in order to fulfil the verb's argument structure by feature unification (Michaelis 2015). Recently, a growing number of cognitively-based studies devoted to lmc emerged (Ziegeler 2007; Sweep 2012): first, they challenge an alternative model of *qualia structure* (Pustejovsky 1995) for being psychologically too costly, and thus inadequate, and second, they show the need for more empirical evidence as well as for the extension of the sample of studied languages. Only few corpus studies have been conducted so far. Most recently, Sweep (2012) investigated German and Dutch equivalents of prototypical English examples of logical metonymy (i.e. *begin*, *finish* and *enjoy*). Our goal is to contribute to the corpus-based investigations of lmc by conducting a contrastive study of Dutch and Czech adopting the method applied in Sweep (2012).

Therefore, we focused on lmc containing all aspectual verbs previously attested in lmc, namely equivalents of English verbs *begin*, *complete*, *continue*, *finish*, *postpone* and *start* in both languages. A balanced random sample of 1200 concordances extracted from a parallel synchronic corpus of the respective languages (InterCorp v10) was manually coded for (i) 10 morphosyntactic and semantic features of NP and VP (e.g. preferred morphological properties of both predicate and its object, the degree of concreteness and action meaning of the object, the range of various events activated by the object etc.), and (ii) 4 syntactic and discourse features of the whole sentence (clause type, complexity measured in number of words, genre and register).

Enriching the pool of evidence with previously understudied Czech data, our results support the preceding findings that the model of qualia structure fails to capture all relevant properties of lmc and all situations where these constructions are used. There is a cross-linguistic similarity between Dutch and Czech mirrored in similar categories of nouns, which occur in lmc, and in similar context in which these nouns are used. As predicted by Littlemore (2015) for the metonymy in general, the more conventionalized the lmc-pattern is (including the predictability of the omitted event), the more likely it will be shared by the two languages. The outliers in the sample reflect cultural and situational specifics that are discussed in order to detect the potential limits of the use of lmc as well as the possibility for its idiosyncratic expansions. Finally, in these border examples, more action names appear as complements of the studied verbs, making the action meaning more explicit and thus weakening the metonymic interpretation of the construction.

Examples

- | | |
|---|---|
| (1) <i>Butch finished his lunch.</i> | |
| (2) <i>Wanneer ben je begonnen met stenen?</i>
when are-AUX.2SG you begin-PTCP with stones | 'When did you start with stones?' |
| (3) <i>Ted' začnu s jedním záhonkem.</i>
now begin-PRS.1SG with one-INS garden_bed-INS | 'I will start with one garden bed now.' |

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Pictures of age: Multimodal frame semantics and different age stages

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Keywords: frame semantics, prototype theory, age-related concepts, multimodality, typicality

In Labov's (1973) classical experiment on the figure of a cup, subjects were instructed to name pictures along the gradient changes of either width or height. Since then, many scholars have followed this idea of describing a concept's typicality by features (Rosch and Mervis, 1975) or association (Hampton, 1981), known as prototype theory. Others have attempted to utilize visual stimuli in exploring the categorization of concepts (Bates et al., 2003; Szekely et al., 2004). These visual-based studies, however, center mostly on typicality judgements on the provided pictures instead of encouraging the participants to draw their own pictures. These studies are less capable of interpreting abstract concepts such as that of Hampton's (1981). Therefore, based on Hampton (1981) and Labov (1973), the current study intends to semantically frame (Fillmore, 1982) gradient concepts, like age-related terms, and examine if visual-based domains are different from writing-based domains.

Three tasks are conducted to determine the best representation of three Mandarin age-related terms. Three target terms were chosen to represent the gradient relation of age: Niánqīng (YOUNG), Zhōngnián (MIDDLE-AGED), and Lǎonián (ELDERLY). In the first task (Association Task), participants are instructed to name up to ten words or phrases related to each age term. They are then asked to rate the difficulty naming these words or phrases. The second task (Drawing Task) is similar to the Association Task, yet the participants of this task are asked only to draw one picture that is most related to one of the three target words provided by the experimenter. The last task (Judgement Task) asks a different group of subjects to judge if these verbal or visual stimuli gathered from the first two tasks are good examples or related to the three concepts.

The preliminary analysis on Zhōngnián (MIDDLE-AGED) suggests different semantic focuses between the output modes of words and images. When verbally associating with the concept of MIDDLE-AGED, Mandarin speakers are more likely to use health issues and body features to describe this concept (i.e. high blood pressure, gaining weights and wrinkles). On the other hand, drawings emphasize more frequently on financial issues, (i.e. drawing a dollar sign) and relations with family. A tentative model of analyzing visuals has been formed based on the data collected. Drawings can be described by the features that are present in the drawing. For example, Figure 1 contains several elements within the same frame, and these can be described based on the functions they serve. A general understanding of the picture can therefore be deduced (Table 1).



Figure 1. The drawing from one of the subjects (Middle-aged)

OBJECT

Main Character	MAN
Supportive Character	BUBBLE, FINANCIAL REPORT, HOUSE, ELDERLY AND A CHILD
Description: Middle-age is a working class MAN who thinks about FINANCE, HOUSING, and ELDERLY AND A CHILD.	

Table 1. The deduction of the Figure 1 based on its roles of visual elements

Constraint on case alternation in Korean '-ko siphta' construction: A self-paced reading study by L1 Japanese speakers

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Keywords: L2 sentence processing, case alternation, L2 Korean acquisition

This study addressed this issue by investigating Japanese-speaking L2 learners' processing of Korean '-ko siphta/sipehata' constructions. In the Korean '-ko siphta' construction, which conveys the modality meaning of '(I) wish/want to', the nominative marker 'i/ka' can be attached to a theme, because auxiliary predicate '-siphta' affect on the theme. In the '-ko sipehata' construction, in contrast, which conveys the modality meaning of 'wish/want to' from the perspective of a third person, ending '-ehata' changes adjective into transitive verb, disallowing 'i/ka' to modify a theme. In the current study, we asked whether L2 learners can apply the constraint of transitivity associated with the realization of case marking in the '-ko siphta/sipehata' constructions during real-time sentence processing.

In this study, 60 advanced Japanese-speaking learners of Korean and 30 native Korean speakers participated in an online self-paced reading task. Experiment stimuli consisted of 24 '-ko siphta' construction with either accusative (1a) or nominative case marker (1b) attached to the theme (An experiment investigating '-ko sipehata' construction is currently in progress). The L2 learners were further divided into higher-proficiency (NNS-H, n = 30) and lower-proficiency (NNS-L, n = 30) groups, based on their scores in the Test of Proficiency in Korean. During the task, participants' reading times in each region(R) was measured across conditions while they read target sentences at their own speed in a word-by-word manner.

For the '-ko siphta' construction, participants' reading times in each region were normalized into log-transformed reading times (LogRTs). Visual inspection of the graphs (Figure) showed that all groups spent almost the same time between the two case marking conditions throughout the regions, except for the lower-level group in R4. Linear mixed-effects regression was fitted to the model that included case marking (Accusative, Nominative) as a fixed factor for each group. Results showed no significant reading time difference between the two conditions in any of the regions for the L1 and NNS-H group. However, for the NNS-L group, a main effect of case marking was found in R4, with a longer reading time in the nominative than in the accusative condition. These results suggest that both native speaker and NNS-H groups were able to process the case-marking information in the '-ko siphta' construction, indicating their acceptance of both case-marking conditions, whereas the NNS-L group had a difficulty with an integration of the nominative case marking on the theme with the construction. Our findings provide a useful testing ground whether the learners will show target-like sensitivity to the case marking constraint in the '-ko sipehata' construction, where the use of a nominative case on the theme is disallowed.

(1) Sample items for the self-paced reading task

a. Na-nun(R1) ecey(R2) Kimpap-ul(R3) mek-ko(R4) siph-ese(R5) siktang-ey(R6) kasse-yo(R7).

I-TOP yesterday Kimpap-ACC eat-ko siph-ACE restaurant-LOC went-SE

'I went to restaurant because I wanted to eat Kimpap.' [Acc-marked]

b. Na-nun ecey Kimpap-i mek-ko siph-ese siktang-ey kasse-yo.

I-TOP yesterday Kimpap-NOM eat-ko siph-ACE restaurant-LOC went-SE

'I went to restaurant because I wanted to eat Kimpap.' [Nom-marked]

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Effects of L1 Typology to Performance of L2 Statistical Preemption: Korean EFL learners reject ‘*The lifeguard swam the boy to the shore*’ more strongly than Chinese EFL Learners

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Recent L1 studies have discovered that the availability of competing alternative (CA) expressions inferred from frequent input leads to the acceptability of creative expression. Thus, while a novel formulation (e.g., the magician disappeared the rabbit) is disallowed if it is expected to be consistently replaced by a more readily available CA expression (e.g., the magician made the rabbit disappear), a creative expression (e.g., the lifeguard swam the children to the shore) is judged to be acceptable if it is not expected to consistently be replaced by a more appropriate alternative construction paired with the given verb.

The present study explored whether grammatical judgment on L2 creative formulation resorts to the frequency distribution of L1 verb-construction compatibility? The participants of the study were novice-level learners of English as a foreign language with two different L1 backgrounds. The one is the EFL learners with L1 Chinese, where intransitive verb (e.g., swim) is allowed to be incorporated into caused-motion construction (e.g., ba-construction) and the other is those with L1 Korean, where such verb-construction pair is ‘statistically preempted’ (or consistently constrained) by a readily-available CA expression (e.g., bi-clausal intransitive construction).

Experiment 1 asked the Korean-speaking (N=34) and Chinese-speaking (N=35) EFL learners to participate in an English paraphrasing task, and investigated whether they transferred their L1 constructions in generating L2 constraints. A test item was judged as “has-CA” (or constructionally acceptable novel formulation) when more than fifty percent of the participants consistently agreed that it had a better paraphrase. Otherwise, a test item was accepted as “no-CA” (or constructionally unacceptable novel formulation). The results confirmed that caused-motion constructions with L2 intransitive verbs (e.g., S-Vi-NP-PP) were disallowed if such formulation was restricted in the learners’ L1 system; Korean participants showed a tendency to replace such novel formulation of English caused-motion construction with L1 canonical bi-clausal intransitive construction, while Chinese participants accepted them.

Experiment 2 examined how Korean/Chinese EFL learners used English statistical preemption. Results of Acceptability Judgment Test (AJT) by L1 Korean (N=165) and Chinese (N=73) EFL learners were analyzed using a linear mixed model (lme4) in R software. The results of Experiment 1 allowed us to hypothesize that Korean EFL learners would give better performance in English statistical preemption than Chinese EFL learners. The results of Experiment 2 confirmed the hypothesis: Korean EFL learners failed to reject ungrammatical (has-CA) English sentences with high-frequency verbs, while Chinese EFL learners and English native speakers successfully rejected.

To conclude, this is the first study to provide empirical evidence that nonnative EFL learners’ restricted use of L2 statistical preemption may be a by-product of different constructional repertoires between L1 and L2.

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Does language interfere with mentalising? : The role of language processing during the false-belief task

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Keywords: theory-of-mind, mentalising, language processing, Japanese, false-beliefs

Background

The development of mentalising ability has been studied extensively using false-belief (FB) tasks. A typical FB task uses a scenario where the protagonist comes to hold a FB about an object because an unexpected transfer of the object had occurred during the protagonist's absence. At the end of the scenario, a child perceiver is asked where the protagonist goes to find the object. If the perceivers can correctly mentalise the protagonist's FB, then their response should indicate the location where the protagonist initially placed the object. Studies using this scenario suggest that passing this test signifies the acquisition of an explicit form of theory-of-mind, which can be observed when a child is around 4 to 5 years of age. However more recent studies (Southgate, Senju, & Csibra, 2007; Surian & Geraci, 2011) claim that younger children are able to mentalise other people's FB. This finding is based on the method of tracking their direction of gaze in such way that their anticipatory-looking indicates an understanding of the protagonist's FB. However, dissociation between the performances in the explicit FB task, where linguistic processing is essential, and the implicit FB task, where only anticipatory-looking was tracked without any linguistic inputs, remains unresolved. The present study examined whether or not the additional narrations used in the FB scenario interfered with the implicit processing of the FB task, which was measured by anticipatory-looking behaviours.

Method

83 Japanese children between 3 and 4 years of age participated in this study. Two conditions were prepared for the FB task based on the work of Southgate et al. (2007). The nonverbal condition included a video clip depicting the protagonist holding a FB as a result of an unexpected transfer of a ball by the puppet (bear). The verbal condition had additional narration depicting the scene. The task had two phases: in the first phase the participants became familiar with the context by being shown the puppet (bear) putting the ball into one of the two boxes. The female protagonist watches the bear's actions, then she retrieves the ball by opening the box in which the bear put the ball. After the familiarization phase, the main test phase began. In the main FB event, the bear puppet put the ball into one of the two boxes while the female protagonist was watching. Then the telephone rang and the female protagonist turned away. While she was looking away, the bear moved the ball. The main FB task included one of the two versions of the FB events, which differed in the timing of the movements of the ball. An eye-tracker (Tobii X-60) tracked the participants' eye-movements to measure fixation durations and identify the location of the initial anticipatory-looking.

Results and Discussion

Analyses were conducted for two dependent variables: 1) initial fixation to either the correct or incorrect location: and 2) fixation duration for each of the correct/incorrect locations. The children's initial fixation was more significantly directed to the correct than incorrect location only in the nonverbal condition: $X^2(1) = 4.33$, $p = .037$, suggesting that the implicit FB task was successful without language processing (figure 1). Fixation duration did not differ between locations in both conditions. However, there was a difference in anticipatory-looking in the nonverbal condition, which depended on the version of the video. The results suggest that processing linguistic information seems to interfere with anticipatory-looking behaviors. The effect of language processing on mentalising is discussed.

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Root and pattern effects in the processing of spoken nonwords in Arabic

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Keywords: Arabic; Morphological processing; roots; word patterns; nonwords

Words in Arabic are formed by mapping roots into patterns. Whereas the root determines the semantic meaning of the word, the pattern creates the phonological structure of the word and specifies its morphosyntactic properties. Conducting a series of priming experiments, Boudelaa & Marslen-Wilson (2015) have concluded that “root and word pattern morphemes function as abstract cognitive entities, operating independently of semantic factors and dissociable from possible phonological confounds” (Boudelaa & Marslen-Wilson, 2015, p. 955). We test the plausibility of this conclusion by investigating native Arabic speakers’ sensitivity to the presence of roots and patterns when processing spoken nonwords in Arabic. 50 native Arabic speakers were given a 7-point word-likeness rating task. In this task, participants were asked to rate the word-likeness of 132 auditorily presented nonwords in Arabic. 88 of these nonwords were created by using real Arabic roots (e.g. /mlk/) that varied in their type and token frequencies. Each root was then mapped into two different types of patterns. This resulted in nonword pairs in Arabic (e.g. /tamalkak/ and /tamalkuk/). The other 44 stimuli were nonwords with no real Arabic roots. Other phonological and lexical variables for the stimuli were also computed. Results have shown that native Arabic speakers are sensitive to the presence of roots in the nonwords. Specifically, root type frequency had the strongest effect on subjects’ ratings of the nonwords in both types of patterns. Implications of these findings to theories of the Arabic mental lexicon will be discussed.

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Multimodal Metaphors and Metonymies in Dynamic Multimodal Discourse: A Case Study of China's National Image Promotion Documentary

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Key Words: metaphor; metonymy; identification; interaction; dynamic multimodal discourse

Abstract: Metaphorical and metonymic thinking is pervasive in various forms of human communication, but the roles metaphor and metonymy play and the patterns in which they interact with each other vary according to the genres in which they occur. The present study attempts to investigate metaphor and metonymy in a realistic genre, focusing on their identification, patterns and interactions. The study adopts a cognitive-functional approach from the perspective of CMT, Multimodal Metaphor Theory and Social Semiotics to analyze a dynamic multimodal discourse (or audiovisual text) – *China's National Image Promo: Perspective*, a seventeen-minute documentary about China. In this promotion documentary, sixteen patterns of multimodal metaphors and six patterns of multimodal metonymies are identified, four patterns of the metaphor-metonymy interaction are revealed and the different cognitive and discursive roles of metaphor and metonymy are discussed. The significance of these findings is as follows. First, they further confirm the assumptions that, as basic cognitive mechanisms of human being, metaphor and metonymy are not limited only to language, but are pervasive in multimodal discourses; Second, they demonstrate that metonymy is more basic than metaphor and usually plays a predominant role in realistic genres; Third, they provide a clear picture of metaphor-metonymy interactions in a multimodal discourse. Finally, they highlight the importance of social cultural background and encyclopedia knowledge in identifying and interpreting metaphor and metonymy, and in the discussion of their roles in conveying ideological ideas. However, this study only explores one multimodal discourse, one genre, more work still need to be done to investigate metaphor and metonymy in more multimodal discourses and other genres so that a systemic study can be formed and shed more enlightenment on our understanding of the two cognitive mechanisms of human being.

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Multimodal fictive interaction in verbo-pictorial configurations

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This paper examines multimodal semiotic configurations which consist of pictorial and verbal elements, (esp. internet memes) in search of cases of multimodal fictive interaction. It is set within the methodological framework of cognitive linguistics, especially referring to the conceptual metaphor and metonymy (Lakoff and Johnson 1980), conceptual integration (Fauconnier and Turner 2003), multimodal meaning creation (Forceville 2009), and fictive interaction (Pascual 2002, 2006, 2014). Fictive interaction is one of the dimensions of fictive construal (Langacker 2008). Fictive interaction is considered to be a linguistic phenomenon in which a conversational frame is used to structure thought, discourse, and language (Pascual 2002) in a more comprehensive and mentally accessible way. Pascual defines fictive interaction as “the use of the conversation as a frame to structure mental, discursive, and linguistic processes”. Fictive interaction is a conceptual phenomenon and it can manifest itself at different levels of language organisation, e.g. the levels of morpheme, word, phrase, clause, sentence or inter-sententially. Following a recently growing trend in multimodal analysis, I attempt to observe whether fictive interaction can also be found inter-modally i.e. if different semiotic resources can combine in order to recreate a conversation-like frame or depict spoken quoted utterances (as well as other conversational elements). After Forceville and Urios-Aparisi (2009) I adopt the term ‘mode’ as referring to different semiotic systems, and in the present paper I focus primarily on the co-occurrence of two modes accessible through one sense: written language and picture. Fictive interaction comes about as a result of blending of these two modes, especially in internet memes which, I claim, are a good example of a multimodal verbo-pictorial material which can be structured on a conversation frame (cf. Dancygier and Vandelanotte 2017).

Keywords: MULTIMODALITY, FICTIVE INTERACTION, CONCEPTUAL INTEGRATION, EMERGENT MEANING, INTERNET MEMES

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Depicting new referents in Norwegian Sign Language

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Keywords: reference, depiction, signed language, corpus linguistics, semiotics

Focusing interlocutors' attention on a person or thing within a discourse involves the coordination of shared attention through the varied referential resources available in a language (e.g., Clark & Bangerter, 2004). Cognitive and functional approaches have investigated a variety of behaviors such as topic and focus constructions, preferred argument structure, pronominal anaphora, animacy, perceptual salience, and accessibility as a determining factor in the selection of referential forms (e.g., Ariel, 1990; Givón, 2017). Researchers generally agree that the choice of referential expression is linked to information management. Interlocutors use more informative referential expressions to introduce new referents, but less informative expressions are used for already salient referents. However, investigations of reference tracking have generally focused on the encoded "linguistic" and/or inferential aspects of referential coherence. To broaden this focus, here we describe how signers engage their diverse semiotic repertoire to identify and talk about referents of varying agency during a storytelling task, and we report preliminary findings from the first investigation of its kind on such patterns of reference in narratives in Norwegian Sign Language (NTS).

We collected an initial sample of 699 tokens of referring expressions from four video recordings where native signers of NTS viewed a picture book and recalled the events in their own retelling. We noted semiotic strategies employed (primarily lexical signs and noun phrases, mouthing, pointing signs, depicting signs, enactments), information status (new, reintroduced, maintained), and animacy (human, animal, inanimate) of the referents. Exploratory analysis using principal components and hierarchical clustering confirmed choice of strategy was most strongly motivated by accessibility: new referents were expressed with more conventionalized forms (especially Norwegian mouthing and lexicalized signs), whereas reintroduced/maintained referents typically involved fewer and less conventionalized semiotics. Previous results (Hodge, Ferrara, & Anible, 2019) from a parallel corpus analysis of Auslan (a signed language of Australia) revealed similar patterns except for depicting signs. In the Auslan retellings, depicting signs were a more common strategy for reintroduced or maintained referents. For the signers in this study, depicting signs were more likely to occur as a strategy for new referents ($\beta = .28$, $t = 4.78$, $p < 0.005$). This unexpected finding does not align with investigations of ASL (Frederiksen & Mayberry, 2016), BSL (Morgan, 2006), or Auslan (Hodge et al., 2019) in which depicting signs are more common as strategies during maintenance and reintroduction rather than new mentions. We discuss the implications of this from a construction grammar approach that characterizes the difference between lexical and depicting signs as a matter of degree rather than type (Lepic & Occhino, 2018), acknowledging that grammaticalization of depicting signs into fully lexicalized forms results in fluid boundaries between these categories that are subjectively and contextually dependent. While additional data collection may further clarify these findings, we allow for the possibility that differences between depiction and lexicalization may be less affected by patterns of narrative reference tracking in the ecology of NTS signers than research on other signed languages would suggest.

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Developing conceptualization of JSL difficult aspect items through a Cognitive Linguistics–Sociocultural Theory Approach

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Keywords: image-schema, subjective/objective construal, Japanese-as-second-language, concept-based instruction, schemas for complete orientating basis of action (SCOBAs)

Interest in applied cognitive linguistics (CL) has been increasing steadily (e.g., Cadierno and Eskildsen 2015; De Knop and De Rycker 2008; Tyler 2012, Achard 2018) and many studies explore implementing CL approaches to language teaching (cf., Beréndi et al., 2008; Lam 2009). However, applying the theoretical proposals of such studies to Japanese-as-a-second language (JSL) instruction is still in its infancy (Imai 2016) and not all quasi-experimental studies (Masuda ed., 2018) have obtained robust effects when applying a CL approach. Therefore, we propose that Concept-based instruction (CBI) (Gal'perin 1992) be tried along with CL. CBI is grounded in Sociocultural Theory (SCT), a theory of human mental development built on the work of Vygotsky. Indeed, both consider meaning-making via symbols as the essence of mind and language and their development.

First, we examine the very important constructs relevant to pedagogical grammar — *image-schema*, *prototypes*, and *networks* in CL — as well as SCOBAs — *schemas for a complete orienting basis of action* in CBI. All of them have proved useful for teaching difficult-to-acquire-L2-conceptual items. Together, both CL and CBI constructs support the visual organization needed to facilitate the incorporation of the new difficult concept in learners' minds. In addition, a usage-based analysis of the new items brings a practical and real feature to learners' tasks. While SCOBAs serve as important pedagogical tools by promoting materialization of target concepts in L2 learners' minds (Negueruela, 2008), “schematic and prototype characterizations have their place in a pedagogical grammar since the virtue of a schematic characterization lies in the fact that it makes possible a concise statement of the complex conceptual unity of a category.” (Taylor 2008: 210). Furthermore, CBI takes a stepwise approach; after a conceptual explanation represented in SCOBAs, L2 learners engage in activities that promote their understanding of an L2 form and its functional value through over/covert speech and social interaction or cooperation.

Second, we propose that a CL-SCT-driven approach is instrumental for teaching difficult-to-acquire-aspects for typologically different languages like Japanese (“Be-language”) and English (“Have-language”), because it emphasizes different construing processes (Ikegami, 2016) and makes learners engage with L2 concepts. In this manner, we can reduce ‘unnecessary’ arbitrariness or ‘rules of thumb’. Ikegami (1991) and Moriyama (2007) state that while English speakers prefer an objective construal — which represents the event by placing the focus on the particular agent/individual, the Japanese speaker prefers subjective construal — which represents an event as a whole, where the individual involved is submerged in the scene. Following Focus-on-form (Doughy & Williams 1998), we propose that a CL-SCT-driven approach consisting of communal tasks along with a presentation of the image-schema for objective construal and subjective construal would foster learners' understanding of seemingly-peculiar aspects of the Japanese language, such as the non-use of *watashi* 'I' as subject, the use of motion verbs like *iku* 'go' and *kuru* 'come', the use of donator verbs *ageru* 'give' and *kureru* 'give (me/us)', and the use of passives.

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Basics of a Theory of the Expression of Thought in Language

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Keywords: creation of linguistic expressions, thought and language, abductive cognition, cognitive grammar

In this research, I present the basics of a theory of the cognitive process of how language users construct linguistic expressions from language-independent thought. The expression produced by this process can be externalized in speech or text, but it does not have to—it can, for example, be used in thinking in an ‘inner voice’.

Every expression will have a particular *fine structure* of its meaning and a particular *compartmentalization*. The fine structure is the mechanistic-level structuring of meaning, and is particularly important because the meaning of the expression will be nearly (but not exactly) identical to the original thought. In language, there is a wide variety of ways to generate approximately-equal meanings from different fine structures (which can be found both in paraphrase in a single language and in translations between languages). ‘Compartmentalization’ refers to how the information contained in an expression is cut up and organized. Different expressions that have approximately-equal meaning can have significantly different compartmentalizations—see, e.g., verb-framed and satellite-framed expressions (Talmy 2000).

The fine structure and compartmentalization of a linguistic expression are properties of the expression itself, and, in general, not of the original thought. Expressing a thought in language involves *approximating* it. Language is generative; expressions are constructed creatively, and this requires a thought that mirrors the fine structure of the expression. The central problem is then how to transfer a language-independent form of thought to a language-dependent one. There must be an intermediate stage—the *middle thought*—where the thought is manipulated so it can be compatible with the available fine structure of the target language.

This process is recursive in two aspects. The first arises from interdependencies in different parts of an expression. For example, let us suppose that (1a) and (1b) are the best possible approximations of their respective bits of thought in the target language. Direct constructional integration (c.f. Langacker 2003) of (1a) and (1b) is not possible (1c), so the thought must be adjusted to a different form that allows integration and produces an approximately-equal meaning, like (1d).

- (1) a. my friends and I
b. (X)’s time
c. *my friends and I’s time
d. my friends’ time and mine

The other is that the middle thought and final expression are recursively determined by each other: the idea is to find a middle thought that fits an expression that fits the middle thought. This entails simultaneous manipulation of thought and elements of its expression in language. The process involves a particular kind of *abduction* as its crucial mechanism, which I will explain in detail.

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An Ontology-based Cognitive Model of the Mental Lexicon

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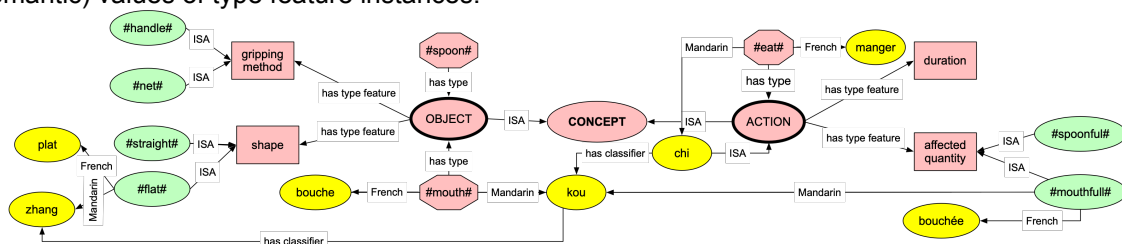
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Keywords: Cognitive Linguistics, Mental Lexicon, Cognitive Grammar, Cognitive Semantics, Classifiers

Negative transfer of classifiers has been witnessed in discourse production of sinophone *early* French learners. Examples of such mistakes, drawn from tests designed to elicit French discourse via pictographic stimuli, show that classifier values are often transferred literally onto French expressions: upon exposure to a pictogram representing the concept of « walking » enhanced by an action property marker standing for « a low unspecified quantity », 50% of the testees wrongly included a translated classifier of « 走, zǒu » in the French rendering (次, cì « Marcher une fois », 步, bù « Marcher un pas », etc.). A plausible explanation of such mistakes could be that early learners access meaning of lexical items in L2 via the conceptual and semantic representation of their equivalents in L1 *and* that classifiers are strongly bound to action and object concepts in the Mental Lexicon.

One of the general frameworks modelling the bilingual Mental Lexicon's structure, the « Revised Hierarchical Model » (see Pavlenko [2009], Kroll & Steward [1994]), places « concept sharing » at an *early* stage of second language learning. « Concept sharing » being a nebulous notion within bilingual Mental Lexicon theory, my approach reinstates the borders between « semantic » and « conceptual » structure (see Evans [2009]) as a means to identify possible links of classifiers to both linguistic meaning and language-independent knowledge. As mandarin classifiers specify inherent meaning features of objects, such as « 张, flat », « 块, squared », etc. but also define the countable partition units of actions, such as « 口, mouthful », for « eat » or « 步, step » for « walk » (see Jin [2013]), they can be thought to affect both the conceptual *and* the semantic level of lexical entry representations.

Beyond the overall structure of the Mental Lexicon, as proposed by existing models (Concept level, Lexical level, Concept Features, links), an explicit representation of what these structural units contain appears to be crucial to the understanding of the knowledge cluster termed « Mental Lexicon ». Poldrack and Yarkony [2015] stress that ontologies are currently the best solution to perform adequate knowledge representation, not only from a formal- and computational-, but also from a cognition-centred perspective. In accordance with this view, my work promotes modelling of the Mental Lexicon by ways of a formal ontology using Cypher rather than other popular encoding solutions (OWL, Topic Maps), because of the graph visualisation facilities provided by the Neo4j platform. The model I have implemented underlines the linkage of words (yellow) to semantic structure (green) and conceptual knowledge (rose) in the range of the « Action » and « Object » (concept) types, classifiers appearing as tokens materialising language-dependent (semantic) values of type feature instances.



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The indefinite use of the Present Perfect Progressive and its emotional effects

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Keywords: Present Perfect Progressive, indefinite use, emotional effects, temporal schema, temporal focus

In comparison with the Present Perfect (PP), the Present Perfect Progressive (PPP) has not received so much attention (e.g. Depraetere and Reed (D&R) 2000; Williams 2002). It has been said that the indefinite use—describing a situation that has occurred before speech time (S)—of the PPP often expresses “explanatory” functions (D&R 2000), as in *I have been working all day*, and carries strong emotions like surprise, disgust, impatience (Jespersen 1961; Onions 1932), as in *Tom has been painting the ceiling. (I couldn't sleep well, so I'm irritated now.)*; this is not the case with the indefinite use of the PP. Few studies have systematically considered these points. This paper explores why the indefinite use of the PPP tends to show such emotional effects based on the general theory of tense proposed by Wada (2001, 2009, 2013), which has systematically analyzed the PP and other tense forms in English.

In this theory, auxiliary verbs denote their own event times and the past participle refers to a situation prior to a certain time. The PP has a basic temporal schema where the event time of the past participle (E_2) is prior to that of perfect *have* (E_1), which coincides with S. Two cognitive criteria are operative in distinguishing four subcategories of the PP, but what is relevant here is the Perfective-Continuous criterion, which describes the relation between the two event times with the concepts of separation and merger. In the case of separation, E_2 is separate from (prior to) E_1 , which coincides with S and receives a temporal focus (TF), a focus directed at the most salient part of a temporal schema (cf. Langacker's “profile”). This type of PP indicates either a direct resultant state of the situation involved (i.e. the entailment type) or an indirect one (i.e. the conversational implicature type). In the case of merger, E_2 continues up to E_1 , which coincides with S and receives a TF; the state (E_1) implied at S is illustrated in *I've lived in this neighbourhood since I was a kid (and this is where I'm living now)*.

Considered along these lines, the basic temporal schema of the PPP has the event times of perfect *have* (E_1), past participle *been* (E_2) and present participle *-ing* (E_3). E_2 is prior to E_1 , which coincides with S. E_3 is unbounded because the present participle expresses imperfectivity (Langacker 2008). E_2 merely serves as the time of orientation for E_3 because progressive *be* refers to a schematic situation (Langacker 2008). On these bases, we first present the temporal schema of the continuative use. A situation associated with E_3 can extend into the future due to its imperfectivity and E_3 continues up to S when it merges with E_1 . The PPP must be used for past situations described by non-stative verbs to reach S. Now we present the temporal schema of the indefinite use. In this use, to represent the past situations as bounded before S, we have two options: the PP and the PPP. The PP is the unmarked choice and the resultant state (E_1) at S is foregrounded because E_1 receives a TF. Thus, to differentiate the two indefinite uses, the speaker of the PPP—the marked choice—usually pays his/her attention to the past situation, the TF being directed at that part of E_3 encompassing E_2 . E_3 connects only indirectly with E_1 via E_2 and there is no guarantee that the past situation itself is completed; E_1 thus cannot describe a direct resultant state but rather an indirect one. The TF's being directed at E_3 , together with the existence of an indirect resultant state at S, causes the speaker to zoom in on the past situation in reference to the state at S. For this reason, explanatory effects arise showing how the past situation is related to the speech situation. Because the PPP involves progressive aspect, Williams's (2002) notion of “susceptibility to change”, i.e. a driving force to use progressive aspect, comes into play. What is susceptible to change is usually linked with tentativeness and thus instability and can, in terms of semantic iconicity, motivate the effect of strong emotions, which are usually tentative and thus unstable. In this way, the indefinite use of the PPP can express explanatory functions and convey implications such as strong emotions at S, i.e. ones deriving from the indirect resultant state at S.

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A Relevance-Theoretic Approach to Mistranslation

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Keywords: translation; cognition; mistranslation; relevance theory; mismatches of cognitive contexts

When appreciating or evaluating the quality of translation, people would always find some translation unsatisfactory, which they call improper translation or mistranslation. Previous researches, with faithfulness as the criterion, define mistranslation as derivation from the original, holding that mistranslation is resulted from the discrepancy between languages and cultures. Fruitful as these descriptive-classificatory approaches are, they fail to explain how linguistic and cultural factor resulted in mistranslation in the process of translating. Progress of cognitive-pragmatics provides the possibility to reveal the psychological root of mistranslation. According to relevance theory, the foundation of cognitive-pragmatics, human communication is an ostensive-inferential process, in which the hearer infers the communicator's intention by combing his contextual assumptions with the communicator's ostensive stimulus (utterance). Relevance is the basic principle to abide by. That is, adequate contextual effects are reached at minimal processing effort. Viewing translation as human communication, this paper defines mistranslation as cross-cultural pragmatic failure. In the framework of relevance theory, the process of translation is subdivided into two ostensive-inferential processes: communication between the source text author and the translator and communication between the translator and the target audience. The roles of cognitive context are examined in both processes and mismatches of context are postulated to account for mistranslation.

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Production and perception of underspecified connectives: the effect of genre

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Keywords: discourse connectives; corpus pragmatics; experimental; acceptability; genre

It is generally assumed that coherence relies on building discourse relations across utterances. When producing discourse relations, speakers and writers have a choice between implicit and explicit marking (e.g. Taboada 2009), the latter being usually carried out by “connectives”. This paper focuses on a third, intermediate level between implicitness and explicitness, viz. *underspecified* connectives (Spooren 1997). They typically include *and*, *but* or *so*, which can be used to express many different meanings besides their encoded one (addition, contrast and consequence, respectively). Our goal is to determine the contextual and linguistic conditions that favor the production of underspecified connectives. Specifically, we want to test whether underspecification is more frequent in informal and unplanned genres, and whether it equally applies to various discourse relations.

We report on the findings of a corpus study and two experiments. First, the distribution of *and*, *but* and *so* and their different meanings is computed across different genres of spoken English from the *DisFrEn* corpus (Crible 2017), where they were manually annotated. The corpus findings suggest the following hypotheses for the experiments: underspecified connectives are more acceptable in informal genres; contrastive uses of *and* (e.g. *marijuana is glorified and alcohol is condemned*) are unacceptable in formal genres; consequential uses of *and* are acceptable (e.g. *he left and the party was ruined*).

We then discuss the results of two offline perception experiments. The first is a forced choice task targeting the acceptability of utterances containing *and* in two computer-mediated genres (chats and comments to online press articles). Four batches of 28 items (each carried out by 30 remunerated participants) oppose the original connective with a stronger or weaker alternative (e.g. original *so* opposed to the weaker *and* in the same pair of utterances expressing the relation of consequence). These stimuli, extracted from a corpus of chat conversations (Loyola CMC corpus, Goldstein-Stewart et al. 2008), were used in their original version and in a modified, more formal version. The interface, prepared on LingoTurk (Pusse et al. 2016) for Prolific Academic, visually represented a “chat” display and a “comment” one, in order to clarify the difference in formality between the versions. Results show that the original connective is mostly preferred, especially when confronted to a weaker alternative. There is a slight but significant preference for stronger connectives (e.g. *however*) in the formal genre, especially for the relation of contrast.

In the second experiment, the participants are presented with the same stimuli, either in their “chat” or “comment” version, and they have to drag-and-drop their preferred connective from a list of options. Regression models show that utterances originally connected by *so* tend to be assigned the weaker *and* by participants, whereas this connective is rarely used in contrastive relations. Genre is not a significant predictor, except in relations originally marked by *but*. Overall, both experiments show little effect of genre except for an incompatibility between *and* and contrastive relations in formal genres. In this respect, perception matches production as measured by the corpus study. However, results from the two experimental studies do not fully map, thus showing that perception and elicitation are not necessarily aligned. The combination of corpus-based and experimental methods has highlighted the role of frequency, cognition and genre expectations on connective variation, while further qualitative analyses should uncover the role of linguistic cues in the context of the connectives.

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Confirmation/agreement Seeking in Talk-in-interaction:

with special reference to the interrogative particle “HAO” (豪) in northeastern

Mandarin Chinese

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Keywords: conversational interaction, holophrastic tag question, discourse operator, epistemic gradience, confirmation/agreement seeking

This paper examines the interactive and coordinative functions of the discourse particle HAO (豪) in the Northeastern Mandarin Chinese from the perspective of interactional linguistics, using the data of natural conversation. The data includes 20-hour natural conversation collected by the author himself, as well as the dialogic transcription from Northern dialectal film and television program.

In previous studies, HAO(豪) was often regarded as a modality particle at the end of the sentence. This paper proposes that HAO(豪) is different from the modality particles which occur at the end of sentence/utterance, like BA(吧), NE(呢), etc. in Mandarin Chinese. HAO(豪) is an interjective particle, independent from the preceding utterance, and should be categorized as utterance tag. The “HAO(豪?)” tag is a single word question that is attached to the end of the immediate preceding utterance and is highly positional sensitive for turn construction, and therefore should be regarded as a discourse operator (Norrick 2009; Onodera 2014), or to be specific, the one-word tag question (Couper-Kuhlen & Selting 2018: Chapter 8). For example:

(1) 你结婚了，豪？

You married hao

You're married, aren't you?

(2) 今天天气不错，豪？

Today weather not bad, hao

It's a good day, isn't it?

(3) 我吧豪，从小就爱看电影。

I particle(uncertain) hao, from childhood like to watch movie

As for me, right? I like watching movie since I was a child.

In the framework of the epistemic gradience (Heritage 2012), this paper proposes that the epistemic gradience of the HAO(豪) question is the slightest compared to other types of questions, including polarity questions in Chinese. The tag question HAO (豪) is not so much used to seek information as it is to confirm the content of the just-said within the speaker's utterance.

The HAO (豪) tag question can not only be used to seek confirmation of the addressee (example 1), but also solicitate agreement or supportive answer from the addressee (example 2). In the narrative style (example 3), HAO(豪) also can be used inviting the hearer to interact and coordinate to reach a common ground. This paper tries to give an unified explanation of the HAO(豪) in different speech context.

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A Cognitive-pragmatic Account of Specificational Sentences

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Keywords: specificational sentences, reference files, noun phrases, cognitive pragmatics, mind reading

INTRODUCTION In semantic-pragmatic studies on specificational sentences (e.g., (1) The winner is ... John!), one question that often arises is what the subject NP represents. In (1), “the winner” is equated with John, but cannot represent John himself, since the tautology “John is John” is not specificational. This paper proposes a new account from a cognitive-pragmatic perspective mainly based on two studies: (a) Jackendoff (2012), which provides the idea of reference files (see below) and (b) Scott-Phillips (2015), a cognitive-pragmatics-oriented study of the origin and evolution of linguistic communication, which suggests design features of languages.

COGNITIVE FOUNDATIONS Reference is a phenomenon wherein a linguistic expression is connected to an external referent, where there must be something cognitive that is happening in our mind. It is most plausible to posit that the referring is mediated by some mental representation which corresponds to the referent and is also somehow linked to the expression. Such mental representations were called reference files (henceforth, RFs) by Jackendoff. They contain all potentially relevant information about the referred individuals. Importantly, humans deploy RFs to keep track of things even when they are not using language.

I propose adding an ID of the referent to RFs as a part of their data structure in order to distinguish files of different referents. For example, when you and your friend drink cups of coffee, you try (and sometimes fail) to keep track of your cup so as not to confuse them; thus, you deploy two RFs with constant IDs, *a* and *b*. IDs can be free variables when the referent is yet to be identified. Suppose you are looking for two missing pieces while solving a jigsaw puzzle. Each of them has an RF with a distinct free variable ID, *x* and *y*, with other information about them, such as their shapes and envisioned looks. Free variable IDs play a crucial role to deal with so-called non-referential NPs in the same way as normal referential NPs.

PRAGMATIC FOUNDATIONS According to Scott-Phillips, “a language is the rich, structured collection of conventional codes that augment ostensive-inferential communication [or, OIC] within a given community” (p. 20), and the evolutionary function of OIC, of which linguistic communication is a special case, is mind reading for the listener and the manipulation of others’ mental states for the speaker. In OIC, speakers also must read listeners’ minds so as to provide appropriate evidence (e.g., utterances) for their communicative and informative intentions and make themselves understood. Humans, as competent ostensive-inferential communicators, are apt mind readers and, to a large extent, are able to guess what their interlocutors do/do not/want to know. Given all of the above, languages are arguably designed for ostensive-inferential communication, where a speaker constantly estimates the hearer’s mental states, and the meaning of NPs should be optimized for OIC.

ANALYSIS Based on these tenets, the semantic-pragmatic aspects of the specificational sentence (1) can be newly analyzed. In a typical situation, before the utterance, the speaker assumes that the hearer knows who John is but not who the winner is. If this assumption is correct, in their minds, the John file has a constant ID, *a*. Thus, the hearer can link such an RF to the predicate NP *John*. In contrast, regarding the subject NP “the winner,” the listener has not identified the referent before the utterance, although he knows that there is some winner. Therefore, he has an RF containing a free variable ID, *x*, and the information that <*x* is the winner (of such and such).> The speaker, assuming this, expects the hearer to link the NP to such an RF. Of course, the speaker, knowing that the winner is John, does not have such a file with a free variable. Instead, in the speaker’s mind, the John file with a constant ID contains the information that <*a* is the winner.> The listener, understanding the utterance, replaces *x* with *a*, merging two files containing the same ID into one, and he thus improves his knowledge.

If the analysis above is on the right track, we can argue that the speaker’s meaning of the NP “the winner” is the RF in the estimated hearer’s mind with a free variable, *x*, and a description of <*x* is the winner (of such and such)>. Generally, such a “non-referential” NP of a specificational sentence expresses an RF with a free variable ID and a description of <*x* is NP>, and the variable is to be fixed by the constant ID of the RF linked to the other NP.

CONCLUSION Many other constructions (e.g., concealed questions, some existential sentences, and attributive use of NPs) involve NPs linked to a free variable ID RF in estimated hearers’ or mentioned people’s mind. To additionally cover these, the author is making a theory of cognitive semantics and pragmatics of NPs, expanding Jackendoff’s notion of RFs.

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The Interpersonal Function of the Japanese Teen Slang *Mazi manzi*

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Keywords: context dependent, interpersonal function, Japanese teen slang, *Mazi manzi*, *Yabai*

This study claims that the Japanese teen slang *mazi manzi* or *manzi* (“マジ卍” or “卍”), often used by female high school and college students, has the interpersonal function. One of its significant characteristics is that it can describe either positive or negative situations:

- (1) a. Tesuto goukaku! Mazi manzi! (positive) “I passed the exam! Woo-hoo!”
 b. iPhone kowareta. Mazi manzi. (negative) “My iPhone has broken. Jesus.”

The grammatical characteristics of *mazi manzi* have been revealed as below in comparison with the Japanese degree expression *yabai*, which is also known as a word bearing the bipolar feature:

		<i>Mazi manzi</i>	<i>Yabai</i>
Category		Adjectival Verbs / Interjection	Adjectives / Interjection
U sage	Predicative	✓	✓
	Independent-word	✓	✓
	Adverbial	*	✓
Pragmatic characteristics		It requires more information than <i>yabai</i> to interpret.	It only requires a context to see if it has a good or bad meaning.

Then, one intuitive question will arise: why do people use such euphemistic expressions instead of straightforward ones which are much easier to communicate? I argue that the use of *mazi manzi* is motivated by the mind peculiar to younger Japanese: they purposely choose the expression instead of sharp ones such as *mukatsuku* “disgusting” to avoid disturbing the atmosphere of conversation:

- (2) Aitsu, { *mazi mukatsuku* / *mazi manzi* }! “She / He really pisses me off!”

Since the use of the explicit expression like *mukatsuku* may hurt hearer’s feelings and destroy the relationship between a speaker and hearer, younger Japanese sometimes choose *mazi manzi* as an alternative, i.e. softening (Satake (1997)). In particular, the use of *mazi manzi* in (2) has an effect to hide speaker’s feeling of anger and make the statement somehow funny.

The argument above is further supported by studies on Japanese vague expressions such as *rashii* “it seems” and *zyanai desuka* “as you know,” both of which have interpersonal function (Murata (1994), Horasawa (2011) etc.):

- (3) a. Minna shinro ga kimatteiku zyan. Zibun hitori oiteikareta mitaide cho yabai rashii.
 “You know, everybody decided their course after graduation. I feel I’m left behind. It seems I’m in a super awkward situation.”
 b. (When A and B first met)
 A: Tabemono no suki-kirai wa naino? “Do you have any issues with food?”
 B: Watashi sakana ga taberarenai zyanai desuka. “I dislike fish, as you know.”

We usually do not use *rashii* to refer to self and also do not use *zyanai desuka* when a speaker and hearer first meet. However, if *rashii* and *zyanai desuka* are not used in the above sentences, they will sound somehow icy and acrid. Then, they dare to use these euphemistic expressions to make their statements softer. This state of mind goes for the negative use of *mazi manzi*, as shown in (2).

There is no such a strategy in conversations in English, because its native speakers usually try to clarify their position. The use of *mazi manzi*, therefore, reflects the typical mind peculiar to teen female Japanese and it deals with interpersonal relationship among them.

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In-out orientation for expressing the self and others in Japanese: a case of “uchi” vs. “soto”

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Keywords: pragmatics of in-out orientation, polysemy and categorization, expressing the self and others, “uchi” vs. “soto” in Japanese, group mentality, “otaku”

This paper points out an in-out orientation found in Japanese. The contrast of “uchi” vs. “soto” can be literally translated as “inside” vs. “outside.” Horn (1989: 268-273) explained oppositions by dividing contrary opposition and contradictory opposition. The opposition of “soto” and “uchi” has a flexible boundary. It can either be contrary or contradictory. In other words, the way we categorize “being inside” and “being outside” is often subjective and cognitively and pragmatically different. For example:

(1) Motto uchi ni haitte kudasai.

More inside to enter please: POL. (Please come further inside.)

Japanese “uchi” does not only express being physically “inside” but also to expresses self or self-related connotations. Previous insightful research such as Christofaki (2018), Hasegawa & Hirose (2005), Jaszczolt (2018), Miwa (2005), Takekuro (2006), Tanaka (2012), Wetzel (1994) and so on worked on this topic from various perspectives, but some of important extended issues have not been fully explored. This paper attempts to further explain the cognitive and pragmatic understanding of “uchi” vs. “soto.” In cognitive linguistics, Johnson (1987:40) stated, “We understand our experience as broken up according to basic categories (of objects, events, states, properties, relations, etc.)” This viewpoint is consistent with Langacker’s analysis of negation (1991:134). Adapting these views, “uchi” is being inside of a certain container/group, and “soto” is outside. Only “uchi” has self-referential usages, and the word “soto” is not semantically extended to describe “some other people,” or “not me,” or “not us.” This paper examines the less discussed underlined meanings of “uchi”: a house, one’s house, my house, our house, a home, a household, one’s family, one’s husband, one’s wife, the inside, and the interior. Specifically there are two major Chinese characters in Japanese which both read “uchi.” They are “家” and “内”, which simply correspond to “house” and “inside.”

(2) Uchi no miso shiru no aji wa tenkaippin da. [NJED]

my wife NOM miso soup NOM taste TOP absolutely superb COP.

(The miso soup that we have at home (my wife makes) is absolutely superb.)

(3) Kono chokoreto wa uchi no seihin da.

This chocolate TOP our NOM product COP. (This chocolate is one of our (firm’s) products.)

(4) Tanaka Tarou uchi (田中太郎内) (Written and signed on behalf of Taro Tanaka by his wife)

Example (4) is one of the typical and classical ending parts of a letter. Here, a wife’s name is not written. However, the receiver knows that the wife wrote the message instead of her husband. In this case, generally the Chinese character “uchi (内)” is handwritten in a smaller size, which shows the modesty of the writer. This example logically follows Lakoff and Johnson (1980)’s “SIGNIFICANT IS BIG,” which conveys a writer’s intended level of politeness. Also, there is a colloquial expression, “uchira,” which means “we” especially among young people. Japanese “ra” is a plural marker, but it not only describes being plural but also giving solidarity and camaraderie among peers. Finally, this paper mentions the expression “otaku” which means a nerd or a geek. “Otaku” was originally used by some anime and manga fans as a way of addressing others with similar interests. Today it also conveys an image of obsession and the detriment of their social skills, and therefore has a negative connotation. Etymologically “otaku” is “o” (honorific) plus “taku” (house) which in combination means “your house,” and thus originally politely and indirectly implies “you,” but the honorific politeness nuance has now almost disappeared when referring to a nerd. Miwa (2005) and Tanaka (2012) mention that Japanese is found to have 51 markers to express “I.” “Uchi” is not the most formal and prominent expression compared to “watashi” which is one of the most formal expressions for the self. Still, “uchi” is a perfect example to reflect the central idea for expressing the self: the examples of Japanese “uchi” might particularly and clearly show the feature of ego-centricity, but we might be somehow universally ego-centric, and might make a flexible and dynamic distinction between in-groups and out-groups.

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A Cognitive Linguistic Approach to *Ma* in Japanese Haiku

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Keywords: reference point ability, blending, modes of cognition, defamiliarization

Japanese haiku is often said to be the literature of *ma*. Although there are some studies on *ma* in Japanese haiku (see Miyakoda & Ishikawa (2015), Arima (2018)), their focus is mainly on the rhythm or beats in Japanese—the measurable *ma*. Rather, *ma* is a way of cognition created by *kire*—the cut in haiku. Yamanashi (2015) says that one of the basic function of *kireji* or cutting word *ya* is to specify the domain of the topic, and rhetorically cutting the stream of thought in the verse leads the reader to contemplate the relationship between the phrase marked by *ya* and the remainder of the verse. This, however, does not explain why *kire* leaves the reader with an allusive feeling, which can be called unmeasurable *ma*. In this presentation, I will describe, in terms of cognitive linguistics, how a reader conceptualizes haiku when he/she feels *ma*.

Haiku, consisting of only fifteen syllables, has two broad types: *Ichimotsujitate*, which features one scene, and *Toriawase*, which contrasts two scenes. I will describe, in terms of the reader's reference point ability, what kind of haiku is good by including *ma* in these two types and conclude that the conceptualizer can experience *ma* when he/she steps out of the dominion, which leads to defamiliarization, and gets back to the reference point. This is when the two dominions blend, and a sense of profoundness emerges in the reader.

As an example of *Toriawase*, consider the haiku in (1) given here. It was composed by Hakyo Ishida, one of the modern haiku poets.

(1) *Onna ku to obi maki izuru saruberi*
Woman come CM belt tie go out crape myrtle (CM: complement marker)

Hasegawa (2012) partly modifies this haiku into the following ones to compare with the original.

(2) *Onna ku to obi maki izuru atsusa kana*
Woman come CM belt tie go out heat TP (TP: topic marker)

(3) *Onna ku to obi maki izuru kurage kana*
Woman come CM belt tie go out jellyfish TP

The haiku in (2) is categorized as *Tsukisugi*—the too close one—because we can easily identify a causal relationship, that is, tying an *obi* belt leading to heat. It's prosaic and there is no *ma* in it. On the other hand, the haiku in (3) is of the type *Hanaresugi*—the one too far apart. We cannot imagine the scene because the tying of an *obi* belt to meet a woman and (the mention of) a jellyfish are isolated events.

By describing the above haiku examples in terms of the reader's reference point ability, we can see that only when we conceptualize *saruberi* in the haiku in (1), we can step out of the dominion (this is *kire*), and the word in turn becomes a reference point. We can now find *onna ku to obi maki izuru* in its dominion, and the dominions blend and become one. This is when the conceptualizer feels *ma* in the haiku, and this kind of haiku makes the readers moved.

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Linguistic Means for Marking Speech Acts: Discourse Formulae

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Keywords: speech acts, Construction Grammar, formulaic sequences, typology, discourse

The philosophic category of speech acts by J. L. Austin and J. Searle and their followers (see overview in Kissine 2013) is aimed at classifying types of interaction between the members of conversation, focusing on two things: the intention of the speaker and the effect on the addressee.

To be treated as a standard linguistic category, speech acts should consist of a set of values (cf. singular, dual and plural for number), and a set of markers distinguishing the values (cf. -Ø for singular and -s for dual and plural in English). Language typology reveals the patterns of categorization, studying which types of marking occur across languages. Speech acts cannot be regarded as a linguistic category and therefore have no basis for linguistic typology until they are described in terms of linguistic markedness.

The problem was raised in Croft 1994 where speech acts were accounted for in terms of types of sentences which have special syntactic markers. However, the notion of “types of sentences” concerns exclusively the surface structure of the utterance. Meanwhile, an important idea of the speech act theory is that the illocutionary force does not always directly correspond to the form of the utterance (cf. suggestion ‘Let’s go!’ conveyed in a sentence of interrogative type – *Are you coming?*). Therefore, types of sentences cannot be regarded as proper markers for the category.

We suggest to consider what we call **discourse formulae** (speech formulas in Fillmore 1984) as linguistic markers for speech acts.

Discourse formulae are a special type of constructions such as *You bet!*, *No way!*, *Say what!* that are used in dialogue as an isolated reaction to the interlocutor’s utterance, cf. (1).

- (1) - *Are you coming for a drink?*
- ***You bet!***

Unlike prototypical constructions (like *what’s X doing Y* in Kay & Fillmore 1999), discourse formulae are entirely fixed and do not have any variables within their body. It is the preceding interlocutor’s remark that fills the slot. Discourse formula, as a reaction to this remark, marks its illocutionary force. We argue that discourse formulae equally interact with indirect and direct speech acts. This means that they can be treated as linguistic markers of speech acts and speech acts can be accounted for as linguistic and cognitive category.

The further problem is whether natural language classification of illocutionary stimuli (provided by discourse formulae marking) matches the traditional speech act classification. To answer this question, we built a database containing around 200 Russian discourse formulae with their semantic and pragmatic classification and annotation of the types of preceding context.

Our analysis shows that language marking of speech acts not only supports the traditional speech acts classification but also enriches it. E.g., concerns, apologies, news and compliments are marked by different discourse formulae across languages and therefore should be added to the list of conventional speech acts as cognitively relevant patterns of speech situation.

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Apologies by Individual Citizens for Political Situations

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Key Words: Discourse, Pragmatics, Speech Acts, Apology, Public Apologies

Research on apologies has focused on two main types: personal apologies for a range of social infractions by individuals (e.g. Olshtain 1989, Meier 1998), and institutional apologies for larger-scope problems (e.g. Zhang 2003, Battistella 2016). We analyze a third type, apologies by individual citizens for political situations. One example is opinion column apologies for actions of U.S. President Trump. Another is apologies on the multimedia website *sorryeverybody.com* for the 2004 re-election of George W. Bush.

Building on our previous research (e.g. Kuha & Riddle 2017), we show that such columns and webpage postings contain typical elements of personal apologies, and we provide a multimedia discourse analysis of their forms and functions. Specifically, we discuss the styles used in nearly 2,000 apologies, analyzing personal, family, and pet photos, postcards, and drawings from *sorryeverybody.com*, as well as elements of typography, spelling, word choice, reference to or avoidance of agency via lexical and grammatical means, level of (in)formality, and the use of speech acts such as offering, invitation, condemnation, insulting, and promising, plus humor and irony, in the entire body of linguistic data. For example (1) includes such personal and informal linguistic elements as first person singular and second person pronouns, contractions, a literal head act with a regional slang intensifier, plus an offer of food as reparation, and a conventional typographical indication of kisses and hugs. It is accompanied by a photo of a young woman holding a sign with the message and making a face indicating regret and dismay.:

1. I'm wicked sorry. I'll make you all cookies XOXO (*Sorryeverybody.com* posting)

In example 2, from a journalist's online column, the first head act has a more formal tone (*please accept this American's apology*), but the remainder aligns the individual American with others (*we*), and addresses the world in a personal way, using a second, more informal head act (*We're really sorry*) intensified with the somewhat informal (in this context) adverb *really* (e.g. as opposed to *very*), and it makes an appeal for emotional support (*keep us in your thoughts*), employing a conventional formula (with pronoun and addressee variations) often used in cases of serious problems, illness, or death. The remainder of (2) cited here criticizes Trump harshly, positioning the apologizer as a good person and deserving of forgiveness for Trump's election and the consequent results.

2. Dear world, please accept this American's apology for Trump's first year in the White House. We're really sorry and we hope you can keep us in your thoughts until some sort of catastrophe removes this demagogue from the presidency...

We argue that such elements frame the apologies as appeals to friends, although they are literally addressed to strangers, and that their formulations include attempts to disarm critics and save face.

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Corpus-based Comparative Study of PLANT Metaphor in English and Chinese

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Keywords: corpora; economic discourse, PLANT metaphor; the Great Chain of Being

As a core component of organic metaphor, PLANT metaphor has constantly been a major concern for scholars. Recently, comparative study between Chinese and English Plant Metaphor has become the spot light. However, corpus-based empirical studies have rarely been conducted. This study, based on two comparable economic corpora, aims to investigate and compares PLANT metaphor in Chinese and English from the perspective of production rate based on the method adopted by Charteris-Black(2004), semantic category according to the categorization model by Zhe Zhang(2018), and linguistic expressions in accordance with Deignan *et al.*'s comparative framework, where manual annotation is applied and the PLANT metaphors are exhaustively identified and annotated. Chinese and English corpora are *China Economy Weekly* (365 thousand words after word segmentation) and *the Economist* (594 thousand words) respectively. The results indicate that English PLANT metaphor is more productive than Chinese(resonance: 58695>34320); Both Chinese and English have the same semantic categories despite the differences in their employment frequency; Chinese and English employ different plant types to structure economic concepts. English takes more preference for *bud*, *branch* and *flower*, while Chinese prefers *fruit*. Chinese uses plant types such as *willow*, *epiphyllum*, *bamboo* and *lotus* more frequently while English is more inclined to *mushroom*, *rose* and *shrub*. Human beings that have different cultural background share common close relationship with plants in nature from ancient times. The similarity of human experience, the universality of Great Chain of Being folk model facilitate the universality of PLANT metaphor. Different cultural historical experience and subjective understanding result in PLANT metaphor variations.

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Curiosity is [image]: A crosslinguistic analysis of metaphor production and interpretation using a multimodal task

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In this poster presentation, we present ongoing research that analyzes participants' metaphor production and interpretation using prompts from two different modes of communication (text and image) and two different languages (Japanese and English). In order to do this, we developed material, which consists of 20 topic prompts (e.g., friendship) in the textual mode and six unique images (e.g., space heater, castle, colored pencils, etc.) for each topic prompt, as potential sources to complete the metaphor. These images were selected as having potential semantic features that could be mapped onto the topic (e.g., warmth, protection, variety). Using nonverbal stimuli for the source provided the participants a more direct experience of the underlying concept and richer modal-specific simulation of it. Moreover, we focused primarily on abstract topics in order to get participants to construct relational metaphors, where the topic and source share a system of higher-order relations, as compared to attributive metaphors, where they share object attributes (e.g., shape, color, length, etc.). These types of metaphor require deeper processing and are typically preferred than the shallow matching of concrete properties in attributive metaphors (Clement & Gentner, 1991). The material was developed simultaneously in both Japanese and English, everything besides the language, was identical (topic items, images, and order presented). Participants saw the topic on a computer screen and then the six images. They first chose one of the images to complete the metaphor and then provided an interpretation of it.

In this poster, we also discuss preliminary results from the data collection. The first aim of this study was to look at preferential source selections by the participants for the different topics to see if some sources had a higher frequency than others. To do this, we used descriptive statistics to show these variations. In the second part of this exploratory study, our aim was to uncover some of the online strategies used by the participants when interpreting the newly generated metaphors. These interpretations required them to find some relational structure between the selected image and the abstract topic. In order to model these interpretations, we adapted the coding categories developed in Wu and Barsalou (2009) and further revised by McRae, Cree, Seidenberg, and McNorgan (2005). For the purposes of this study, we only used three of the four general codes (entity properties, situation properties, and introspective properties). Data suggests that the semantic features used for the interpretations rely on a narrow number of these coding categories, especially the global systemic property of the entity in the image (entity properties), the typical goal or function of the entity within a situation (situation properties), and causal relationships of the entity (introspection properties). We will present these initial findings and discuss some limitations and direction for future research.

Finally, using participants with varying first languages allowed us to perform cross-linguistic analyses between the responses completed in English and those completed in Japanese in order to look for similarities and differences between the two languages. Using data from the before mentioned descriptive statistics and semantic feature models, we discuss possible influences the first language has on preferential sources for metaphors and the structural knowledge used to interpret them.

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ECONOMY metaphors in political discourse

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Keywords: conceptual metaphors, ECONOMY metaphors, political discourse, cross-linguistic analysis, source domain concepts

This study investigates how economy is portrayed through conceptual metaphors in political discourse. The material consists of fourteen presidential inaugural speeches in Taiwan from 1948 to 2016, given by six presidents. Our goal is to examine how metaphorical expressions on economy are related to the development of political transformation in Taiwan and to compare the ECONOMY metaphors between Taiwan Mandarin and American English. To extract metaphorical expressions of economy, “the searching for target domain vocabulary strategy” (Stefanowitsch & Gries, 2007) is applied in this current study. First, *jīngjì* ‘economy’, the lexical item referring directly to the concept ECONOMY, is searched in the fourteen speeches. Second, the extracted cases are examined to see whether the target lexical item is embedded in metaphorical expressions (Lakoff & Johnson 1980; Lakoff 1993). In total, 73 metaphorical expressions of economy are found. Based on the patterns of collocations and intertextual cross-references, five groups of conceptual source domains are identified: LIVING ORGANISM, BUILDING, MEACHINE, WAR, and TREASURE. The types of metaphors manipulated in different period of time show a significant correlation with the democratization process in Taiwan, which has gone through three stages of democratization: period of martial law (1948-1987); transition to democracy (1990-1996); democracy consolidation (2000-2016). The metaphor ECONOMY IS A WAR is only observed in the first stage, considered as national mobilization for suppression of the communist rebellion period, whereby democracy symbolizes a new order that needs to be constructed from turmoil, so does economy (e.g.,...to *defeat the enemy in economy*). The metaphors ECONOMY IS A LIVING ORGANISM and ECONOMY IS A BUILDING are used in both the second and third stages. However, the manifestation is based on different grounds. During the second stage, when the focal point is to establish the foundation of democratic system, a solid economic system and economic liberalization are in need (e.g.,...to *establish a solid economic system and aim for economic liberalization*). During the third stage when several milestones in the journey of democratization have been achieved, Taiwan still encounters some upcoming obstacles such as diplomatic dilemma and global economic catastrophes. Thus, the emphasis in this stage is to reconstruct and innovate the economic system to ensure and accelerate economic growth (e.g.,...to *develop a brand-new economic system and accelerate economic growth*). In addition, some cross-linguistic similarities and differences are found in the metaphorical expressions of ECONOMY between Taiwan Mandarin and American English in their respective political discourses. To map onto the target domain concept ECONOMY, the source domains are similar in both Taiwan Mandarin and American English. Both languages apply LIVING ORGANISM, BUILDING, MEACHINE, and WAR as source domains. But, one critical difference is observed: the idea of economic growth is conveyed through the source domain PATH in American English (Boers & Demecheleer, 1997) (e.g., ... to *make some advances on the security of the assets of closed banks*), while it is delivered through the source domain LIVING ORGANISM in Taiwan Mandarin (e.g., ... to *accelerate economic growth*). This reflect that the concept of economic growth is conceptualized differently in two languages, which evidences that socio-cultural factors may influence how people use metaphors to understand abstract concepts. The findings demonstrate not only the correlative patterns of ECONOMY metaphor with the political transformation in Taiwan but also provide some insights into the cross-linguistic analysis of metaphors in political discourse.

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“The way we corrupt”: an experimental approach to metaphorical framing

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Keywords: metaphor, framing effects, reasoning, experiment, corruption

Over the past decade, metaphorical framing effects have been one of the major focuses in the realm of cognitive science. Most notably, a series of studies undertaken by Thibodeau and Boroditsky (2011, 2013, 2015) reveals how metaphors affect the way people think and reason about complex social issues. Acknowledging the power of metaphorical framing effects, this study aims to investigate how different metaphors can lead people to have different viewpoints toward corruption which has long been a serious problem in Thailand. Prior to conducting experiments, we first employed the word sketch tool available via the online corpus tool Sketch Engine (Kilgarriff et al. 2014) to examine collocates of the lemma CORRUPTION in the 15-billion-word English Web 2015 corpus and of the lemma คอรัปชั่น (meaning ‘corruption’) in the 82-million-word Thai Web corpus, so that we could see a broad picture of how people conceptualize corruption and determine appropriate metaphorical framing conditions. Overall, we found that corruption is usually conceptualized by means of either the Disease/Illness metaphor or the Thief metaphor.

In this regard, we divided our experiments into three sets. For each set, participants were asked to read one of the three versions of texts concerning corruption in a fictitious country. Those three versions of texts include one non-metaphorical condition and two metaphorical framing conditions, namely the corruption-as-disease condition and the corruption-as-thief condition. Having read the text, participants were asked to suggest their preferred solutions to reduce corruption in the country. Participants’ solutions were coded into categories in line with the entailments of the two metaphors: (a) ‘social reform’ for the Disease metaphor, (b) ‘law enforcement’ for the Thief metaphor, and (c) ‘miscellaneous’ in case the participants propose any other variations of the solutions.

We found that the topic corruption by itself leads people to be more reform-oriented than enforcement-oriented. In addition, a number of solutions proposed by the participants in the non-metaphorical group tend to be unsystematic and miscellaneous as the participants were likely to say that “more information is required”, “the country is unknown”, etc. However, once the metaphors were presented, the majority of answers tended to conform with the entailment of each metaphorical condition. More importantly, we also observed that, although the topic corruption is more reform-oriented in nature, the reform-oriented solutions proposed by the participants who received the corruption-as-disease text were more systematically elaborated than those proposed by the participants in the non-metaphorical group. Thus, we hypothesized that metaphors not only have an influence on the way we reason about social issues, but also affect the quality of the proposed solutions in terms of systematicity and elaboration.

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Metaphor Interpretation: a Quest for Cross-cultural Variation

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Keywords: conceptual metaphor, cultural variation, metaphor interpretation

This cross-cultural study, on a more general level, aims at developing a framework to research metaphor interpretation, i.e. how people specify metaphorical meanings. At a more specific level it attempts to reveal some cultural variation in metaphors of Brazilian Portuguese, Russian, Chinese, Japanese, South African English and potentially other languages and cultures.

The study is based on Conceptual Metaphor Theory (Lakoff and Johnson, 1980) and its more recent advances on cultural variation (Kövecses, 2005, 2015; Musolff, 2016). It has been noticed that social and cultural specificities in metaphor can be found on all its levels. However, there is still considerable uncertainty with regard to a methodology for identifying those variations.

To reveal the impact of culture on ways people understand metaphorical meanings, the authors chose three common metaphors that appear in all studied languages, *life is a journey*, *life is a game* and *life is a battle*, and designed a questionnaire. The questionnaire consisted of 3 metaphors and 13 5-level Likert items. The items named 13 descriptive adjectives that could potentially characterize the target domain alternative to the metaphoric expressions. The adjectives commonly used to characterize Life were chosen from collocation dictionaries in a way that they reflect both positive and negative attitudes and various types of emotions.

The questionnaires were offered to subjects in their native languages. For each studied language at least 20 subjects (university students) answered the questionnaire. The answers were subjected to computer-aided statistical analysis, including a comparison of the average mean values, ANOVA tests and post hoc analysis. As an alternative to the statistical analysis authors also explored an approach where the levels of Likert items are viewed as fuzzy sets (Zadeh, 1972) and can be modeled and interpreted with fuzzy logic principles.

The analysis results showed, firstly, the applicability of the proposed framework to study metaphor interpretation; and, secondly, a significant difference in how the concept Life within the metaphors *life is a journey*, *life is a game* and *life is a battle* is viewed in different cultures.

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How do Mirror Images in Editorial Cartoons Reflect the SELF Metaphor?

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Keywords: mirror images, editorial cartoon, SELF metaphor

Introduction: In Lakoff (1996, 1997), it is argued that a person is conceptualized as two divided entities; one entity is SUBJECT and the other is SELF (THE DIVIDED PERSON METAPHOR). What one wants to show is his public SELF, rather than his hidden and private SELF. Therefore, his SUBJECT controls the inner SELF, preventing it from being shown publically (THE GENERAL INNER-SELF METAPHOR). Sometimes one person is conceptualized as having two different selves, being in conflict with each other (THE SPLIT SELF METAPHOR). SELF is also conceptualized as a companion to his SUBJECT (THE SELF AS A COMPANION METAPHOR). SUBJECT can also, in some cases, be understood as being absent from one's SELF as in *He is beside himself*. Losing one's SELF is also possible as in *after losing yourself in a relationship* (THE LOSS OF SELF METAPHOR). After Lakoff (1996, 1997), researchers studied linguistic data dealing with the SELF metaphor (Ahrens 2008, Gomez 2015), but as far as we know, no attempt has been made to compare linguistic data with SELF metaphors in visual images. Since pictorial metaphor is one important aspect of conceptual metaphor (Forceville 1996, Forceville and Urios-Aparisi 2009, Sobrino 2017), this paper will observe the SELF metaphors in the images of mirrors shown in Korean editorial cartoons to identify the similarities and differences of the visual and verbal SELF metaphors. **SELF Metaphor in the Images of Mirrors:** The images of mirrors in editorial cartoons are a very effective device for showing that a person is divided into SUBJECT and SELF. The SUBJECT which is separated from the SELF becomes a viewer of his SELF and objectively observes the SELF shown in the mirror. Sometimes, the SELF image in the mirror reflects who the SUBJECT believes he is and, sometimes, it does not (<Figure1>). When the SELF image is a reflection of what the SUBJECT believes himself to be, but does not reflect the reality of who he is, the message of narcissism is delivered to readers (<Figure2,3>). The mirror can also reflect both the SELF that the SUBJECT mistakenly believes in alongside the true SELF, heightening the contrast (<Figure4>). When the SELF image is not what the SUBJECT believes himself to be, the SUBJECT may be alarmed (<Figure5>). In other cases, the SUBJECT is not alarmed at his SELF image, even though it differs from what he publically projects, and the two act like friends (<Figure6,7>). Sometimes, a mirror shows an image of a different person from the one that is standing in front of the mirror, delivering the message that the two different people have the same SELF. It insinuates that what they have done in the past is the same (<Figure8,9>) or how much they have been corrupted is the same (<Figure10>). THE DIFFERENT SUBJECTS AND THE SAME SELF metaphor is not observed linguistically, whereas all other visual metaphors are. **Conclusion:** Close observation of the images of mirrors reveals that the SELF metaphor observed in linguistic data are similarly observed in visual images, and visual images have an additional SELF metaphor not found in linguistic data.



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A Synchronic Comparative Analysis of Emotion Metaphors of 悲 (bei) /SADNESS in Chinese and German memorial texts

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As Ortony et al. (1988: 3) said, “the study of human emotion constitutes one of the essential components in our probe into human cognition.” Metaphor as non-literal use of a linguistic expression in a particular communication situation serves as the ubiquitous method of expressing of emotions and feelings in the world languages (s. Skirl/Schwarz-Friesel 2013). The study of emotion metaphors can be seen as a tool to the conceptual systems of emotions (s. Kövecses 2000, Yu 2002, Stefanowitsch 2006 etc.). In the context of Critical Cognitive Linguistic of Schwarz (2008), Schwarz-Friesel’s (2013, 2015), Kertész’ et al. (2012), which provide the possibility to divide verbal manifestation (metaphor) from emotion concept (SADNESS) and also emphasize the importance of corpus study in the cognitive linguistics, the present paper attempt to investigate the metaphorical constructions of emotion concept 悲/SADNESS within the internet-based Chinese and German memorial texts between 2001-2016.

Using a corpus-based approach this study will contrast the collected data in three parts: firstly, which convergences and divergences in relation to conceptual domain of emotion category 悲/SADNESS can be found in both Chinese and German texts; Secondly, how the classifications of metaphorical expressions by degree of conventionality (chengyu/idiom, lexicalized metaphor, cliched metaphors, creative metaphors, innovative metaphors) will be distributed in both of the corpora; Thirdly, whether the referencing/denoting and expressing metaphors of sadness to be found in the corpora, which usually be ignored in the most of present studies.

The result has shown that there are 24 conceptual combinations of the metaphorical verbalizations in the German corpus and 19 in the Chinese corpus. The majority of them (16) can be found in both of the corpora. With regard to the non-equivalent conceptualization patterns, however, it is more common to seen in the German corpus that positive associating concepts are used as source domains in the conceptual combinations.

Additionally the result shows that all of the classifications of metaphorical expressions are discovered in both corpora. Among them the lexicalized metaphors have the largest proportion in the German corpus and cliched metaphors have the largest part in the Chinese corpus. Since creative and innovative metaphors emphasize the particularity of verbal constructions and are able to enhance the intensity of the emotionality, so it is difficult to get any similarity between Chinese and German corpora. The speakers of different languages creative also in different ways in metaphor use. The innovative metaphors of SADNESS have the smallest proportions in both corpora. It is noteworthy that more terms for organs or parts of the body have been used in Chinese metaphors than those in German. This could be related to deep-rooted cultural thoughts as well as TCM influences.

Thirdly, most of sadness metaphors enable not only to denote but also express the sad feelings. Based on the theory of dividing emotion words from emotion-laden words of Schwarz-Friesel (2013) the present paper has also developed a method to differ emotion-denoted metaphors and emotion-expressed metaphors. The empirical research has shown that (over) half of the sadness metaphors express the sad feelings in both Chinese and German corpora. The metaphors, which only want to denote grief, have the smallest shares in both languages. It is also clear that sad feelings are construed and perceived to a greater extent within the help of metaphorical formulations.

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Aug. 9th (Friday morning ~ early afternoon)

8:20–9:00	COFFEE (near room 101 in Bldg. G)				
9:00–10:30	PLENARY 5: Sotaro Kita. <i>Gesture, metaphor, and spatial language</i> (Central Auditorium)				
10:30–10:50	BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)				
room #	101	103	104	105	108
category			categorization (Chair: Verena Minow)	THEME: Causation in discourse and cognition: Crosslinguistic perspectives (Organizers: K. Kawachi, A. Latrouite & J. Bohnemeyer)	THEME: Cross-theoretical Perspectives on Frame-based Lexical and Constructional Analyses: Bridging Qualitative and Quantitative Studies (Organizers: T. Ohori & K. H. Ohara)
10:50–11:15			V. Minow & J. Salzinger "Wen hassen wir? #dasperfektedinner" Conceptualization and categorization of in-group and out-group belonging on Twitter	Introduction	Introduction
11:20–11:45			T. Shortall Saussure revisited: the delineation of <i>langue</i> and <i>parole</i> using a prototype-category model	E. Bellingham Integrating event descriptions in multi-predicate constructions: frame semantics and construal in the English means construction	P. Sambre Multilingual FrameNet and Calabria's mafia: video documentaries as conceptual windows on a transnational economic crime scenario
11:50–12:15				G. You et al. Extracting lexical causatives from discourse	P. Sambre et al. Verbal genericity and null instantiation in Italian and German cut and break sequences
12:12–13:15	LUNCH (BIG PAPA or other locations)				
category	THEME: Language at the mid-level of understanding: The curious case of linguistic representations (Organizers: P. Milin & D. Divjak)	THEME: Evolving linguistics (Organizer: K. Fujita)	motion (Chair: Yukinori Kimoto)	THEME (cont.)	THEME (cont.)
13:15–13:40	Introduction	K. Fujita Syntax, Cooperation and Self-Domestication		F. Gallez & S. De Knop The caused motion construction revisited: theoretical and cross-linguistic perspectives	N. Hamilitch A constructional approach to borrowed bound morphemes in Japanese: With an emphasis on cultural frames
13:45–14:10	J. Newman Questioning the lemma in usage-based linguistics	K. Hoshi A Possible Link between Cognitive Linguistics and the Lennebergian View on Biological Evolution of Language	L. Masson-Collin Motion events across languages: a parallel-corpus investigation of English, French and Japanese spatial expressions	I. Trigel & K. Tomson Estonian causative constructions from the construction grammar perspective	M. Kitazawa & K. H. Ohara Interpretation predicates and contents in frame integration: the case of <i>sasou</i> in Japanese
14:15–14:40	C. Marzi & V. Pirrelli Basic word units and the processing-storage dualism	K. Taniguchi On the Emergence of Grammar and Image Schemas: A Cognitive Linguistic View	Y. Deng & J. Chen Move or not Move: An ERP Study on the Processing of Fictive and Actual Motion Events	A. Latrouite & R. D. Van Valin Jr. Causational Interpretation based on Immediate and General Common Ground Frames	M. R. L. Petruck & L. Levin Frame Semantic Parsing Needs Constructions
14:45–15:10	R. H. Baayen Understanding and producing words without stored representations	H. Fujita On the Co-evolution of Internalization and Externalization in Human Language	G. Dubois A force-dynamic account of the Finnish verbs of REMAINING: when staying can involve a shift in force dynamics	N. M. Zaika Additional meanings of causal markers in polypredicative constructions	
15:10–15:30	BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)				

COFFEE (near room 101 in Bldg. G)

PLENARY 5: Sotaro Kita. Gesture, metaphor, and spatial language (Central Auditorium)

BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)

204	205	206	207	208	301
corpus (Chair: Bert Cappelle)	metaphor (Chair: Antonio Barcelona)	applied linguistics (Chair: Maki Kubota)	multimodality (Chair: Masaaki Kamiya)	THEME: Minority Languages & Cognitive Linguistics: towards a two way relationship (Organizers: S. Devylder & A. Gaby)	
	A. Barcelona Metonymy-guided discourse inferencing. A qualitative study	Y. Lan & S. Kim Making the most of peer review: Is going Anonymous the way forward for Asian learners of English?	R. Augustyn Creating an aura of mystery in multimodal film setting: A cognitive analysis of Denis Villeneuve's <i>Arrival</i> and <i>Blade Runner 2049</i>	Introduction	
M. Barlow & S. Kemmer Subjective/Objective Construal and Individual Preferences	T. Komatsubara Cognitive and cultural preferences of metonymy in Japanese	K. Yang & M. Wang Developmental trajectory of L2 syntactic representation: Evidence from structural priming	S. Tabacaru & R. Becker I'm surprised to hear you say that: The use of <i>raised eyebrows</i> in oral and written contexts	E. Adamou et al. How to speak "geocentric" in an "egocentric" language: A multimodal study among Ngigua-Spanish bilinguals and Spanish monolinguals in a rural community of Mexico	
B. Cappelle et al. Making sense of <i>fake's</i> fickleness: The role of context	Ch. Lu Dynamic Metonymy: perspectives from lexical semantics and Blending theory	M. Kubota The effect of individual factors on second language lexical attrition in bilingual returnee children	S. Tabacaru & Sh. Van Der Mark Crosslinguistic perspectives on the use and meaning of emoji in Asia and Europe	Sh. Wilcox et al. Signed Languages as Minority Languages	

LUNCH (BIG PAPA or other locations)

change (Chair: Kiyoko Toratani)	metaphor (Chair: Tetsuta Komatsubara)	applied linguistics (Chair: Mutsumi Ogawa)	multimodality (Chair: Elise Stickles)	THEME (cont.)	THEME: Integrating iconicity: recent work and future directions (Organizers: M. Dingemanse & A. Verhagen with J. Nölle & Th. Van Hoey)
K. Toratani Naturalization of the Japanese loanword <i>sushi</i> in English	T. Nessel Two stars in the bassoon sky: metaconstructional compounds and metaphor extraction in Norwegian	Y-H. Hu Cross-linguistic Effects in the Teaching and Learning of English Count/Mass Nouns by Mandarin Chinese Speakers		A. Gaby & L. Woods Ethics and collaboration between cognitive linguists and speakers of minority languages	Th. Schwaiger The not so self-evident iconicity of reduplicative word-class derivation
K. Danjo Pejorative derivation from spatiality: A comparative case study of Japanese <i>burabura</i> , <i>daradara</i> and German <i>herum</i>	KJ. Nabeshima The legacy of Primary Metaphor Theory: What to take home and what to build on	M. Ogawa et al. Language Proficiency and Instructional Effects: A Cognitive Linguistic Approach to the Count-Mass Distinction	A. Brown & M. Kamiya The Role of Gesture in Scopal Ambiguity: A Comparison of Japanese and English	L. A. Janda & L. Antonsen North Sámi Possessive Constructions in the Era of Truth and Reconciliation	Th. Van Hoey & Ch. Lu Reduplication as a trigger of intersubjectivity: Mandarin Chinese ideophones and reduplication in the CHILDES corpora
Y. Shibuya A corpus-based diachronic analysis of register variation in English comparatives	X. Tang Developing Metaphoric Concepts with Constructions: A Corpus Based Analysis	Th. S. H. Yau & H. Zhao Bi-directional Transfer in Second Language Idiom Comprehension	M. Avelar et al. Spatial deixis and gestures in Brazilian Portuguese and American English: a crosslinguistic multimodal analysis	S. Devylder Paamese sand drawings: insights into the polysemiotic nature of human communication and revitalization efforts of an endangered practice	M. Imai & J. Kimura Sensitivity to sound symbolism in Japanese Hard-of-Hearing children
V. Glebkin Semantic change from sociocultural perspective	N. Yu & J. Huang Difficulty as Weight and Solidity in English and Chinese	R. H. Taferner The Effects of Conceptual and Semantic Crosslinguistic Influence in Explicit L2 Instruction of Temporal Adpositions	E. Stickles et al. The effects of spatial manipulation and mental imagery skills on gesture production	M. Ponsonnet et al. The respective roles of culture and grammar in shaping emotion metaphors: The case of the Gunwinyguan family (Australian, non-Pama-Nyungan) Forename Surname	A. Ówiek et al. Comprehension of Non-Linguistic Vocalizations across Cultures

BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)

Aug. 9th (Friday late afternoon)

room #	101	103	104	105	108
category	THEME (cont.)	THEME (cont.)	motion (Chair: Joel Olofsson)	THEME (cont.)	THEME (cont.)
15:30–15:55	<p>move to 14:15</p> <p>D. Divjak & P. Milin (The) unbearable lightness of (the) English articles</p>	<p>F. Chang Using the P-Chain to understand the Evolution of Language</p>	<p>K. Yamamoto & K. Takahashi Segmentation of complex motion events in two verb-serializing languages</p>	<p>D. Gerasimov Causal markers derived from speech act verbs in the languages of the world</p>	<p>D. Nonaka When alternating verbs fail to alternate: the case of the locative alternation in English</p>
16:00–16:25	<p>start at 15:30</p> <p>J. Klavan Linguistic representations of constructional alternations: A case study from Estonian</p>	<p>R. Uno Shared Intentionality and the Emergence of Sentence Types in Natural and Artificial Languages</p>	<p>J. Olofsson Cough and joke. Concomitance co-event in Swedish motion constructions.</p>	<p>S. Say Nominal causal constructions: causal chains and syncretism (a typological study)</p>	<p>K. Ohara Frames-and-Constructions Analysis of Japanese and English Bilingual Children's Books</p>
16:30–16:55	<p>start at 16:30</p> <p>N. C. Ellis Essentials of a Theory of Language Cognition</p>	<p>T. Hashimoto Filling a Gap between Pre-linguistic and Linguistic Pragmatics: An Experimental Semiotic Approach to the Formation of Symbolic Communication Systems with Intention Sharing</p>	<p>N. I. Stolova Motion Events from Latin to Romance: Role of Linguistic Resources in Typological Shift</p>		<p>C. Baker Beyond N, V, and Adj: Frame Semantics and the Closed-class Lexicon</p>
17:00–17:25	Discussion	Discussion			Discussion w/ M. Hilpert
17:45–19:30	BUSINESS MEETING (room 101 in Bldg. G)				

204	205	206	207	208	301
construction (Chair: Diego Oliveira)	metaphor (Chair: Ning Yu)	applied linguistics (Chair: Katrin Kohl)	multimodality (Chair: Keiko Abe)	THEME (cont.)	THEME (cont.)
	K. Teeri-Niknammoghadam Why 'ahead of Christmas' but not 'ahead of Friday'? On semantics of Finnish FRONT adposition constructions in SEQUENCE IS RELATIVE POSITION ON A PATH metaphor of time	D. Dardon Can Verbal Short-Term Memory Training Lead to Greater Gains in L2 Vocabulary Learning?	I. Hsu Watch! The Olfactory Time Machine! - A Study of Synesthetic Metaphors in Japanese Winespeak-themed Manga	H. Sarvasy et al. EEG in PNG: A report on the neurolinguistics of clause chain processing	A. D. M. Smith & S. Hoefler Iconicity and the origins of symbolism and grammar
A. Shiba Interaction Between Text Genres and Constructions	Y. Ogami On the Experiential Bases of the Two Meanings of Temporal "Saki" in Japanese	A. W. Horvat et al. Demolishing walls and myths: Cognitive salience of literal and metaphorical meanings in L1 and L2 speakers	S. Abe Connecting language, vision and force: Analyzing emotional forces of FRUSTRATION in Japanese manga	S. Spronck Finding a new place for pragmatics in CL through minority languages	J. Nölle et al. Beyond iconicity: aspects of metonymy and indexicality in sign grounding
S. Siltaloppi Greetings from the festival – how listing is used in a signed postcard	G. P. W. Rajeg et al. Linguistic and co-speech gestural patterns of spatiotemporal metaphors in Indonesian		X. Zhao A Multimodal Cognitive Poetic Study of Postmodern Picturebook: <i>The Stinky Cheeseman and Other Fairly Stupid Tales</i>	Discussion	I. Mittelberg Iconicity – embodiment – image schemas: Towards a spectrum of different sources and levels of gesturally enacted schematicity
D. L. de Oliveira Transitive constructions under negation in Russian: a usage-based approach to the genitive-accusative competition	J. Fu & G. Steen Metaphor Use in Aphasia: Evidence from AphasiaBank (Mandarin)		C. Romney Online image searches as indicators of lexical nuance between Japanese and English	Discussion	Th. Van Hoey & J. Nölle Integrating Iconicity (general discussion)
BUSINESS MEETING (room 101 in Bldg. G)					

Gesture, metaphor, and spatial language

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I will discuss how co-speech (i.e., speech-accompanying) gestures relate to language and conceptualisation underlying language. I will focus on “representational gestures”, which can depict motion, action, and shape or can indicate locations (i.e., “iconic” and “deictic” gestures in McNeill’s 1992 classification). I will provide evidence for the following two points. Various aspects of language shape co-speech gestures. Conversely, the way we produce co-speech gestures can shape language. I will discuss these issues in relation to manner and path in motion event descriptions, clause-linkage types in complex event descriptions, and metaphor. I will conclude that gesture and language are parts of a “conceptualisation engine”, which takes advantage of unique strengths of spatio-motoric representation and linguistic representation.

Language at the mid-level of understanding: The curious case of linguistic representations

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Many disciplines, including (but not limited to) linguistics, psychology and computer science, share an interest in language. Yet, it remains unclear from an interdisciplinary point of view what the necessary and sufficient knowledge about language would be. Assuming that language is a complex system (cf., Beckner et al., 2009), we want to propose, taking Marr's (1982) argument, that there must be three levels of understanding of any system of considerable complexity as epistemological point of departure for a discussion. Marr's tri-level hypothesis distinguishes between

- I. The Computation: what does the system do (e.g., what problems does it solve), and why does it do these things?
- II. The Algorithm/Representation: how does the system do what it does; what representations and processes it uses?
- III. The Implementation: how is the system physically realized (i.e., neural structures and neuronal activities)?

It seems that linguistics, psychology and engineering all deal with the mid-level of understanding representations and algorithms. The time is right to acknowledge and to integrate independent efforts from other disciplines: downwards, to viable biological implementations; and upwards, seeking answers to teleological questions of why the system exists and what its purpose would be. Cognitive Linguistics is ideally placed to lead this knowledge-merger, as it has incorporated insights from all three aforementioned disciplines to study language as a usage-based instrument for organizing, processing and conveying information in all its cognitive and social complexity and with respect for individual differences.

A good starting point for a discussion on the necessary and sufficient knowledge about language is the issue of the 'units' used at the algorithmic/representational level. Are language 'units' intrinsic to the computational problem or emergent from it? And what kind of representations could be expected to be implemented biologically? Interdisciplinary endeavours require us to explicitly revisit the scope and nature of linguistic constructs and to determine what knowledge they are built on, and how they could be learned? In fact, Poggio (2010; 2012: 1018-1021) suggested a revision of Marr's levels of understanding, adding two levels at the very top, above the computational level: learning and evolution.

Our proposed session brings together a coherent set of six papers that all challenge the core problem of 'unit' along one or more dimensions of the Marr-Poggio knowledge space. This discussion-platform, we believe, will equip Cognitive Linguistics with a re-conceptualised cognitive commitment.

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Questioning the lemma in usage-based linguistics

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Keywords: corpus methods, lemma, inflection, collocates, linguistic unit

Usage-based approaches to language often make use of a “lemma”, i.e., a unit of representation and analysis that encompasses all the inflected forms of a word. As such, the lemma is an intermediate unit of analysis, more abstract than the orthographic or phonological words of raw text/speech, and utilized in studies that purport to discover usage-based knowledge of speakers. Cognitive linguistic and corpus-based studies of argument structure, syntactic patterning, and collocational patterning typically express results in terms of patterning around lemmas rather than the inflected word forms. In one of the few corpus-based studies that systematically investigate the value of working with lemmas vs. inflected forms, Gries (2011) concluded that for the most part, a lemma-based analysis was sufficiently informative in a study of a specific syntactic alternation of English. Notwithstanding Gries’ valuable, but circumscribed study, I question the practice of positing the lemma as a default unit of analysis. I argue in the spirit of Sinclair (1991), Rice & Newman (2005), and Newman & Rice (2006), that the lemma can obscure much of the interestingly differential behaviour of individual inflected forms in corpus-based studies.

In this corpus-based paper I begin in a very targeted way with a comparison of the adjectival collocates occurring immediately before the noun *child* (singular) vs. *children* (plural), *children* having already been identified in the literature as an inflected noun form of particular interest in English and some other languages (Tiersma 1982). The data is drawn from the SPOKEN component of the Corpus of Contemporary American English (COCA, Davies 2008-) and the adjectival collocates were ranked according to the measures of Attraction and Reliance (cf Schmid 2010). Interesting and unexpected differences between the adjectives preferred by the singular and plural nouns emerge from this comparison. To take just one unexpected result, adjectives of the form *x-year-old* (*six-year-old* etc.) are clearly preferred collocates of *child*, but not *children*, in the corpus measured by both Attraction and Reliance scores. Following on from this particular observation, I then broaden the focus to adjectives occurring before approximate synonyms of *child/children* (*daughter(s)*, *son(s)* etc.) and show that the same contrast between adjective + singular patterns vs. adjective + plural patterns holds for this larger set of synonyms as well. These findings suggest that there is indeed good reason to study the behaviour of adjectival collocates of nouns at the inflected word form level. The study considers differential effects of patterning around inflected forms of verbs vs. nouns, as well as different consequences associated with patterns involving relatively abstract syntactic structure vs. lexical collocates.

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Basic word units and the processing-storage dualism

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Keywords: Recurrent Neural Networks, Usage-based grammars, Emergence, Processing, Storage

According to usage-based grammars (Tomasello 2008) and learning-driven theoretical frameworks, linguistic representations are continually developing units, with the human cognitive system containing both lexically specific and more abstract patterns. In particular, biologically-inspired learning models such as Recurrent artificial Neural Networks (RNNs) have radically challenged the functional dualism between language storage and processing, by modelling them as two differently time-scaled aspects of a unique underlying dynamic. Processing nodes that are repeatedly activated in *processing* a (complex) linguistic unit are the same nodes responsible for its *stored representation* (Baayen 2007; Elman 2009; Marzi & Pirrelli 2015). The approach challenges the following five widespread “fallacies” in language modelling.

Ontological fallacy: linguistic units are independent of the way speakers acquire, organize and use them; an extreme form of this fallacy is the idea that abstract linguistic units are part and parcel of the human genetic endowment. In contrast, RNNs provide a model of the emergence of units from the way language is processed and stored, to suggest that speakers know language by the way they process it. Epiphenomenalistic fallacy: linguistic units are just collateral by-products of the way speakers process and store language; they may be part of human metalinguistic awareness, but play no role in actual usage. Contrariwise, RNNs turn bottom-up processing routines into long-term top-down expectations that bias future processing steps, guide our attention/control mechanisms, and account for language learning and generalization. Constructionist fallacy: the ability to reduce a complex whole to simpler units (and laws for their combination) implies the ability to start from laws and units to reconstruct the whole. This is often tied with the assumption that basic units are stored off-line, with complex units being processed on-line (Clahsen 2006). In fact, complex units are often much more than just a function of their constituents (Tomasello 2008), and evidence of time-scale effects in the behavior of complex dynamic systems warns us against the search for a one-to-one relationship between linguistic representations and their behavioral correlates. Listing fallacy: basic units form an unstructured repository of stored items (Pinker & Ullman 2002). This fallacy is unsupported by evidence of complex morphological systems (Hay & Baayen 2005) and models of working memory (D’Esposito 2007; Wilson 2001). If storage consists in consolidating and sharing processing routines (as is the case with RNNs), the question of whether a derivational affix is stored or processed is irrelevant, if not misconceived. Functional segregation fallacy: being species-specific, language requires dedicated cognitive functions and specific neural correlates. Analysis of the working of RNNs lends support to a somewhat different view: basic units of language are domain-specific by-products of the interaction of more general, language independent cognitive processes.

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Understanding and producing words without stored representations

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Keywords: mental lexicon, linear discriminative learning, representation-greediness, computational modeling, distributional semantics

Most theories of the mental lexicon are representation-greedy. Typically, the mental lexicon is modeled after standard dictionaries, with representations for words' forms and representations for words' meanings. Comprehension, e.g., is taken to first match an input representation against the form representations in the mental lexicon. Given a proper match, the corresponding semantic representation is retrieved. By contrast, the theory of Linear Discriminative Learning (LDL, Baayen et al., 2018a,b), a computational implementation of the mental lexicon, eschews stored representations. In this model, conceptually, representations are states of a high-dimensional system that arise dynamically as a consequence of sensory or intentional input.

At the algorithmic level, input and output states are represented by high-dimensional numeric vectors. Vectors for form use binary coding for the presence vs. absence of low-level form features, whereas vectors for meaning are obtained with methods from distributional semantics. In contrast to computational linguistics and natural language processing, distributional semantics has not had much of an impact in cognitive linguistics and general linguistics (a literature survey of the journals *Language* and *Cognitive Linguistics* revealed only a handful of studies in which distributional semantics is mentioned, and in these studies, distributional semantics is never used to address central theoretical issues). Important for cognitive approaches to language is that LDL constructs semantic vectors (from corpora) not only for content words, but also for inflectional, derivational, and grammatical meanings (including tense, aspect, mood, person, number, case, etc.). As a consequence, LDL can be used to study and model the relation between form and meaning in the lexicon without having to submit to the item-and-arrangement approach of standard models in theoretical morphology and computational linguistics. By focusing directly on the relation between form and meaning, morphologically complex words can be understood and produced without having to make, often arbitrary, decisions on a veritable zoo of representations for morphemes, stems, exponents, inflectional classes, or exceptions, and without having to engineer complex rule systems operating on these representations.

At the implementational level, low-level auditory input vectors using binary encoding for acoustic features such as those used by Baayen et al. (2019) can be understood as representing cell assemblies in the primary auditory cortex monitoring for change patterns received from the cochlea, whereas semantic vectors likely approximate widely distributed neural connectivity between neurons across, among others, the left temporal lobe and the left inferior and middle frontal gyri.

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(The) unbearable lightness of (the) English articles

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Keywords: articles, English, learning theory, usage-based grammar

English articles are such minion language units: frequent and hence unremarkable, they arguably carry very little communicative weight, yet are passed on from one generation of speakers to the next. Linguists struggle to formulate an account that would adequately capture their use (see, e.g., Abbott, 2006), and articles form notorious stumbling blocks for foreign learners whose native tongues do not solidify the base-of-use for articles (Thomas, 1989). We will consider the learnability of English articles from a usage-based and learning theoretical perspective. On a usage-based approach to language, abstractions would emerge from exposure to the ambient language. The wider sentence context has proven invaluable for predicting syntactic and semantic choice, and should also apply to predicting articles in context. Yet, the road to mastery is long. Young children often omit articles from their speech altogether (Gerken, 1996) or produce them as fillers (Peters, 2001). Matthews et al. (2009) found that children aged 2 to 4, when required to produce 'the', were below or at chance in all age groups, while adults remained below ceiling. What could be the underlying reason for such results?

We start from the assumption that, in usage, articles and nouns are perceptually inseparable and the choice for an article is not as free as grammar books might lead one to assume; article-noun co-occurrence is highly constrained by context, and they could be considered as forming one unit. More than half of the 1000 most frequently attested nouns in the British National Corpus appear predominantly without article (524) or with a definite article (400), while only a minority prefers the indefinite article (76); this preference is licensed in their typical contexts. The nouns' preference for co-occurrence with one of the three options (*a/an*, *the*, zero) also affects those nouns' uncertainty (entropy) and distinctiveness (relative entropy): *a/an*-dominant nouns are highly likely to allow other articles too (*the* or *zero*) and are very difficult to predict from the determiner; *the*- and zero-dominant nouns do not differ in the extent to which they allow other determiners but *the*-dominant nouns are harder to predict from their determiner than zero-dominant nouns.

Native speakers of English are exposed to the contextual properties that constrain this article choice. Native speakers of languages without articles, on the other hand, have learned to associate the exact same context with the same noun without need for articles, leading them to produce an infelicitous combination or to dispense with articles altogether. Simple computational learning simulations (using the Rescorla-Wagner rule (Rescorla & Wagner 1972) of the divergent experiences of native (L1) and non-native (L2) speakers yield two intriguing results. For L1, if the article is treated together with the noun as a unit, then the wider context becomes predictive as a function of the systematicity of its co-occurrence with the target noun; this provides support for our starting hypothesis. For L2, simulation treated the article and the noun as independent outcomes. In that learning set-up the article only becomes somewhat predictable if the language serves as "context" (L1 vs L2): L2 learners know that articles ought to appear in L2 but not in L1, which is an insight that is of little practical value. Learning theory provides us with relevant concepts to make sense of these simulation results, and using findings from a large-scale simulation study on a 1.2-billion-word Internet corpus, we will discuss how pre-exposure makes English articles so unbearably hard to pin down.

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Linguistic representations of constructional alternations: A case study from Estonian

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The present paper addresses the first and second level of Marr's (1982) tri-level system of understanding – computation and algorithm/representation – and focuses on the linguistic representations of constructional alternations. At the representational level, I am interested in how native speakers of Estonian solve the problem of choosing between two competing morpho-syntactic constructions, i.e. what (linguistic) representations and processes do they use to manipulate the representations of these constructions. The constructional alternation in question is the parallel use of the adessive case construction and the postpositional construction with *peal* 'on'.

I model native speaker behaviour as attested in two experiments – a forced choice task (96 participants) and an acceptability rating task (98 participants). I hypothesise that there is a difference between the knowledge representations participants draw on in the two tasks – the problem that the native speakers need to solve at the level of computation is different in the two tasks. The stimuli for both experiments comprise 30 corpus sentences randomly sampled from five equal probability bins defined by a binary logistic regression model in the 900-observation corpus dataset (see Klavan 2012 for details). The sampled stimuli represent the full probability scale and ranges from sentences where one construction was very probable to sentences where both constructions were equally probable. The data are analysed using mixed-effect regression (the *lme4* package in R).

The results of the study show that the forced choice data correlates better than the rating data with the results of a corpus-based model (Klavan & Veismann 2017). For example, the forced choice task confirms that length, complexity, mobility, word class play a role in the choice between the two competing constructions with length being the strongest predictor. The same set of predictors were found to be significant based on a mixed-effects logistic regression model fitted to the corpus data. The acceptability rating task, however, does not confirm this finding – only complexity and mobility are predictive when speakers rate the two alternative constructions. This result points towards the conclusion that the two tasks tap into different type of linguistic knowledge. Another important finding of the study is that individual differences – both at the level of words and speakers – account for a large amount of variation in the data (see also Baayen et al. 2013, Bresnan and Ford 2010, Theijssen et al. 2013). By employing a rigorous experimental design that compares the results of two experiments using the same set of stimuli and rigorous data analysis methods, the paper contributes to the discussion on gaining deeper insights into central epistemological questions regarding the nature and representation of linguistic knowledge, more specifically construal and constructional alternations.

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IN THEME SESSION

Language at the mid-level of understanding: The curious case of linguistic representations

TITLE

Essentials of a Theory of Language Cognition

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Keywords: Embodiment, Embeddedness, Enactivism, Extended mind, Emergentism

Languages are emergent, social, integrated phenomena. Language cognition is shared across naturally-occurring culturally-constituted communicative activities. Language is the quintessence of distributed cognition. Language and usage are like the shoreline and the sea. Usage affects learning and it affects languages too. So, our understanding of language learning requires the detailed investigation of usage, its content, its participants and its contexts – the micro level of human social action, interaction, and conversation, the meso level of sociocultural and educational institutions and communities, and the macro level of ideological structures.

These emphases parallel theoretical developments in the cognitive sciences more generally. Mind is not the brain alone. Language cognition is not just “in the head;” it extends well beyond the skull and the skin. Non-Cartesian 4E Cognitive Science views cognition as being Embodied, environmentally Embedded, autopoietically Enacted, and socially Encultured and distributed. These are essential components of any theory of language cognition and representation.

This paper summarizes these developments within cognitive science before considering implications for language research especially as these concern usage-based language learning and cognition in second-language acquisition (SLA) and multilingual contexts. Here, I prioritize research involving corpus-, computational-, and psycho-linguistics, and cognitive psychological, complex adaptive system, and network science investigations of learner-language interactions. I consider implications for teaching. Looking at languages through any one single lens does not do the phenomena justice. Acknowledging the social does not entail restricting our research focus to the social. It does not limit any educational approach to naturalistic exposure. It does not obviate more traditional approaches to psycholinguistics, cognitive linguistics, or SLA. Instead it calls for greater transdisciplinarity, diversity, and collaboration.

Theme Session

Evolinguistics: Where Cognitive Linguistics and Generative Grammar Meet

Organizer: Koji Fujita (Kyoto University)

This theme session features seven talks on Evolinguistics as an interdisciplinary, cross-theoretical approach to language evolution. We assume that language arose from multiple domain-general cognitive functions which may have evolved in humans and other species alike. Given this viewpoint, studies of the evolution of human language necessitates collaborations between different linguistic frameworks. For example, although Generative Grammar (GG) and Cognitive Linguistics (CL) started with contrasting, often conflicting understandings of the nature of human language and human mind, we believe that it is necessary to bring their advantages together to discuss the evolution of language.

This session focuses on two fundamental aspects of human language: form (syntax) and function (communication). Hierarchical syntax is a distinctive feature of modern human language, while its evolution and maintenance may be shaped by demands of human triadic communication via linguistic symbols. GG currently claims that uniquely human hierarchical compositional syntax can be reduced to the basic combinatorial operation “merge.” As will be proposed in this session, this operation is very likely to be rooted in the sensori-motor system (“action grammar,” i.e. combinational strategies observable in manipulation of physical objects) or in the conceptual-intentional system (“interrelational categorization,” i.e. grouping of distinct objects into a set based on their shared properties). Either way, the evolution of merge can be understood in a way which is fully compatible with some basic ideas of CL, including embodiment, grouping, etc. We will show that constructing complex linguistic structures essentially presupposes domain-general cognitive processes such as integration, categorization, pattern abstraction and so forth.

In addition to this formal aspect, communicative motivation for language evolution cannot be dismissed. Conveying and understanding what a linguistic symbol refers to can be successful only with joint attention and shared intentionality between the speaker and the hearer, as proposed by Tomasello. Such social aspects are significant in linguistic activities using highly developed systems of symbols. We will also argue that human capacity of sharing attention and intention is relevant to the formation of complex syntactic structures.

From this broad perspective, we will discuss some current topics of Evolinguistics: language processing (Chang), motor action and syntax (K. Fujita), internalization and externalization (H. Fujita), symbolic communication (Hashimoto), categorization and recursion (Hoshi), image schemas (Taniguchi) and joint attention (Uno). We pay special attention to the possible evolutionary link between communicative functions and syntax to stress the collaborative status of CL and GG in Evolinguistics.

Hopefully, we will offer an opportunity for all participants to learn the latest research and findings of CL, GG, and beyond, and consider how these different perspectives can be linked and unified to explore human language evolution.

Speakers & Titles (in the order of presentation):

1. Koji Fujita / Kyoto University
Syntax, Cooperation and Self-Domestication
2. Koji Hoshi / Keio University
A Possible Link between Cognitive Linguistics and the Lennebergian View on Biological Evolution of Language
3. Kazumi Taniguchi / Kyoto University
On the Emergence of Grammar and Image Schemas: A Cognitive Linguistic View
4. Haruka Fujita / Kyoto University
On the Co-evolution of Internalization and Externalization in Human Language
5. Franklin Chang / Kobe City University of Foreign Studies
Using the P-Chain to Understand the Evolution of Language
6. Ryoko Uno / Tokyo University of Agriculture and Technology
Shared Intentionality and the Emergence of Sentence Types in Natural and Artificial Languages
7. Takashi Hashimoto / Japan Advanced Institute of Science and Technology
Filling a Gap between Pre-linguistic and Linguistic Pragmatics: An Experimental Semiotic Approach to the Formation of Symbolic Communication Systems with Intention Sharing



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Evolinguistics: Integrative Studies of Language Evolution for Co-Creative Communication

Syntax, Cooperation and Self-Domestication

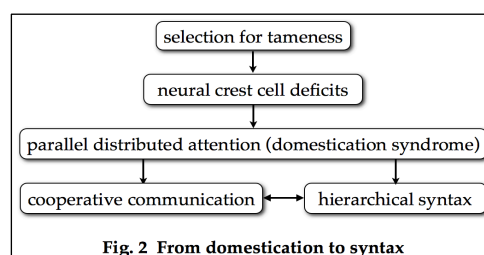
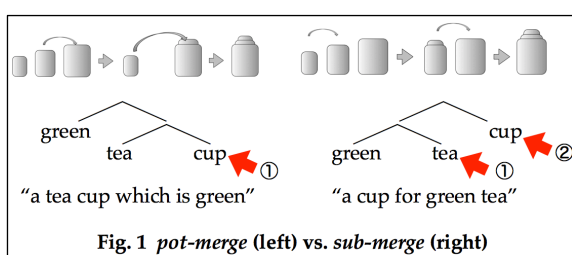
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Keywords: language evolution, communication, cooperation, syntax, self-domestication

Studies of human language evolution demand a broad-range integration of different viewpoints in linguistics and beyond. This talk illustrates one interesting case where cognitive linguistics (CL) and generative grammar (GG) may collaborate to understand the origins and evolution of language, by elaborating on an evolutionary link between human cooperative communication and hierarchical recursive syntax via (self-)domestication.

Today's GG proposes *merge* as the basic computational operation which gives rise to all the hierarchical structures found in human language. This is a highly welcome departure from older proposals because of the operation's sheer simplicity and especially because of its near affinity to *conceptual integration*, *blending*, *grouping*, etc., which will invite a productive conversation between CL and GG. Unfortunately, no serious attempts have been made within GG to uncover the evolutionary origin of merge (Berwick & Chomsky 2016), perhaps with the sole exception of Fujita (2017), who proposes that merge evolved as an exaptation of action grammar (Greenfield 1991) via metaphorical extension. It has been shown, among others, that the shift from *pot-merge* (pot-strategy merge) to *sub-merge* (subassembly-strategy merge) was a crucial event in the making of recursive syntax (Fig. 1). What remains unclear, however, is how this shift became possible.

A closer look at the working of sub-merge reveals that it requires two or more workspaces in parallel, much in the same way that one attends to more than one object in cooperative triadic communication based on joint attention and shared intentionality (Tomasello 2008). I contend that human syntax and cooperation are two examples of our *domestication syndrome*. As a self-domesticated species, we humans share many physical, physiological, behavioral and cognitive traits with other domesticated animals, and the neurobiological mechanisms underlying domestication (Wilkins et al.'s (2014) 'neural crest cell hypothesis') and its importance for language evolution (Benítez-Burraco & Kempe 2018, Thomas & Kirby 2018) are now intensively studied. Our unique pro-social cooperativeness is very likely a consequence of self-domestication which favored reduced aggressiveness and generous attention, which also enabled the kind of parallel distributed attentional system involved in sub-merge. Thus cooperation forms a (not *the*) cognitive foundation of hierarchical syntax (Fig. 2). This line of exploration will open up the possibility of bringing together CL's communication-based approach and GG's structure-based approach into a comprehensive scenario of human language evolution without any conflict.



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A Possible Link between Cognitive Linguistics and the Lennebergian View on Biological Evolution of Language

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Keywords: biological evolution, categorization, cognitive set-formation, evolutionary recombination, the Lennebergian view on language evolution

Lenneberg (1967), unfortunately, has quite often been mentioned only in connection with emphasizing the biolinguistic view of the Chomskyan generative grammar. However, given the central role accorded to the cognitive process of categorization in human language in his work, it should in fact be more in line with the field of cognitive linguistics, where it has been well demonstrated that categorization plays a pivotal role in human language and cognition (Lakoff 1987, Taylor 2003 *inter alia*). While the question of how categorization came into play in language evolution has been addressed in the context of cultural evolution in cognitive approaches (Contreras Kallens et al. 2018 *inter alia*), it has never been concretely discussed in connection with the emergence of the human language symbolic combinatory mechanism in biological evolution of *Homo sapiens*.

My aim is to suggest a possible direction for filling this gap by revisiting Lenneberg's (1967: 374) conjecture on biological evolution of language that states that "[t]he cognitive function underlying language consists of an adaptation of a ubiquitous process (among vertebrates) of categorization and extraction of similarities" (which should be eventually linked to the similarity and analogy-based processes current in many cognitive approaches to linguistics, e.g., Gentner's 1983 analogical reasoning and Haiman's 1983 iconicity *inter alia*). It is to be noted that here the term "adaptation" does not mean "adaptation to the environment" but rather it means "structural innovations on a molecular level" (Lenneberg 1967: 72) of DNA. Thus, the issue of primary importance is to investigate how the ubiquitous process of categorization and extraction of similarities would be "adapted" to yield human language in phylogeny.

Although an in-depth molecular biological study on this matter is beyond the scope of this presentation, developing and refining the line of my earlier work (Hoshi 2018), which is based upon the Lennebergian view of language evolution, I will carefully compare the similarities and differences between Lenneberg's (1967) *interrelational categorization* (*IntCat*) and *grouping/merge*, and will propose a hypothesis that the human language symbolic combinatory mechanism such as Langacker's (1997) *grouping* (or alternatively *merge* in generative grammar) derived from *IntCat* as part of evolutionary recombination of the two sub-elements in *IntCat*, viz., an array of "concepts" and a cognitive set-formation operation, affecting the nature of categorization in our species in a fundamental fashion. Also, given the fact that the cognitive process of categorization per se has been preserved in our species, it will be suggested for a future research possibility that the relevant genetic mutation in the biological evolution of language created a novel neural substrate system for implementing *grouping/merge*, independently of the one for categorization, via multi-level biochemical interactions in our brain (Fisher & Vernes 2015).

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On the Emergence of Grammar and Image Schemas: A Cognitive Linguistic View

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Keywords: action grammar, image schema, container, linking, construction

This paper presents a cognitive-linguistic approach to the issue of “syntactic hierarchy” and its evolution studied mainly in generative grammar, and offers a plausible picture of how humans have developed the abilities of combining symbols to form complex constructions.

Since generative grammar has been reducing its central construct of “Universal Grammar (UG)” to simpler operations, UG as it assumes currently approximates some domain-general cognitive abilities. One of such moves can be seen in “action grammar,” which hypothesizes the motor origin of syntax (Greenfield 1991, Fujita 2017). It claims that syntactic hierarchies are rooted in the strategies of combining multiple objects into a united whole, like nesting cups. According to Greenfield (1991), the combining strategies of objects develop from “pairing” of two objects to “pot” and “subassembly” of multiple objects. In a generative-grammar view (Fujita 2017), such combining strategies give rise to what they call “merge,” as part of hard-wired innate UG, which produces syntactic hierarchy.

Noteworthy enough, the idea of action grammar is compatible with the cognitive-linguistic view of embodiment, especially of image schemas that are recurrent patterns extracted from sensori-motor experiences (Johnson 1987); in the case of serializing objects, what underlie is the “container” schema. However, the container schema and inference patterns it evokes are not so self-evident as they seem; one needs to recognize the relative sizes of objects (the container should be bigger than the content), the relationship of inclusion, the dependency of the content’s location on the container and so on to utilize the schema. In fact, Greenfield (1991) suggests the possibilities of non-successful instances of pairings, as we can see younger children and animals try to put a big object into a small container. This leads us to assume that the container schema is acquired in a heuristic way through trial-and-error experiences of combining objects of different sizes (cf. Fragaszy et al. 2002), and that the container schema is not available until later stages of development and evolution; primitive syntagmatic relations between items are rather accounted for by “linking” schema.

This paper demonstrates the assumption observed above in terms of usage-based, construction-grammar view of syntactic development (Tomasello 2003) where constructions are extracted from specific chunks composed of multiple lexical item. In light of this, what appears to be “syntactic hierarchy” is brought only after one establishes constructions which function as containers to accommodate lexical items, not only in ontogenetic but in phylogenetic terms. The present paper will show that the sensori-motor development from the linking schema to the container schema correlates with emergence of grammar, through close examinations of the results of experiments concerning nesting cups presented so far (Greenfield 1991, Fragaszy et al. 2002 and so forth).

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On the Co-evolution of Internalization and Externalization in Human Language

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Keywords: language evolution, co-evolution of internalization and externalization, human lexicon, concrete concepts, abstract concepts

In the generative approach to language evolution as typified by Berwick & Chomsky (2016), externalization (communication) is largely dismissed as a secondary phenomenon in favor of internalization (thought) being the primary function of language. I argue against this position and claim that externalization plays an equally important role in the evolution of human language, especially of a rich and complex lexicon, in support of the cognitive linguistic view that communication is the essential function of language.

As cognitive semantics has shown so far, the concepts underlying human lexicon can be classified into concrete and abstract concepts. Concrete concepts are based on bodily experience with physical entities, while abstract concepts lack a physical basis and do not have stable, tangible, observable referents. They are often understood metaphorically through more concrete concepts or structures (Lakoff & Johnson 1980, Johnson 1987). This priority of concrete concepts over abstract ones deserves special attention when we consider the co-evolution of their internalization and externalization. As regards evolutionary continuity, it is also interesting to note that nonhuman animals, especially primates, share some conceptual structures with humans, even though they lack sophisticated ways of externalizing them (Fitch 2017, Seyfarth & Cheney 2017).

This talk emphasizes that the co-evolutionary role of internalization and externalization is an essential factor in the emergence of human lexicon, which contains concepts ranging over various levels of abstraction. The co-evolution in question proceeds as follows. As a first step, basic concrete concepts are readily realized as syntactically operable lexical items. Concrete concepts have a common physical basis because they represent physical entities which have specific shapes or texture and can be handled as such (Taylor 2003; see also Pulman 1983). As a result, they can be internally combined into complex linguistic forms without externalization. In contrast, abstract concepts do not have such physically universal standards, and understanding them depends on a specific idealized cognitive model (Lakoff 1987). Therefore, they first need to be shared through externalization to become distinct linguistic objects.

As a second step, not only abstract concepts but also internally complex concrete concepts will be externalized and used for communication. This externalization makes it easier to manipulate them as syntactic objects because they are now equipped with obvious forms linked to auditory or visual stimuli. This, in turn, leads to more complex internal combination of lexical concepts, both concrete and abstract ones, and these new concepts will be externalized again.

Thus there is a kind of positive feedback loop of internalization and externalization, and this co-evolutionary relation has provided human language with such a rich and complex lexicon as we see today.

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Using the P-Chain to understand the Evolution of Language

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Keywords: prediction, syntax, meaning

To understand the evolution of language, it is necessary to link biological mechanisms for learning with meaning-based language processing and in this talk, I will present a P-Chain framework that can help to link these components (Dell & Chang 2014). The first link in the P-chain is that *Processing involves Prediction* and this refers to the fact that during comprehension, people often generates expectations for upcoming linguistic elements (Altman & Kamide, 1999). If you can predict a sentence from meaning, then you can do sentence production (*Prediction is Production*). When predictions are wrong, then *Prediction leads to Prediction error* and error is important in many learning algorithms (*Prediction error is used in Implicit Learning*, Rumelhart, Hinton, & Williams, 1986). Thus, in this model *Implicit Learning creates Priming* and there is evidence for this type of priming in adults in tasks such as structural priming. As the changes due to learning accumulate, this same process can also explain the acquisition of language (*Priming accrues in Acquisition*). The final link argues that Prediction error can explain Event-related Potentials like the N400 and P600, and this demonstrates that the learning signals in this framework can be seen in the electrical activity of the biological brain. Thus this framework helps to bridge between meaning-based production/processing/acquisition of language and biological systems that were under evolutionary pressure.

Sequence-based prediction can be modelled in simple recurrent neural network models that use back-propagation to learn sequential regularities. The fact that these networks can model a wide range of studies of how language influences the electrical activity in the brain (N400 and P600 studies, Fitz & Chang, 2018) demonstrates that these algorithms are approximating biological mechanisms in human brains. Furthermore, these algorithms have been used to model hierarchical structure across a wide range of different sequence learning tasks (e.g., music, action), so these mechanisms could have been under evolutionary pressure before language ability fully evolved (Conway & Christiansen, 2001). But these mechanisms are not sufficient to explain meaning-based sentence production and a new architecture was created that combined simple recurrent networks with message meaning. This new architecture, called Dual-path model, was used to instantiate the links in the P-chain framework. Here I argue that the key change in the development of human language was not due to the evolution of sequence learning per se (sequence prediction/implicit learning), but instead was the results of the evolution of social abilities to understand and convey meanings to others (Tomasello, 2010). The change in human social motivations to communicate can only support the evolution of language when encoded into an architecture like the Dual-path model which links sequencing learning abilities to structured meaning. In this talk, I will discuss the learning abilities of different types of neural network architectures and how meaning fundamentally changes the nature of the representations in these models.

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Shared Intentionality and the Emergence of Sentence Types in Natural and Artificial Languages

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Keywords: sentence, holophrase, joint attention, shared intentionality, grounding element

From a cognitive linguistic perspective, this presentation explores the role of shared intentionality in the evolutionary emergence of sentences and examines the adequacy of the argument by analyzing the results of our previous experiments with artificial languages.

In a cognitive linguistic framework, the study of language evolution mainly focuses on the emergence of symbols via iconicity. Expressions with high iconicity such as ideophones or gestures are considered key to the origin of language (Haiman). The symbols assumed in these studies are mostly lexical items. While cognitive grammar presupposes continuity between lexicon and grammar (Langacker), sentence types have their own characteristics as symbolic assemblies. This presentation explores the emergence of the sentential meaning paired with the form of a declarative sentence. As a link between words and sentences, I focused on the semantics of holophrases, or words that function as sentences. A study in Japanese linguistics points out the distinction between holophrases used to demand existence (e.g., shouting “Water!” when you want water) and holophrases used to confirm existence (e.g., shouting “Water!” when you see water and are moved by its existence). In addition, it is argued that the semantic structure of the latter type leads to a declarative sentence with a predicate and grounding elements (e.g., auxiliaries) that show how the speaker conceives the predicated event (Onoe). Onoe’s argument presupposes a monologue. However, I demonstrate that, once used in a dialogue, a holophrase to confirm existence establishes joint attention for shared intentionality, that is, a type of joint attention that can be established only by humans (Gomez et al., Tomasello). Moreover, I propose that shared intentionality leads to sentential meaning.

To determine the adequacy of this proposal, I adopted a constructive approach to language. In this experimental approach, we let robots, simulated agents (Hashimoto & Ikegami), or humans (Galantucci) interact through artificial communication systems and observe how communication structures emerge (Scott-Phillips & Kirby). In most studies in this field, communication systems transmit information. However, we conducted experiments with robots (Uno et al., 2011) and humans (Uno et al., 2012) in which we blocked the transmission of ordinary information and made them communicate for communication itself to introduce shared intentionality. Consequently, we observed new usages of artificial communication systems. That is, the perspectives of the robot or the human “speaker” were displayed in the “utterances” and were utilized to sustain the “listener’s” communication. This observation may be regarded as an emergence of a sentence with grounding elements, that is, a declarative sentence.

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Filling a gap between pre-linguistic and linguistic pragmatics: An experimental semiotic approach to the formation of symbolic communication systems with intention sharing

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Keywords: Intention sharing, Symbolic communication, Denotation and connotation, Pragmatics

While the understanding intention is critical in human communication, the intention is not always expressed literally as denotation but implied as connotation. The mirror neuron system is a candidate of the underlying neural mechanism of understanding intention through actions (Iacoboni et al. 2005) such as facial expressions, gestures, and prosody. Deductive reasoning plays a role in the understanding of connotation including intention (Grice 1975; Sperber and Wilson 1986). A gap, however, exists between these two levels, namely, between pre-linguistic pragmatics including embodiment and linguistic pragmatics premised upon semantics and syntax (Hurford 2007).

An experimental semiotic approach (Galuntucci 2009) to the formation of symbolic communication systems (Konno et al. 2012) can help clarify the mechanisms of intention understanding. In this experiment, two participants in separate sites conducted a coordination task with symbolic message exchange. The message was composed of abstract graphics with no predefined and shared meaning. While the participants must share referential meanings of symbols (denotation), the task was fabricated so that symbol sharing alone was not enough. The participants needed to mutually understand whether the partners' messages meant to declare the sender's states or to demand the receiver's action, namely, connotations representing partners' intentions.

We found that symbolic communication systems with intention sharing developed from making common ground (pre-linguistic pragmatics) to sharing symbol systems (semantics), and then to establishing role division indicating intentions (basic linguistic pragmatics) (Konno et al. 2014). This result means that our experimental semiotic paradigm is effective to explore the developmental process from pre-linguistic to linguistic pragmatics. It was suggested that the mirror neuron system worked as a neural substrate as the pre-linguistic pragmatics, not by associating embodied actions with intention of the actions but by contributing in the tendency toward embodied simulation of other's intention since the task included no apparent embodied action (Li et al. under review). Additionally, front-parietal functional connectivity in the brain seemed to integrate symbolic and intentional meanings (Fujiwara et al. 2018). This functional connectivity may fill the gap between pre-linguistic and basic linguistic pragmatics.

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“Wen hassen wir? #dasperfektedinner” Conceptualization and categorization of in-group and out-group belonging on Twitter

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Keywords: categorization, group belonging, discourse analysis, Twitter, cognitive psychology

We define ourselves in terms of social groupings and quickly decide who is part of a group and who is not. This is not only the case in face-to-face interaction, but also on social media like Twitter. Often Twitter users are seen as a large homogenous mass (cf. Macskassy 2012), but that ignores smaller groups and especially in-group, out-group and inter-group behavior. Human cognition is to a large part based on identifying and categorizing things that belong together (Lakoff 1987) which also plays a role when we categorize ourselves in terms of group belonging (Tajfel/Turner 1978).

In our paper we look at tweets by German Twitter users who regularly live tweet during the broadcast of the reality television format *Das Perfekte Dinner*, using the hashtag #dasperfektedinner to understand how users conceptualize group belonging. Reality competition formats such as *Das Perfekte Dinner* invite evaluative comments from viewers, but in contrast to tweets sent while watching fictional content, those comments are often addressed at real people, i.e. the contestants. To the community of reality TV tweeters, commenting on the contestants' behavior, personality, and outward appearance is seen as fair game and classifies the contestants as part of the out-group.

- (1) Angela, du hast da was zwischen deinen Pferdezähnen #dasperfektedinner
'Angela, you have something between your horse teeth'

These tweets either directly address the contestants (1) or comment more generally on aspects in the show (2), but mainly aim at criticizing the contestants, which is a significant part of the construction of group belonging.

- (2) Die Küche ist aber nicht schön #dasperfektedinner
'The kitchen is not exactly nice' #dasperfektedinner

On the opposite side we have the tweeters. They are considered to be an *ad-hoc* audience, only connected through the use of the same hashtag. It has been claimed that such a group is not stable beyond one episode (Bruns / Burgess 2011). However, our data shows that tweeters form an in-group that continues to exist beyond the interaction of one evening (3), sometimes even beyond one specific TV show.

- (3) Hey ihr Tweeties, bin jetzt auch da, was habe ich verpasst, wen hassen wir?
#dasperfektedinner
'Hey tweeties, I'm here now, what did I miss, whom do we hate?'

We argue that tweeters start to construct categories of group belonging as soon as they begin participating in the discourse. Our data furthermore suggests that these groups are stable beyond one single episode, which applies not only to the in-group but also the out-group with its ever-changing group members.

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Saussure revisited: the delineation of *langue* and *parole* using a prototype-category model

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It is little over a century since Saussure (1916) suggested that language is both a mental construct (*langue*) and a sociological event (*parole*).

To this day, we have failed to stipulate which language elements belong to *langue* and which to *parole*, or even suggest how these two domains differ, except in very general ways.

The Chomskyan perspective has skirted around the idea of *langue*, and Chomsky (1986) has seen *parole* as unworthy of investigation.

Halliday's Functional Grammar, by contrast, looks at language sociologically, and is rooted firmly in the area of *parole*, with little attention given to language in the mind.

In this presentation we will use a simple system, the prototype-category approach, to characterize *langue* and *parole* and delineate clearly how they differ.

Lexical categories like FURNITURE have prototypes or best examples, such as *table*, *chair* and *sofa*, as do grammatical categories. The Existential category (there is/are in English, and *imasu/arimasu* (います/あります) in Japanese) has a range of at least six grammatical variations, including Exist+NP+PP (there is a book on the table) and Exist+NP+VP (there is a man waiting at the door).

By eliciting existential data from over 100 native speakers of English and Japanese respectively, speakers of both languages overwhelmingly produced the pattern Exist+NP+PP, suggesting this as the prototype for both languages.

When this data is compared with spoken usage-based corpus data (Langacker, 1987), the corpus data is non-prototypical and involves a whole range of structural variation.

We suggest therefore that *langue* seems to be prototypical, that the mind appears to organize categories rooted in their own prototypes, while *parole* makes use of the full range of linguistic possibilities, improvising and expanding on the basic prototypical-categorical language to weave structurally wide-ranging, lexically abstract patterns that reflect the full possibilities of human communication in the real world.

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Motion events across languages: a parallel-corpus investigation of English, French and Japanese spatial expressions

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Keywords: cognitive typology, translation, spatial encoding, parallel corpus, English, French, Japanese

In his pioneering work on cognitive semantics, Talmy (2000) proposes a typological classification of the languages of the world based on how motion components are lexicalized. He distinguishes two main lexicalization patterns: (a) languages that tend to lexicalize Manner in the main verb and encode Path in their periphery (Satellite-framed), such as English; and (b) languages that tend to lexicalize Path in the main verb (Verb-framed) leaving Manner either unexpressed or in the periphery of the sentence, such as French. Some languages, however, use more than one of these types to encode complex events. For example, Japanese – despite its typical classification as Verb-framed – allows for alternative lexicalizations: coordination and compounding (Croft et al., 2010); Manner encoding in various ways (e.g., use of semi-onomatopoeic/mimetic Manner adverbs, colloquial compound Manner verbs) and Path and Deixis encodings in compound verbs (Morita, 2011; Matsumoto et al., 2017), thus raising questions about its verb-framed character.

The aim of this paper was to compare the Japanese system to another verb-framed language (French) and to a satellite-framed system (English) and thus to test the validity of previous classifications. A parallel English-French-Japanese corpus using an American novel (Gilbert, 2006) and its French and Japanese translations was built and coded following Soroli and Verkerk (2017) coding system. The coding was based on two axes: one focused on the syntactic architecture of the utterances - whether they were simple or complex; and the other on the semantics of the utterances - whether the preferred structures in the original vs. the translations were semantically dense (how many motion components were expressed) and what was their semantic focus (e.g., Manner-, Path- or Deixis-focused). In order to adopt a theory-neutral perspective the data were coded twice (method inspired by Soroli & Verkerk, 2017): (a) *P-coding*: included Deixis (movement towards or away from the speaker) as a subcomponent of Path – according to Talmy's description; (b) *D-coding*: considered Deixis as a component on its own – according to Morita's and Matsumoto et al.'s descriptions.

The results show that Japanese shows great variability in its encoding strategies when Deixis is considered independently (D-coding). Despite similarities in the domain of syntactic architecture (all three languages mainly favour simple clauses) and some common patterns in the semantic analysis (French and Japanese show similar profiles in the P-coding), the Japanese text contains: (a) less Path-only utterances than French (very few utterances leave Manner unmentioned); and (b) because of its compound constructions, Manner adverbs and participles as well as simultaneous encodings of Manner, Path, and Deixis are more frequent than in the other two languages.

To conclude, the findings: (a) suggest important within-type variations across V-framed languages (French vs. Japanese); (b) confirm the distinguishing character of Japanese; and (c) point to the need for further investigations in order to fully describe the typological characteristics and symmetrical strategies of this language.

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Move or not Move: An ERP Study on the Processing of Fictive and Actual Motion Events

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Keywords: Fictive Motion; Actual Motion; Cognitive Processing; N400; P600

This study used ERP method to investigate the processing of Fictive Motion (FM) and Actual Motion (AM) during natural language comprehension. In our hypothesis, the motion component of a verb is preserved in both AM and FM constructions (“The army/The bridge crossed the river”). However, the incorporation of a motion-event sense into FM requires reanalysis or reconstruction both syntactically and semantically.

In the experiment, all the FM and AM sentences were selected using the framework of Talmy (2000). Originally, 180 (3 conditions *60 groups =180 trials) sentences were used as the stimuli, and each sentence was divided into three segments: the noun phrase, the verb and the final part of the sentence. Notably, the only difference between the FM and AM sentence lies in the Figure, while the motion verb and the Ground are the same. FM sentences (i.e. emanation path, pattern path, frame-relative path, advent path, access path and coextension path) were matched as closely as possible in length and content to AM sentences. For example:

- (1) a. FM sentence: 影子落在地面上(The shadow falls onto the floor)
- b. AM sentence: 苹果落在地面上(The apple falls onto the floor)
- c. Filler sentence: 地面是湿的(The floor is wet)

The paradigm of rapid serial visual presentation (RSVP) was used in the experiment (see Figure 1). 16 Chinese participants attended the experiment.

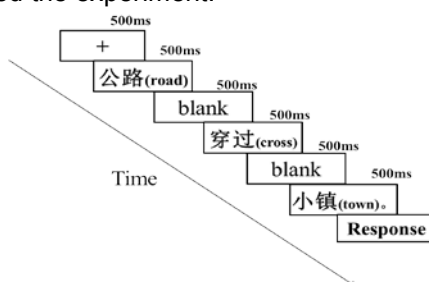


Figure 1: Example trial in the ERP experiment

The ANOVAs in the 300–500 ms time-window yielded a significant main effect of condition and an interaction between condition and Anterior-Central-Posterior distribution at midline electrodes: $F(2, 30) = 4.519, p = 0.046$. Pairwise comparisons revealed that the FM evoked a larger N400 than the AM condition. Specifically, for CZ N400: $F(1, 15) = 8.462, p = 0.011$; for PZ N400: $F(1, 15) = 5.900, p = 0.028$. ANOVAs between 500 and 800 ms also detected a significant main effect of condition and an interaction between condition and Anterior-Central-Posterior distribution at midline electrodes: $F(2, 30) = 4.262, p = 0.042$. Pairwise comparisons showed that the FM elicited a larger P600 at the electrode site of PZ than the AM condition: $F(1, 15) = 4.959, p = 0.042$.

Overall, the ERP results reveal that larger N400 and P600 were elicited by FM constructions, indicating that the processing of FM requires increased cognitive efforts than AM condition. The neurocognitive mechanism underlying the N400 and P600 effects reflects the higher cognitive load in both syntactic and semantic integration process for FM constructions, such that motion verbs with static entities can be difficultly integrated into the motion-event frame context involve additional mental simulation of motion (Matlock, 2004).

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A force-dynamic account of the Finnish verbs of REMAINING: when staying can involve a shift in force dynamics

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Keywords: force dynamics, remaining, (non-)motion, aspect, polysemy

This paper presents a force dynamic account of the Finnish verbs of REMAINING, following the theory developed by Talmy (1988, 2000). According to Talmy (2000: 410–411), force dynamics, as one of the fundamental categories that language uses to structure and organize meaning, is most directly evident in grammar – however, it also plays a prominent role in structuring lexicalization patterns for open-class lexical items. For instance, the verbs *stay* and *remain* in English (along with the verbs *leave*, *hold* and *keep*) are prominent lexical verbs that manifest strong force dynamics (ibid., p. 426–428). The same observation can be extended to the Finnish verbs of REMAINING.

Finnish traditionally distinguishes between two verbs of REMAINING, i.e. denoting in their most basic sense the continuation of a spatial or more abstract relationship: 1) the verb *pysyä* ('to remain, stay'), which governs a locative argument in a stative case (*Kai pysyi kotona* 'Kai stayed [at] home'), and 2) its near-synonym *jäädä* ('to remain, stay'), requiring its locative argument to be marked with a directional local case, implicating motion (or change) towards something (*Kai jäi kotiin* 'Kai stayed [into] home'). The motion-orientedness of *jäädä* and more specifically the contradiction of non-motion with (a path of) motion is quite idiosyncratic and can fundamentally be linked to the verb's aspectuality. Unlike the verbs of REMAINING in English, aspect is indeed where the fundamental distinction between *jäädä* and *pysyä* operates: *pysyä* is durative and unbounded; *jäädä* is punctual and bounded.

Force dynamics has great explanatory power for analyzing this aspectual distinction and other semantic features of the Finnish constructions of REMAINING. In the two examples above, the Agonist, appearing as subject, has a force tendency toward rest, while the Antagonist (left implicit) has a tendency toward action. In this force-dynamic interaction, the Agonist is stronger and the Antagonist can only hinder the Agonist without blocking it, resulting in the subject staying where he already was. To capture the aspectual contrast between the two verbs, I rely on the distinction that Talmy makes between a *steady-state force-dynamic pattern* and a *shifting force-dynamic pattern*. The latter, adding the factor of change through time, is useful for describing the aspectuality of the punctual and motion-oriented verb *jäädä*, while the earlier applies quite accurately to the stative verb *pysyä*. The originality of applying this distinction to the Finnish verbs of REMAINING, however, lies in that the force-dynamic shift occurring with *jäädä* in its continuative meaning, unlike Talmy's analyzed examples, involves a change that is invisible to the physical world.

The present analysis is in line with what has been put forward by Huumo (2007: 94–95), who suggests that "sentences with *jäädä* designate only a punctual force-dynamic interaction between the alternative scenarios of leaving and not leaving". This paper thus expands Huumo's hypothesis by providing a systematic analysis of the different force-dynamic patterns featured by the Finnish verbs of REMAINING and their implications for the verbs' semantics. It is based on naturally occurring written Finnish collected from the Finnish TenTen corpus.

Describing the Finnish verbs of REMAINING in terms of steady-state and shifting force-dynamic patterns is powerful as: a) it corroborates previous analyses of the verbs' image schemas (Author), b) it accounts for the polysemy of *jäädä*, which exhibits, besides its continuative meaning, a change-of-state one (*Kai jäi työttömäksi* 'Kai became unemployed (lit. 'remained [into the state of being] unemployed)' and an adversative one (*Teksti jäi lyhyeksi* 'The text remained somewhat short (lit. 'remained [into the state of being] short)') and c) it helps to describe e.g. variation between voluntary and involuntary remaining (*I stayed home for a nice and cozy evening* vs. *I remained stuck at home*). The verbs of REMAINING at a general semantic level are particularly relevant to the theory of force dynamics in that they crystallize several crucial aspects of it.

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Segmentation of complex motion events in two verb-serializing languages

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Keywords: ballistic caused motion events, event segmentation, serial verb constructions, Ilocano, Thai

This study aims to investigate event segmentation (Pawley 1987, Givón 1991, Bohnemeyer et al. 2007) in the coding of ballistic caused motion events (e.g. *kick*, *throw*) in two verb-serializing languages of Southeast Asia, Ilocano (a Malayo-Polynesian language of the Austronesian family) and Thai (a Tai language of the Tai-Kadai family). A video-based speech elicitation experiment conducted in the two languages reveals that speakers of each language make frequent use of serial verb constructions (SVCs), to describe ballistic caused motion events. Building on the results, we examine how such SVCs package ballistic caused motion events linguistically, using the scope of temporal modifiers. The data collected through interviews show that the way of event segmentation varies between Thai and Ilocano SVCs.

SVCs are monoclausal constructions consisting of two or more independent verbs serialized with no overt connector (Aikhenvald 2006). Each constituent verb of an SVC, by itself, may function as a full-fledged verb. An SVC is monoclausal in that the whole construction falls under the scope of an illocutionary-force operator (e.g. imperative marker) and of an epistemic modal marker (e.g. speculative marker), as in (1) and (2).

- (1) *kinugtara=k* *ti=bo:la* *?agpasi:rok*
 kick:perfective=1SG.ERG core=ball go.under:perfective
?iti=lamisa: ?an *napan* *?idjaj=net.*
 oblique=table go:perfective locative=net
 'I kicked the ball and it passed under the table away to the net.' [Ilocano]
- (2) *phûan tê?* *lûuk bôn* *phân nâa* *chân paj hâa* *càkkrayaan*
 friend kick ball pass in.front.of 1SG go approach.and.meet bicycle
 '(My) friend kicked the ball which passed in front of me away to the bicycle.' [Thai]

Following Bohnemeyer et al. (2007), we introduce the macro-event property (MEP) as a way to examine how ballistic caused motion events are morpho-syntactically packaged in the two languages. A construction expressing a complex event has the MEP if and only if temporal operators (e.g. *yesterday*, *instantly*, *at noon*) necessarily have scope over all subevents of the complex event. Ballistic caused motion events described with SVCs as in (1) and (2) primarily consist of two subevents, Ballistic causation and Caused motion. Thus, the possible segmentations are: (a) the two subevents are integrated into a single macro-event expression (an expression having the MEP) or (b) they are not. The results show the following. Ilocano SVCs for ballistic caused motion as in (1) do not have the MEP. In other words, the two subevents are not integrated into one macro-event expression, although the passing and arrival event described in (1) are integrated into a single macro-event expression. In contrast, Thai SVCs for Ballistic caused motion as in (2) have the MEP, and therefore they combine Ballistic causation and Caused motion more tightly than Ilocano SVCs.

To sum up, we show that the segmentation of complex motion events differs between the two verb-serializing languages. It is also shown that the two languages have SVCs with different properties. This study thus contributes to a better understanding of the range of variation in SVCs as well as in the segmentation of complex motion events.

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Cough and joke. Concomitance co-event in Swedish motion constructions.

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Keywords: motion events, motion verbs, co-events, construction grammar, Swedish

Manner of motion is a co-event type that has been treated extensively in the research of motion typology. However, as noticed by Talmy (2017), there are other co-events that have received less attention. One such example is concomitance, which denotes an activity that “co-occurs with the main Motion event and is an activity that the Figure of the Motion event additionally exhibits” (Talmy 2000:46, also cf. Israel 1996; Beliën 2008; Olofsson to appear). The question asked in this paper is to what extent this co-event is represented in motion event description in Swedish. As a point of departure, consider the following examples.

- (1) Siri hostade iväg till bussen (‘Siri coughed off to the bus’)
- (2) Siri skojade runt på stan (‘Siri joked around in the city’)

In example (1), the verb *hosta* ‘cough’ is used in a double adverbial construction that consists of a verb, the directional adverb *iväg* ‘off’ and a prepositional phrase headed by the preposition *till* ‘to’ denoting the goal of the motion. In example (2), the verb *skojas* ‘joke’ is used in a structurally similar construction that consists of a verb, the directional adverb *runt* ‘around’ and the prepositional phrase headed by *på* ‘on’ denoting the restricted area in which the motion takes place. None of the verbs *hosta* and *skojas* are motion verbs but rather activities the moving subject is performing while moving. Both (1) and (2) are novel and hence examples of productive uses of the [VERB-*iväg-till*] ‘verb-off-to’ construction and the [VERB-*runt-på*] ‘verb-around-on’ construction respectively.

In this talk, which builds on a comprehensive corpus study of 17 Swedish motion constructions (Olofsson 2018), I will show that mainly a few of the most productive constructions are used with concomitance verbs, while the major part of the constructions are used only with a set of common motion verbs (such as *springa* ‘run’ and *åka* ‘go by vehicle’).

This leads to the assumption that in order to capture the use of novel verbs in motion event descriptions, such as the concomitance activity verbs, one needs to account for specific (partially lexically filled) motion constructions (cf. Boas 2008).

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Motion Events from Latin to Romance: Role of Linguistic Resources in Typological Shift

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Keywords: motion events, historical linguistics, Latin, Romance languages, typological shift

In Talmy's typology of event conflation (Talmy 2000), language's type is based on the surface element that this language commonly uses to express the framing event of the macro-event. For example, consider the macro-event "[the bottle MOVED in to the cave] DURING-WHICH [it floated]". English commonly expresses it as *The bottle floated into the cave*, while Spanish as *La botella entró flotando en la cueva* (literally, 'The bottle entered (MOVED-in) floating to the cave') (Talmy 2000: II: 49). The English pattern places the framing event (i.e., path of motion) in the satellite *into*, making English a satellite-framed language. In contrast, in the Spanish pattern, the framing event is lexicalized in the main verb root in *entró*, making Spanish a verb-framed language. The fact that Spanish and other Romance languages are predominantly verb-framed is noteworthy because they developed from a predominantly satellite-framed language (Latin). Publications that have addressed the transition from predominantly satellite-framed Latin to predominantly verb-framed Romance languages have discovered that the typological shift in question is part of broader trends attested on the way from Latin to Romance (Stolova 2008, 2010, 2015).

The goal of the present study is to establish a comprehensive inventory of Latin-to-Romance trends involved in the typological shift from satellite-framing to verb-framing. The study argues that such trends have to do with changes in motion-independent linguistic resources. The study demonstrates that there are three kinds of relevant linguistic resources involved: semantic, morpholexical, and morphosyntactic. The study has a Pan-Romance focus. In addition to Classical Latin and Late Latin, it relies on data from a wide range of Romance languages: Spanish, French, Italian, Portuguese, Romanian, Catalan, Occitan, Sardinian, and Raeto-Romance.

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Causation in discourse and cognition: Crosslinguistic perspectives

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Keywords: causation, Frame Semantics, Construction Grammar, iconicity, languages and cultures

Cognitive linguists have long recognized causation as a cognitive domain of fundamental importance to both the grammatical structure and the lexicons of natural languages (e.g., Croft 1991; Langacker 1991; Talmy 2000). This session brings together presentations of new research relevant to the crosslinguistic exploration of causality, in keeping with the crosslinguistic orientation of the overall conference theme. Five of the papers have an explicit typological focus; four more are implicitly comparative. Four draw on typological databases; the rest are based on primary data from languages such as Estonian, Japanese, Korean, Kupsapiny (Nilotic), Sidaama (Cushitic), Tagalog, and Yucatec Maya (only two of the papers focus on English). These papers deal with every aspect of the linguistic representation of causality, from agentivity and argument structure via multi-predicate and clause combination constructions to discourse coherence. Recurrent theoretical perspectives are Frame Semantics, Construction Grammar, and Grammaticalization Theory. Sources of evidence include elicitation, experimentation, corpus studies, statistical analysis of typological databases, and L1 and L2 acquisition studies. In the following, we identify four themes around which the contributions revolve.

1. Causality in lexicon and discourse – Four of the papers marshal tools from Frame Semantics (Bellingham; Latrouite and Van Valin) and/or Construction Grammar (De Knop and Gallez; Trigel and Tomson) to study the role of causality in event integration and coherence relations. A fifth investigates how lexical causatives can be automatically identified in discourse and discusses implications for language acquisition (You et al).

2. Causality in grammar: Iconicity – It has long been suggested that the morphosyntactic complexity of causatives iconically reflects the complexity of the causal chain involved (e.g., Haiman 1983). A recent target article by Haspelmath (2008) hypothesizes that such iconicity effects are entirely frequency-based, drawing responses by Croft (2008) and Haiman (2008). Two of the papers directly engage with this debate (Bohnemeyer; Levshina), while Kawachi et al present a rigorous quantitative test of Haiman's Iconicity Principle in response to Escamilla (2012).

3. Causality in grammar: Lesser-studied causative constructions – As compared to morphological and periphrastic causative constructions, other morphosyntactic expressions of causality have received less attention. Five of the presentations in our session focus on such devices. Three of them are typological studies (Gerasimov; Say; Zaika), while the fourth presents an in-depth examination of the syntax and semantics of an understudied English construction (Bellingham) and the fifth investigates how causatives, voice, and information structure interact with each other in Tagalog (Klimenko).

4. Causal cognition across languages and cultures – The relationship between cognition and linguistic structure is a fundamental issue in cognitive linguistics. Two of the presentations in our session examine how members of different linguistic and cultural communities attribute causality depending on the agentivity of the actors involved in the event (Ariño and Ibarretxe-Antuñano; Lin). The presentations focus on cross-cultural variation, but also lay the groundwork for future investigations of how relevant cultural differences impact the lexical and grammatical encoding of causal chains.

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Integrating event descriptions in multi-predicate constructions: frame semantics and construal in the English means construction

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Keywords: frame semantics, construction grammar, construal, lexical aspect, force dynamics

Multi-predicate argument-structure constructions (e.g. caused motion, resultative) allow speakers to build descriptions of complex causal events by integrating multiple event frames: those contributed by each predicate, plus the more abstract event frame of the construction (Goldberg, 1995:5; Langacker, 1991:293-304). I extend this analysis to the highly productive English means construction, exemplified in (1), which integrates two (potentially complex) event frames (main event + means event) with the constructionally provided means frame.

- (1) a. He angered Democrats by threatening to veto his own budget.
b. Archy wrote by hurling himself at the typewriter keys one at a time.
c. His own wife survived by clinging to a couple of chairs until she was rescued.

Corpus of Contemporary American English (Davies, 2008-)

Although frequently used to paraphrase the semantics of other constructions (e.g. Goldberg & Jackendoff, 2001:538; Levin, 1993:98; Jackendoff, 1997:554-5), the means construction itself has received very little attention. The pattern of event integration typically exploited in these paraphrases (in which the means event specifies the underspecified causing subevent of the main event, e.g. (1a)) is however only one of the possibilities for the means construction: a corpus study of this construction reveals two other patterns of event integration.

I argue that the primary semantic contribution of the means frame is to portray the means event as a fine-grained construal (c.f. scalar adjustment in Croft & Cruse, 2004; Croft, 2012) of a component of the main event (typically, but not necessarily, involving some action by the actor of the main event). The three possible patterns of event integration are distinguished based on which component of the main event frame they target, and the pattern can be predicted based on the main event frame's causal and aspectual structure as well as the salience/cultural relevance of a larger force-dynamic structure (containing the main event frame).

The second pattern (1b), requires a durative main event (an activity or accomplishment) which is not causally complex, and the means event is a fine-grained construal of the entire main event: the relationship between the two events is similar to the elaboration coherence relation found in discourse (c.f. Hobbs, 1979). In the third pattern (1c), the main event is restricted to event frames which are not themselves causally complex, but exist within a highly salient/culturally relevant force-dynamic structure (e.g. dying, surviving, escaping). The means construction directs attention to (and the means event provides a fine-grained construal of) the event which precedes the main event in the salient force-dynamic structure: this preceding event would otherwise not have been explicitly mentioned. A detailed semantic analysis of the English means construction offers unique insight into the interaction between lexical and constructional semantics in the composition of complex event representations.

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Extracting lexical causatives from discourse

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Keywords: language processing, first language acquisition, causatives, machine learning, discourse genres

Causation is one of the main features of human cognition and language. An important step in language acquisition is to understand causation and its linguistic expressions. A prerequisite for this is the extraction of causatives from the input. Languages vary in how they express causatives but the main three types are lexical, periphrastic and morphological causatives. While periphrastic and morphological causative constructions can usually be easily traced by detecting periphrastic verbs (e.g. “make” in English) and affixes (e.g. -(s)ase in Japanese), lexical causatives have no explicit marker and are therefore much more difficult to generalize. Essentially, verbs can imply different levels of causality, which might form a continuum rather than exhibiting strict cutting points for lexical causatives. Here we propose a computational method to simulate the extraction and generalization of lexical causatives based on distributional learning. To test whether child-directed speech exhibits a different distribution of features which might facilitate this generalization process we test our method in three different corpora representing three genres: written language, spoken adult-to-adult language and child-directed speech.

We employ the word embeddings algorithm (Mikolov et al., 2013) with an adjustable window to generate high-dimensional vector representations for verbs. Besides inferring from raw utterances in the corpora, the models capitalize on syntactic information at different levels to achieve a more comprehensive inference. We apply the models to corpora of three different discourse genres: the written corpus in the British National Corpus (BNC), dialogues in the BNC spoken corpus and child-directed speech in the Manchester Corpus (Theakston et al., 2001). Our main finding is that syntax plays a different role for causative inference in different genres. In the written corpus, results show that models built solely on raw utterances generally perform below the baseline, while adding syntactic information did improve the performance. In particular, post-verbal parts of speech (POS) help to largely enhance the differentiation in most cases. Moreover, the order of feeding syntactic information to the models in the training phase drastically influences the performance, with feeding syntax after raw utterances worsening the results across all window sizes. Adult-to-adult dialogues show no clear patterns concerning the inference strategy of lexical causatives but often display improved results when syntax is involved. While syntactic information is favored in the two genres taken from the BNC, child-directed speech consistently renders a relatively high performance purely based on raw utterances. We suggest that verb meaning in child-directed speech is most successfully extracted by relying on the semantics of neighboring words whereas meaning in written language is best extracted by relying on structural information of the neighboring words. We discuss the impact of these results for first language acquisition research and the potential generalization of these models in other languages.

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The caused motion construction revisited: theoretical and cross-linguistic perspectives

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Keywords: caused motion construction; oblique argument; cross-linguistic perspectives; German; French

In her description of the English caused motion construction (CMC) Goldberg (1995 & 2006) defines the oblique argument essentially as a local goal expressed by a directional prepositional phrase. A study of German instances of the CMC in the corpora DeReKo of the Institute for German Language (IDS-Mannheim) reveals a greater variety in the realization of the oblique argument. Apart from the expression of a local goal (1-2), the German oblique argument can also express a state or a temporal goal (compare Dalmas & Gautier 2013; Dewell 2011), e.g. (3) and (4).

- (1) *Der Fußballer köpft den Ball ins Tor.* (lit. 'The soccer player heads the ball into the goal')
- (2) *Der Fußballer köpfte eine Ecke von Marcel W. ins Tor.* (lit. 'The soccer player headed a corner into the goal')
- (3) *Der Fußballer köpft das Team zum Erfolg.* (lit. 'The soccer player heads the team to (the) success')
- (4) *Der Fußballer köpft das Team in die nächste Saison.* (lit. 'The soccer player heads the team into the following term')

This variation largely depends on the motion expressed by the construction, i.e. actual, non-actual or subjective motion, and on the nature of the other arguments and the interaction between them in the CMC (verb, subject, object). In (1) the local goal (*ins Tor*) is associated with the actual motion of a concrete object (*den Ball*). Construction (2) also describes actual motion and the object (*die Ecke*) corresponds metonymically to the ball. By contrast, in (3) and (4) the meaning of the construction is extended (also compare the description of resultatives by Goldberg & Jackendoff 2004): the object (*das Team*) is being moved metaphorically into a state (*zum Erfolg*) or to a later moment in time (*in die nächste Saison*).

As the constraints on the construction are language-specific and typologically motivated (Talmy 2000) there is no one-to-one correspondence between the German constructions and their French equivalents. Consequently, the translation of these constructions constitutes a challenge for French speakers. Against this background, our study aims (i) at describing possible extensions of Goldberg's CMC (family of constructions), (ii) with data from DeReKo at illustrating the specificities and constraints of the German CMC, and (iii) in a cross-linguistic perspective at exploring the major differences between the German CMCs and corresponding French equivalents with examples from the translation corpora OPUS.

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Corpora

DeReKo: <http://www1.ids-mannheim.de/kl/projekte/korpora.html> / OPUS: <http://opus.nlpl.eu/>

Estonian causatives from the construction grammar perspective

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Keywords: causative, construction grammar, Estonian

Causation is considered to be a basic cognitive domain that has fundamental importance to both grammatical structure and the lexicon (cf. Langacker 1991; Talmy 2000). Rich morphology and presence of both morphological and constructional means of expression in Estonian gives us a great chance to tackle a rich inventory of different possibilities to express phases of causative chain. In the present paper we focus on the conceptualization of the realization phase in the causative chain in Estonian.

There are three main ways to express causality in Estonian:

(1) analytic causative constructions (cf. *aja-b naer-ma* - drive-3SG laugh-INF2, lit. '(he/she/it) drives someone to laugh'),

(2) morphological causatives (cf. *naeru-ta-b* - laugh-CAUS-3SG '(he/she) makes someone laugh more time'),

(3) lexical causatives (e.g. *tapa-b* 'kills').

In addition, depending on the situation and context, a cause-effect relation can also be expressed by other means, for example by adposition constructions (e.g. [N:GEN + *tõttu* 'because of' / *mõjul* 'due to' / *läbi* 'through']), cases (illative, elative, inessive or comitative), or adverbial clauses, such as BECAUSE-clause (e.g. *sellepärast* 'because', *kuna* 'when; whereas').

Our data consist of spoken descriptions of video clips depicting causative situations. Clips come from the Causality Across Languages project (Bellingham *et al*, under review). The experiments were run with 32 Estonian speaking participants.

We have closer look at two types of constructions. First type is conceptualized by speech act verbs and its complement in the 1st infinitive (e.g. *palu-b istu-da* - 'asks (someone) to sit (down)') where the resulting event is not usually explicitly conceptualized. The second is an analytic construction with a locative expression, e.g. *kaussi löö-ma* 'to crack (lit. 'hit' into the bowl', where the result of the causative event is construed by locative expression (e.g. *kaussi* - bowl:ILL 'into the bowl').

We also tackle the question of what makes the speaker to choose morphological or analytical way of expression. As an example of this, there is a difference in the continuation of the CAUSER's control over the result event (cf. examples of *ajab naerma* 'drives someone to laugh' and *naerutama* 'makes someone to laugh more time or more than once' above). In this type of constructions the realization phase of the causative situation is included in the meaning of the construction, and thus the speaker does not need to mention the result of the scene explicitly.

Our paper contributes to the main idea of the construction grammar (e.g. Goldberg 1995, 2006): based on the Estonian data we see that the usage of specific causal chain types derive from the constructional meaning. If time allows, we will also introduce some causative expressions, which are not included in the list of means of causality in Estonian so far.

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Causational Interpretation based on Immediate and General Common Ground Frames

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Keywords: causal relations, discourse, lexical causatives, frames, prototype scenarios, meaning calculation

Austronesian languages like Tagalog exhibit explicit morphological means like the prefixes *pa-* and *ika-* for marking different kinds of causation.

- (1) a. Nag-kain ako ng isda. b. Nag-pa-kain ako ng isda sa mga bata.
 AV. eat 1sNOM GEN fish AV-CAUS-eat 1sNOM GEN fish DAT PL child
 'I ate fish.' 'I made/let the children eat fish.'
- (2) a. Na-galit siya sa akin. b. I-k<in>a-galit niya ako.
 ST-anger 3sNom DAT 1s CAUS<UV>anger 3sGEN 1sNOM
 'He is angry at me.' 'I made him angry.'

Still, our preliminary fieldwork study shows that these are not used as often as one would expect. Very often speakers choose verbs unmarked for causation. The calculation of the exact causal relation between two events is then left to the hearer. It has been claimed that in addition to frames that provide the lexical-conceptual meaning of linguistic elements and structures, interlocutors seem to make extensive use of situational prototype frames (Barsalou 1992), in which events are connected via constraints mirroring different causal relations ('x requires y', x enables y' etc.). How exactly events are construed as connected is therefore also influenced by discourse coherence relations (like explanation, elaboration, parallelism etc.) and what is 'at issue' (=focal) in a short, given discourse, i.e. whether the result or the process is at-issue and central in a series of events. In this talk, we will give an outline of a current frame semantic approach (cf. Petersen 2007, Löbner 2014) to the calculation and representation of the information- and discourse-structural interpretation of event descriptions based on immediate and general common ground frames (cf. Berio et al. 2017), whereby the immediate common ground frames represent the linguistic knowledge and cues given in the immediate discourse context, while the general common ground frames consist of general world knowledge and, more specifically, about prototypical scenarios. Time permitting, we will, furthermore, discuss when explicit lexical causatives are used.

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Additional meanings of causal markers in polypredicative constructions

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Keywords: causal constructions, reason clauses, semantics

The paper deals with semantics of causal markers in polypredicative constructions; it is based on a reasonably balanced sample of 74 languages. It turns out that apart from their basic causal meaning, causal markers can express other additional meanings.

1. Evaluative component. While neutral evaluation is typical of most causal markers under consideration (cf. Spanish *porque* ‘because’), they can express positive or negative evaluation as well (cf. Spanish *gracias a que* ‘thanks to the fact that’ and *por culpa de que* ‘because of’, where the cause is perceived as negative). Besides, some of the causal markers can imply negative evaluation of the consequence in the main clause, cf. a Russian causal marker *iz-za togo, chto* from [Boguslavskaya & Levontina 2004: 74].

It seems that evaluative meaning is more typical of Standard Average European, though the other language may be underdescribed in this respect.

2. The reality of cause. Some languages can not only express real cause, but use false causal markers as well. Some of them imply that the participant believes the reason to be false (cf. French *sous (le) prétexte que* ‘under the pretext that’), while others refer to a situation where the participant does not know that the reason is false (cf. Basque *-delakoan* ‘in the belief that’) [Rijk 2008: 463].

3. Temporal distance. In some languages, different causal markers can express greater or smaller temporal distance. Thus, in Skou (Western Skou, Indonesia) the reason marker *te-*, unlike *wa ko te*, is used if “the time reference of the first clause significantly precedes that of the second clause” [Donohue 2004: 497-498].

4. Conformity or non-conformity to the hearer’s expectations. In Mishar Tatar dialect causal clauses violating the presupposition of the question admit only one of two basic causal strategies (while causal conjunction *čenki* is possible here, perfect converb *-gan-ga* is not) [Tatevosov et al. 2017: 488].

(1a) *sineŋ čaškr-ŋ juk, čenki sin a-nr ūze-ŋ wat-tr-ŋ.*

you.GEN cup-2SG not_exist REAS you it-ACC yourself-2SG break-PST-2SG

(1b) **sin a-nr ūze-ŋ wat-kan-ga (kür-ä) sineŋ čaškr-ŋ juk.*

you it-ACC yourself-2SG break-PFCT-CAUSE (see-ST.IPFV) you.GEN cup-2SG not_exist

{– Where is my cup?} – ‘Your cup is not there any more, as you have broken it yourself’.

5. Objective vs. subjective cause. In some languages the opposition between the objective and subjective reason is possible, cf. the Korean examples, where *-(e)se* expresses objective and impersonal cause, while *-nikka* “expresses a speaker’s emphatic attitude” [Sohn 1993: 88]:

(2a) *pi-ka wa-se nuc-ess-eyo*

rain-NOM come-SE late-PST-DEC

‘I was late because it is raining’.

(2b) *pi-ka o-nikka nuc-ess-eyo*

‘(You know/I believe) I was late because it is raining’.

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Causal markers derived from speech act verbs in the languages of the world¹

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Keywords: causality, causal clauses, cognitive typology, grammaticalization, subordination

Standing apart from other types of adverbial clauses in many respects, causal clauses remain understudied from a cross-linguistic point of view [Diessel & Hetterle 2011]. One commonly recognized source for the development of markers of causal relations is generic speech act verbs [Heine & Kuteva 2002: 261-262; Güldemann 2008: 464-467; Martowicz 2011: 131], cf. (1):

(1) Kolyma Yukaghir [Nikolaeva 2004: 15.45]

Tabun-gələ pulun-de: ta:t ibil'e:-l'əl tude terikə-gələ
 that- ACC old.man-DIM thus cry-EV(3SG) he. POSS old.woman- ACC
kude-de-gə mon-u-t.
 kill-TR-DS.CVB say-0-IPF.CVB

'The old man started crying because they had killed his wife.'

Based on a survey of complement and adverbial constructions in a sample of more than 120 languages of the world, I argue that two broad grammaticalization scenarios must be distinguished.

On the one hand, speech act verbs commonly grammaticalize into complementizers, first with other predicates of speech, than extending to a broader range of matrix verbs. From there they may evolve into general subordinators covering cause-effect among other adverbial relations or come to be employed in causal clauses built on the basis of complement clauses.

On the other hand, speech act verbs may develop directly into markers of causal relations, as suggested by the data from languages where other subordination types are introduced by markers that bear no affinity to speech act verbs. A distinctive subtype of this scenario is the strategy of causal clause formation characteristic of the Caucasus as a linguistic area. It involves conventionalization of conditional clauses of the type "If you say/ask why P, Q":

(2) Adyghe [own fieldwork]

...*səd-a p-ʔ^we-me qə-ze-χ^wə-m ə-ne-me a-λeβ^wə-š'təβe-p.*
 what-Q 2SG.A-say-DYN DIR-REL.TMP-become-OBL 3POSS-eye-PL.OBL 3PL.A-see-IPF-NEG

'...because when she was born, she was blind'.

(3) Ingush [Nichols 2011: 530]

Earzii eanna c'i tyllaai hana ealcha ciga=chy earzii daaxandea.
 (name) say.CVANT name bestow.NW why say.CVTEMP there=in eagle live.CVREAS

'It's was named "Earzii" ('eagle') because an eagle lived there.'

Grammaticalization of speech act verbs into causal markers "bypassing" complementation and other subordination types, which has not yet received much attention in the literature, testifies to the special affinity between speech act situations and causal clauses. This appears natural given the latter's typical communicative function in speaker-hearer interaction [Ford & Mori 1994; Diessel & Hetterle 2011].

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Nominal causal constructions: causal chains and syncretism (a typological study)¹

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Keywords: cognitive typology, causal expressions, adpositions and cases, grammaticalization, source and goal

By nominal causal constructions, I refer to constructions in which the caused event is syntactically expressed by a full-fledged clause, whereas the causing event is syntactically represented as a noun phrase, typically in combination with dependent marking (cases or adpositions) or, more rarely, head marking devices. Nominal causal expressions can be headed by verbal nominalizations ('because of the plane's late arrival') and abstract nouns ('because of the distance'), but they can also metonymically refer to an entity involved in the causing event ('because of my sister / car') [Degand 2000].

The goal of this study is to establish typologically valid connections between types of meanings expressed by nominal causal constructions and the polysemy/syncretism patterns associated with the respective coding devices. The data were gathered from available descriptions of areally and genealogically diverse languages (the size of the sample is currently 65 languages). Individual constructions (0-4 per language) were annotated for several parameters including morphosyntactic type, pattern of syncretism and semantic type.

Syncretic nominal causal markers are cross-linguistically more common than dedicated nominal causal markers (see [Palancar 2001] for a discussion of some patterns of syncretism from a cognitive point of view). Typically, they emerge based on more concrete meanings via grammaticalization [Heine & Kuteva 2002]. I propose to group specific functions that can be syncretic with nominal causes into four classes: i) "Source" (motion from, 'after', etc.), ii) "Identity" (markers of spatial or temporal proximity, including locative, instrumental, comitative and possessive markers); iii) "Goal" (directional, dative, benefactive, purposive markers, etc.) and iv) the residual "Other" class.

Semantic classification was often problematic because of the scarcity of available data. This classification was based on the relative position of the caused and causing events on the time axis, semantic type of the main predicate and the presence/absence of a sentient or agentive participant (these parameters were inspired by Talmy's and Croft's approaches to causation). As a result, available uses were grouped into four broad classes: i) Prior non-volitional cause ('he was late because of his sister/car'); ii) Simultaneous non-volitional cause ('I am shedding tears because of the smoke'); iii) cause of Reaction, including emotions ('he was punished for his sin'); iv) Motivation ('they fought over / because of the meat').

It seems that all possible types of combinations of semantics types and syncretism patterns can be attested. However, these combinations are not distributed randomly. In particular, causes from the "Simultaneous" domain strongly favor markers of the "Identity" type. Reactions and Motivations favor markers of the "Goal" type. Interestingly, prior non-volitional causes seem to be rare in some macro-areas (e.g. New Guinea and Oceania). They favor dedicated markers and tolerate borrowed markers more easily than other types of nominal causes. These findings might reflect more abstract (and secondary?) status of those causal constructions that do not involve a sentient / human being as a mediator, despite their strong presence in the Western scholarly tradition, including linguistic accounts. A more general conclusion is that conceptualization of causal chains and the transfer from a causing event to a participant of that event is not universal.

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Cross-theoretical Perspectives on Frame-based Lexical and Constructional Analyses: Bridging Qualitative and Quantitative Studies

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Ever since Fillmore (1975, 1977, 1985, among others), the frame-based analysis of the lexicon has been one of the central foci of cognitive linguistics. Further, it has fed into a new generation of research characterized by the sophisticated use of corpora (Ruppenhofer et al. 2016, chapters in Lyngfelt et al. 2018, papers in Torrent et al. 2018) and statistical methods (Stefanowicz and Gries 2006; Glynn and Fischer 2010). This theme session builds on this tradition, and attempts to advance our understanding of the organization of lexical and constructional information and its interactions with other aspects of language.

The issues to be addressed in this theme session include:

(i) Frame Semantics and the FrameNet (FN). FN is designed to be a system for building a language resource enriched with Frame Semantic annotations, but at the same time it is expected that FN lexicon will have a seamless interaction with its *constructicon* that stores grammatical constructions. Also, compatibility of frames across languages will be a key point of discussion.

(ii) Corpus-based approach to cultural knowledge. Since its inception, the concept of frame included culturally oriented knowledge (giving inspiration to the notion of ICM). Recent advances in quantitative method of lexical analysis have encouraged us to look deeper into the lexicon as a window to cultural frames. Exploring the effectiveness of this method and its further possibilities will be a topic for this theme session.

(iii) Enriching corpora with annotation. Endowing corpora with rich annotation has proved to be a highly effective method in corpus-based constructional analyses. But obviously its possibilities have not been exhausted, leaving much to be explored. We will discuss what kind of information should be tagged to corpora for enhanced lexical and constructional analyses.

The session will feature leading scholars in the field, who will report on the state of the art of their research areas. At the same time, ample time for focused discussion will be reserved with a hope to establish a solid platform for deeper investigation of our linguistic and cultural knowledge.

There are nine papers altogether: SAMBRE on multilingual FN; SAMBRE ET AL. on cut and break verbs in Italian and German; HAMLITSCH on borrowed morphemes in Japanese; KITAZAWA AND OHARA on interpretation predicates and frame integration; PETRUCK AND LEVIN on frame semantic parsing; KRAWCZAK on social emotion concepts; NONAKA on verb alternation in English; OHARA on contrastive text analysis of Japanese and English; BAKER on closed-class lexicon. The session will be headed by OHORI's overview and wrapped up by HILPERT's commentary.

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Multilingual FrameNet and Calabria's mafia: Italian video documentaries as conceptual windows on a transnational economic crime scenario

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Keywords: multilingual framenets – Italian – crime scenario – actors and events – cultural frame semantic models

Context and corpus – This paper offers a cognitively inspired frame-based analysis of two long Italian documentaries about economic mafia activities in Italy and the EU, such as racketeering and money laundering by 'Ndrangheta, the Calabrian mafia, which infiltrates the legal economy globally. Importantly, these documentaries explain the validity of law enforcement in the economic sphere, as well as the increasing contestation by Italian civil society, by means of activist anti-mafia resistance, in Italy and Germany, for instance (Sambre 2017).

Linguistic framework and rationale - Frame semantics and FrameNet (FN) offer a language-independent metalanguage and detailed crime scenario (Boas 2009, Ohara 2012, Baker 2017), based on English data. Despite its generic relevance for the understanding of English LGP, the sequential organization of the FN crime scenario in terms of criminal actors and American legal procedures makes it less suited to describe socio-behavioral aspects of Italian economic mafia culture and (trans-) national policing in Italy and the EU (Sergi 2018). Furthermore, it does not include specialized (Pimentel et al. 2012) criminological concepts about international organized crime (Longo 2010), nor about culturally relevant (Boas 2013) peculiarities of economic anti-mafia, i.e. civil anti-mafia actors/victims and activities foregrounded in discourse. As an idiom, Italian and crime as LGP have been largely absent in (cultural) analyses of the Multilingual FN project (MFN), apart from seminal work on verb valency, high frequency lexical units (Busso & Lenci 2016) or exploratory work on written LSP legal concepts (Venturi et al. 2009).

Objectives and (provisional) results – Our general objective is to reintegrate Italian in the MFN, by means of rereading FN's source English metalanguage based on a realistic recent Italian 'Ndrangheta media discourse c, in order build a corpus-based exploratory lexicon (LUs) and semantic role (FEs) description of economic anti-mafia discourse for: (i) representation of actor types (nominal entities) both in legal and civil anti-mafia; (ii) types of economic mafia offenses and anti-mafia legal or civil action (verbal events, and repressive means); (iii) sectors and (local and regional Italian and non-Italian) places (non-core FEs) associated with (i-ii); (iii) a possible transitivity construction for (anti-)mafia actors as FE core agents and/or undergoers (Hart 2014). (iv) We will then briefly evaluate the results of our linguistic description (i-ii-iii) against the background of criminological research about global 'Ndrangheta and anti-mafia (dalla Chiesa 2014). As a result we and propose an enlarged conceptual English FN crime scenario metalanguage, which from the applied perspective could act as a starting point for describing international organized (economic) crime, actors and events, in other (transnational) cultures and languages.

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Verbal genericity and null instantiation in Italian and German cut and break sequences: a multimodal socio-cognitive approach

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Keywords: multimodality – CxG – instrumentals – German/Italian – cognitive grammar

Context and corpus - This talk takes further utterance construction grammar (UCxG, Cienki 2017) as the overarching multimodal association between lexico-grammatical valency patterns and head/hand co-speech gestures. The data set is composed of a dyadic elicitation task for instrumental cutting and breaking actions, inspired from cross-linguistic verb typology (Majid et al. 2008 a.o). German- and Italian-speaking participants jointly imagine causal events in which they associate images for instruments and for patient objects undergoing cut/break actions (Schoonjans et al. 2017). Such brainstorming (in 8 pairs of speakers) brings about complex causal event representations, in which participants word and gesture the use of hands or artefacts (knives, saws) in enacted instrumental causality (Sambre and Wermuth 2010, 2015) and update this information (Langacker 2008) sequentially.

Objectives - The general objective is to examine the systematics of the multimodal association of verbal and gestural information, along the axes of vertical schematicity-elaboration (i-ii) and sequential development (iii), in discursive stretches of several utterances, for breaking down complex causal event representations (Bohnemeyer 2011). More specifically, we zoom in on form and frequency of co-speech gesture and temporal overlap of gestures with (i) generic verbs for cut/break GER *schneiden/brechen* IT *tagliare/rompere* (Streeck 2002); (ii) null instantiations (NI) in genre-based verb-argument structures, i.e. free omissions of NP argument roles (AG, PAT, INS) or Verbs (Ruppenhofer & Michaelis 2010, 2014) completed by gestural fillers (e.g. *puoi* [NI INF, vertical hand movement] *così, you can* [NI INF, vertical hand movement] *like*); (iii) the elaboration of generic verbs and/or NI verb-argument structure (in i and ii respectively) in subsequent surface structures, where overt spoken frame elements dynamically fill in (previously) generic or NI information (Langacker 2012; Ruppenhofer et al. 2012).

(Provisional) results – Genericity (i), NI (ii) and elaboration (iii) verbs on the level of simple (i-ii) or multiple (iii) utterances integrate conceptual representation of instrumental action both as composite a *form/product* of individual mental simulation. Abstract thinking structurally co-occurs with enacting concrete iconic affordances imposed by instrumental artefacts (Bergen & Feldman 2008, Masson-Carro et al. 2016), but also as an *interactive function*: hands and words are part of a socio-cognitive process where causal chains and subevents are visualized for, and stepwise elaborated or completed by participants (Gallagher 2008, Bohnemeyer 2011, Auer 2015). *Conceptually speaking*, complex utterances combine these dimensions synthetically or analytically: synthesis refers to the compact schematized base depiction of an instrumental macro-event in (i) a conceptually underspecified format (and sometimes with (ii) a grammatically incomplete form), whereas analysis concerns the step-wise sequential completion and/or elaboration of that baseline in processing time (Langacker 2016). Seen from an *interactional perspective*, generalized macro-events (i-ii) may act as interactive instructions to prospectively project (iii) sequential co-constructions (Stukenbrock 2014, Auer 2015, Streeck 2018). We will sketch which multimodal foci trigger for such co-construction and/or co-elaboration.

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A constructional approach to borrowed bound morphemes in Japanese: With an emphasis on cultural frames

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Keywords: Frame semantics, Cultural frames, Construction morphology, Loanwords, Compounding

Among the many English borrowings in Japanese, there is a subset of abstract elements that are used primarily as bound morphemes. Intriguingly, these morphemes (Booij 2010) can invoke frames that have their roots in Japanese culture (Fillmore 1982). This paper discusses how cultural frames contribute to the constructional networks of borrowed bound morphemes in Japanese. We will discuss three such constructions, *x-jakku* 'jack', *x-taimu* 'time', and *x-rosu* 'loss'.

The *x-jakku* construction (Hamlitsch & Horie 2017) invokes the Japanese_train frame as in (1).

(1) *Jisha kookoku de umetsukusu kookoku jakku o tenkai.* (2005, Chunichi/Tokyo) (Partially modified)

'[They] will start their campaign by occupying (somewhere, e.g., a subway station) with their own ads (lit. ad-jack).'

The *x-jakku* construction has two subtypes. The first construction ($[[x]_{Ni-jakku}]_{VNj} \leftrightarrow$ [occupying SEM_i w/ SEM_{kj}]) has two sub-nodes: 1. [occupying **vehicle**_i w/ arms_{kj}], e.g., *ressha-jakku* 'train hijacking' and 2. [occupying **space**_i w/ instrument_{kj}], e.g., *densha-jakku* '(legally) occupying a train (with posters)'. The second construction ($[[x]_{Nk-jakku}]_{VNj} \leftrightarrow$ occupying space_i w/ instrument_{kj}); e.g., *kookoku-jakku* '(legally) occupying somewhere (e.g., a train/station) with ads') is linked paradigmatically with (i.e., alternates with) the second sub-node of the first construction. Here, the Japanese_train frame mediates the two major branches through metaphorical and metonymical semantic extension. Interestingly, this frame emerged in Japanese society, where trains are ubiquitous and filled with ads.

"x" of the *x-taimu* construction may be instantiated by core, peripheral, or even extrathematic elements of a frame (Fillmore & Baker 2010) such as Theme (e.g., *koohii-taimu* 'a fun time for drinking coffee while doing something'), Place (e.g., *kafe-taimu* 'a fun time at a café doing something'), Positive Emotion (e.g., *otanoshimi-taimu* 'time for doing something that causes joy'), etc. These subtypes can alternate as in (2). The Family_activity frame, rooted in normative Japanese social interactions, is a representative facilitator of the alternations.

(2) *Mama-tachi no oshaberi-taimu* ('chat-time; a fun chat time')! *Ko-sodate no koto ya jibun no koto nado jiyuu ni oshaberi shi, rifuresshu shimashoo.* (2008, BCCWJ) \leftrightarrow *mama-tachi-taimu* ('mothers-time; a fun time for mothers to do something together') \leftrightarrow *rifuresshu-taimu* ('refresh-time; a time to do something that brings one's energy back')

'It's time for the moms to have a fun chat (lit. chat-time)! Let's refresh and talk freely about things like child-rearing or something personal, etc.'

The *x-rosu* construction evokes the House_pet frame, Marriage frame, and Entertainment frame in the constructional network (e.g., *petto-rosu* 'losing one's pet and missing it'; *Tamaki-rosu* "'losing" Tamaki, a popular soap opera actor, because of his marriage'). Here again, the construction is closely linked to Japanese cultural norms where celebrities, along with pets and certain beloved family members, are admired and viewed as pure, ideal, and unblemished, and therefore can become an object of attachment.

In all these cases, culture-specific frames play a central role in the construction of the morphological networks. Japanese not only borrows these morphemes but also gives them a set of functions that are culturally dependent. In order to understand the meanings of these borrowings, one must also understand how they fit in and relate to Japanese culture.

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Interpretation predicates and contents in frame integration: the case of *sasou* in Japanese

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Keywords: frame semantics, frame integration, interpretation predicates, content predicates, Japanese

This paper discusses frame integration involving an interpretation predicate in Japanese. Inspired by Hasegawa et al. (2006), which uses the idea of frame integration to characterize the meaning of sentences with an interpretation predicate, this paper argues that a Japanese verb *sasou* 'entice/seduce' may also be characterized as an interpretation predicate and analyzes the meanings of the verb and of sentences containing it. First, it claims that *sasou* evokes three frames. Secondly, the paper points out that in all of the three meanings of *sasou*, the content is encoded either as a predicate or a noun phrase in the sentence. This is in contrast to the English interpretation predicate *risk*, since in the case of *risk*, the content is always encoded as a predicate and not as a noun phrase. By analyzing meanings of *sasou* and meanings of sentences containing it, this paper argues that interpretation predicates exist not only in English but also in Japanese and points out that there are interesting differences between English and Japanese interpretation predicates.

Hasegawa et al. (2006) employs the idea of frame integration to describe the meaning of sentences containing an interpretation predicate such as *risk*, *manage* and *dare*. They point out that interpretation predicates "locate a state of affairs within some larger interpretive schema" (Hasegawa et al. 2006: 1). In their analysis of the verb *risk*, they argue that there is a frame integration between the verb and a content predicate, which "gives information about the content of a state of affairs," within a sentence (ibid.). In the sentence *she risked her life by going to Iraq*, for example, *going to Iraq* is the content verb phrase and *risk* plays a role in evaluating the risk of the action. *He risked leaving the security of his home to deliver the message* is also composed of the interpretation predicate *risk* and a content verb phrase, *leaving the security of his home*.

This paper argues that *sasou* in Japanese is an interpretation predicate just like *risk* in English. It claims that the verb evokes three frames (the *Attempt_suasion*, *Cause_to_start*, and *Seducing* frames) and that in all of the three meanings the content may be encoded as a noun phrase, in addition to as a predicate, unlike *risk*. In (1) and (2), the interpretation predicate *sasou* is shown in bold and the content noun phrase is underlined. In (1), the noun *syokuzi* 'meal' is the content and *sasou* gives an interpretation of the SPEAKER's intention for suggesting a CONTENT to Kasuya. That is, Akino not only suggested Kasuya to go to a place for a meal but also intended to spend time together by going and eating there. In (2), *sasou* is used with a noun phrase expressing the SEDUCER's attractive attributes. Here, the verb gives an interpretation of the SEDUCER's intention for using a MEANS, i.e. *kuroi hitomi* 'black eyes.' That is, the SEDUCER used her black eyes to sexually attract the traveler.

- (1) [Akino wa SPEAKER] [Kasuya o ADDRESSEE] [syokuzi ni CONTENT] **sasotta**.Attempt_suasion
Akino TOP Kasuya ACC meal LOC enticed.
'Akino invited Kasuya to a meal.'
- (2) [Seisyō ga SEDUCER] [kuroi hitomi de MEANS] [tabibito o SEDUCED] **sasotta**.Seducing
sacred prostitute NOM black eyes INSTR traveler ACC seduced.
'A sacred prostitute seduced a traveler with black eyes.'

To summarize, this paper analyzes the meanings and uses of the verb *sasou*, by employing the theory of frame semantics and especially the idea of frame integration. It points out for the first time that *sasou* is an interpretation predicate and thus shows that interpretation predicates exist not only in English but also in Japanese. Except for Hasegawa et al. (2006), the importance of frame integration, especially the importance of interactions between an interpretation predicate and its content in sentence meanings, has not been studied. This paper argues that the Japanese verb *sasou* is indeed an interpretation predicate and demonstrates that its content may be encoded as a noun phrase, in addition to as a predicate, unlike the English interpretation predicate *risk*. It is hoped that this paper contributes to a better understanding of semantics of interpretation predicates in Japanese as well as in English and in other languages. It is also hoped that mechanisms of frame integration may be studied from cross-linguistic perspectives.

Frame Semantic Parsing Needs Constructions

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Keywords: frames, constructions, frame semantic parsing, natural language processing

Gildea and Jurafsky's (2002) pioneering work, based on early FrameNet data (Johnson et al., 2002), paved the way for the development of semantic role labeling (SRL) systems, some of which have reached a relatively high level of performance (e.g., Swayamdipta et al., 2018; Roth, 2016; Roth & Lapata, 2015, Das et al., 2014). Such systems have proven useful in Natural Language Processing (NLP) tasks, all of which first require frame semantic parsing (FSP, e.g., Liu et al., 2016). Despite exploiting ever more sophisticated computational techniques, greater success in FSP is limited because, for the most part, SRL itself is limited to semantic role detection and labeling with respect to individual lexical items, or what FrameNet has construed as such (e.g., *throw on*, *throw up*, *throw together*) as opposed to grammatical constructions.

While cognitive linguists working in Frame Semantics (e.g., Fillmore 1985, 1986) and Construction Grammar (e.g., Fillmore 1988, Kay and Fillmore 1999) are fully aware of the need to characterize all types of constructions, not just lexical ones, as FrameNet primarily has done (Ruppenhofer et al. 2016), so far the NLP research community has not developed enough computational infrastructure that would support the automatic recognition of constructions, but for notable exceptions (e.g., Bakshandeh & Allen 2015; Dunietz 2018).

This paper presents an analysis of a grammatically complex sentence (#1) to illustrate the kinds of linguistic material that a well articulated FrameNet-type lexicon and construction must be able to handle (Fillmore 2006).

1) Car sales were so much lower than expected that stock prices plummeted.

Example (#2) mimics FrameNet's so-called full text annotation, i.e., lexicographic annotation for each lexical item in (#1), with frame names appearing in subscript.

2) [Car_{Vehicle}] [sales_{Commerce_sel}] were [so_{Sufficiency}] [much_{Degree}] [lower_{Measurable_attributes}] than [expected_{Expectation}] that [stock_{Capital_stock}] [prices_{Commerce_scenario}] [plummeted_{Change_position_on_a_scale}]

Examples (#3) – (#5) list the constructions that (#1) instantiates: Comparative_inequality, Causation, and Sufficiency, respectively; the examples also indicate the construction evoking elements (CEEs), if identified, and the construction elements (CEs) for each.

(3) **Comparative_equality**: [Car sales_{Item}] were [so much_{Degree}] [lower_{CD_base CD_marker CEE}] [than expected_{Standard}] that stock prices plummeted.

(4) **Causation**: [Car sales were so much lower than expected_{Cause}] [that stock prices plummeted_{Effect}]

(5) **Sufficiency**: Car sales were [so much lower than expected_{Sufficient_proposition}] [that stock prices plummeted_{Consequence}]

Note that the CEE in (#5) is discontinuous, given that *so* and the finite verb *plummeted* in the *that*-clause evoke the Sufficiency construction. Dunietz et al. (2017) captured numerous syntactic configurations that express causation, despite their linguistic realizations not always including a specific lexical item that would evoke a causation frame. For example, *Car sales were so much lower than expected* is the cause of the effect *that stock prices plummeted* in (#4), where the construction itself provides the causative interpretation; note the Cause and Effect CEs labeled on (#4). While humans can infer such causation (#4), machines cannot do so without the constructional information that the present analysis provides. In other words, frame semantic parsing needs constructions.

This work explicitly brings NLP into Cognitive Linguistics (Dunn 2018), and in so doing strives to invoke cognitive aspects of language processing. Also, it begins to suggest that articulating lexicon and construction might best be accomplished by attending to the concerns of NLP, specifically modeling frames and constructions in ways that NLP research and development will find useful.

Frames-and-Constructions Analysis of Japanese and English Bilingual Children's Books

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Keywords: frames-and-constructions analysis; frame divergence; constructional divergence; the *primacy of the frame* hypothesis, contrastive construction

This paper discusses a frames-and-constructions analysis of bilingual texts, a methodology for comparing frames and constructions in bilingual texts, focusing on constructions in Japanese and English that appear in a bilingual children's book. It argues that in addition to cultural and typological factors, which have been mentioned in previous analyses, constructional differences may be a cause for a mismatch in frames evoked by source and target texts, supporting Czulo's claim based on his analyses of English and German texts (Czulo 2013). Furthermore, by analyzing frame divergences and constructional divergences between Japanese and English, the paper aims to lay out a framework for building a contrastive construction, a repository of construction descriptions, between typologically-unrelated languages.

Frames-and-constructions analyses describe meanings and structures of sentences, focusing on the semantic frames evoked by various linguistic expressions in the sentences. Czulo (2013) regards meaning preservation in translation as the preservation of the frame whenever possible and proposes the *primacy of the frame* hypothesis: ideally the frame of the translation matches the frame of the original. He observes that picking a construction comparable in function in the target language may lead to frame shifts. That is, as the function of the constructions is a factor preferred over the exact match, constructional mismatches may lead to an overriding of the primacy of the frame principle.

This paper analyzes Japanese and English bilingual texts in the following steps: 1) identify the frames evoked by the main predicates in corresponding Japanese and English sentences; 2) if there is a frame mismatch in the two and if there is no frame integration within each, identify the constructions evoked by the two sentences; 3) identify the functions of the constructions; and 4) examine whether the two frames identified in 1) are related via any FrameNet frame-to-frame relations. The paper focuses on sentence-level general constructions.

1) J: *Henna hako ga ochi teru wa*
strange box NOM fall RESULT PARTICLE
(literal translation) 'A strange box has fallen.'

→ E: *Hey, here's a strange box*

2) J: *Thetic* construction → E: *Here_be* construction

3) J: Presentational function → E: Presentational function

4) The *Motion_directional* and *Being_located* frames are not related by a FrameNet frame-to-frame relation

As shown in 1), the Japanese main verb *ochiru* 'fall' evokes the *Motion_directional* frame, while the English *be* evokes the *Being_located* frame, so there is a frame mismatch. The Japanese sentence is an instance of the *Thetic* construction and the English translation exemplifies the *Here_be* construction, so there is a constructional divergence. However, a close examination of the two constructions reveals that both have the presentational function.

Analyses in the paper argue for the view that in Japanese and English bilingual texts, choosing a construction comparable in function in the target language may lead to frame mismatches, thereby resulting in an overriding of the primacy of the frame principle.

To summarize, the paper demonstrates that frames-and-constructions analyses are useful in examining bilingual texts of typologically unrelated pairs of languages. It supports Czulo's claim that a constructional divergence may be a cause for a frame mismatch, by showing examples from Japanese and English. The paper also revealed that the current FrameNet frame-to-frame relations are not sufficient to evaluate the semantic relatedness of pairs of sentences exhibiting a frame mismatch in the two languages. At the same time, the paper suggests that it is worth examining cases of frame matches as well, since such frames may be regarded as cognitively basic. Until now it has been difficult to identify comparable constructions in typologically unrelated languages. It is thus hoped that the frames-and-constructions analysis demonstrated in the paper will prove useful as a means for building a contrastive construction.

Beyond N, V, and Adj: Frame Semantics and the Closed-class Lexicon

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Keywords: FrameNet, lexical semantics, function words, construction grammar, semantic features

Although the most familiar examples of Fillmore's Frame Semantics (Fillmore 1982) are event frames evoked by verbs, the FrameNet Project at ICSI has always asserted that frames can represent not only events, but also relations, states, and entities and that they can be evoked by words of various parts of speech. For example, the frame Evading contains the lexical units (LUs) *elude.v*, *evade.v*, *evasion.n* and *get away.a*. This is a clear contrast to another major lexical resource, WordNet (Fellbaum1998), which has separate hierarchies for nouns, verbs, adjectives and adverbs, with some cross-links between derivationally related words. In recent years, the FrameNet team has gradually added more LUs of other parts of speech; the FN database currently contains 252 LUs with POS adverb, 154 preposition LUs, and 14 subordinating conjunction LUs. Most of the adverb LUs are uncontroversial, appearing in conventional frames, e.g. the Coincidence frame contains the LUS *accident.n*, *chance.a*, *chance.n*, *chance.v*, *coincidence.n*, *random.a*, and *randomly.adv*. We plan to use the WordNet derivational links to suggest additional words of different POS for existing frames, and looking into whether distributional representations of word meaning can help in this process (cf. Pennacchiotti *et al.* 2008).

Recent annotation of new types of text, such as TED talks and research into covering more of the high-frequency English words has also highlighted the need for better coverage of prepositions, conjunctions, pronouns, interjections, etc. However, distinguishing their different uses is difficult: sometimes they evoke frames independently, other times they to serve only as "markers" of particular FEs, some occur in only constructions or multi-word expressions which then evoke frames. FrameNet currently covers static locative and temporal prepositions fairly well, but going further will be quite challenging; e.g., defining the full range of uses of *for.prep* (currently in the frames Duration and Taking_sides) and *with* (currently in Accompaniment and Have_associated). The personal pronouns will require at least one new frame representing the communication context, which might also be the basis of a treatment of deictics like *this* and *those*. (*Here* and *there* are already in the frames Locative_relation and Spatial_collocation.) As usual, the development of new frames and frame relations will be guided in part by previous work on these topics by Fillmore (e.g. Fillmore 1971) and other cognitive linguists such as George Lakoff, Len Talmy, and Ron Langacker.

Some frames, including those containing LUs outside the N, V, and A parts of speech, also raise questions as to when the semantics is better represented as arising from a single frame-evoking expression versus one or more constructions (which might include lexical units as part of their definitions). For example, the subordinate conjunction *but.c* is annotated in the Concessive frame, but *and* is not yet listed in FrameNet, on the grounds that coordination is primarily a construction rather than a frame. Similarly, the Negation frame contains the LUs *not.adv*, *no.art*, and *without.prep*, but the scope of the negation depends in part on the constructions in which they are used. The new texts also contain many MWEs whose meaning is primarily pragmatic and conversational, such as *How are you*, *Thank you*, and *in fact* and constructions such tag questions. We will discuss the progress made and challenges faced in this research and the implications of these questions for the development of Frame Semantics in English and other languages

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Subjective/Objective Construal and Individual Preferences

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Keywords: subjectivity, individual differences, gesture, corpus, public discourse

In this study we examine how language and gesture are used to indicate stance within the complex dynamics of White House Press Conferences, paying particular attention to individual preferences concerning a more subjective or more objective construal (Langacker 2008, 72) of the communicative setting. Although each White House press secretary takes up multiple positions within the discourse space of the press conference, there are options in the construal of the dynamics of the press conferences. In this situation we take the most subjective viewpoint to be one where the press secretary is fully involved in a personal dialogue with the members of the media. In contrast, taking a more objective viewpoint means that the press secretary tends to see their role as one of reporting or facilitating a conversation between the President and the media (or the wider public.)

We investigate the extent to which individual press secretaries have a preference for a more subjective or more objective conceptualization of the conduct of the press conferences. We look at specific interactions, but the main focus is on overall patterns that indicate stable individual preferences for a more subjective or more objective style. We use large speech samples (600,000 to 1,200,000 words) for each of the five press secretaries investigated. We also look for interactions in around 15000 adjacency pairs involving each press secretaries' response to questions. In addition, we observe videos of the press conferences to search for multimodal constructions and locate instances of the use of gesture to indicate stance.

For this study, we calculate the relative frequency of use over several months of linguistic items such as personal names and lexical phrases (*I am, I think, we are, the president, etc.*) to assess the preferred position or viewpoint of the different press secretaries. Here, we can give an illustrative example related to the intermediary dimension. For each set of press conferences, we calculate the frequency (per 1000 words) of *the President* in questions asked by the media (in each set of press conferences) and compare that with the use by the different press secretaries. As expected, the use among the media is fairly constant (10.3, 9.7, 9.0, 9.8, 10.8) and the usage by the press secretaries is much more variable (15.3, 6.7, 7.9, 9.8, 8.0). Thus, it turns out that Ari Fleischer (15.3) has a strong preference for referencing 'the President' and he also has by far the lowest use of personal names in responses to questions, amongst all the press secretaries. We take this to be indicative of an objective perspective in that while Fleischer is obviously interacting with representatives of the media, the conceptualisation tends towards a more abstract communication between the President and the wider public.

We find from the data that Robert Gibbs has a strong tendency to use *I am*, which is one indication of a strong subjective perspective. We also see evidence of a multimodal construction based on *I think* and a deictic gesture. In the presentation we elaborate on these individual differences in the use of language and gesture by the five press secretaries. The results show not only the normal shifts in construal in usage events, but also the existence of stable individual preferences.

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Making sense of *fake*'s fickleness: The role of context

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Keywords: corpus linguistics, privative adjective, modification, word and phrase embedding, context-sensitivity

Few words have enjoyed more recent attention than *fake*, especially (but not exclusively) in combination with *news*. Not only has *fake* featured prominently in word-of-the-year contests around the world, it has also been treated extensively in the linguistic literature. Formal semanticists have classified *fake* as a so-called 'privative' adjective, for which sentences of the form *No Adj N is (an) N* are always true. We here contest that *fake* is an across-the-board privative adjective. For instance, while a *fake beard* is not, actually, a beard, a *fake article* is most definitely still an article. We suggest that privativity may be a side effect of the core meaning of *fake*, which involves an act whereby someone intends to deceive (Lakoff & Johnson 1980: 121-122; Coulson & Fauconnier 1999, Taylor 2003: 96). This still raises the question of how humans effortlessly manage to interpret a *fake*+noun combination correctly.

Using a distributional-semantic approach (Turney & Pantel 2010), we first demonstrate that the overall semantic contribution of 'privative' adjectives (*artificial*, *fake*, *false*, *fictitious*) cannot be detected straightforwardly as a general distancing effect. We here use 'embeddings', that is, dense vector representations based on word co-occurrences in a large corpus, which in our study is a dump of the entire English Wikipedia. A plausible hypothesis would be that the contexts of an adjective-noun combination are more different from the contexts of the noun when the adjective is such a 'privative' one than when it is an ordinary (subsecutive) one, like *red*. Comparing the cosine distance between the adjective-noun bigram and single noun embeddings across two sets of adjectives, privative and ordinary ones, we fail to find a noticeable difference. This suggests that a classification of adjectives into these two sets (privatives and non-privatives) is too coarse. We therefore extend a recent proposal (Del Pinal 2015) involving the noun's qualia roles (how an entity is made, what it consists of, what it is used for, etc.; Pustejovsky 1995) and propose several interpretational types of *fake*-noun combinations, some but not all of which are privative. These interpretations, which we assign manually to the 100 most frequent *fake*-noun combinations in the Wikipedia corpus, depend to a large extent on the meaning of the noun, as combinations with similar interpretations tend to involve nouns that are linked in a distributions-based network. When we restrict our focus to the privative uses of *fake* only, we do detect a slightly enlarged difference between *fake* + noun bigram and noun distributions compared to the previously obtained average difference between adjective + noun bigram and noun distributions. This result contrasts with negative or even opposite findings reported in the literature (Boleda et al. 2012, 2013).

Our study shows that the precise interpretation of *fake* is highly sensitive to the kind of noun it combines with. We argue that a cognitive-linguistic, usage-based approach is well equipped to face this fact about *fake*. Further discussion of authentic examples (e.g., of *fake gun* referring, in a crime film, to a real gun that was not used as a murder weapon but was planted on someone) demonstrates that speakers also have to bring to bear highly detailed frame-semantic knowledge of the world and knowledge of the wider discourse context.

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Naturalization of the Japanese loanword *sushi* in English

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Keywords: lexical borrowing, naturalization process, constructions, frame semantics, layering

Japanese ranks very high among the non-Indo-European languages that provide loanwords to English (Durkin 2014: 25). The naturalization process of Japanese loanwords in English is explained by Doi (2014) in a three-stage scale, with “totally foreign” at one end and “fully incorporated” at the other. While Doi’s scale offers a refined generalization of the process of naturalization, it is based on examples from the Oxford English Dictionary (OED). Therefore, it is by no means certain that the scale can be extended to account for the patterns of loanwords outside the OED examples. To answer this question, this paper focuses on a Japanese loanword *sushi*. It examines its characteristics using iWeb corpus (Davies 2018-) and a Google web search.

Doi (2014) identifies three stages distinguished by morphological and semantic characteristics. In Stage 1, the loanword accompanies a paraphrase as in “*sushi or rice sandwiches*” (an 1893 citation in OED). In Stage 2, the loanword occupies the attributive slot of a compound (e.g. *sushi* bar). In Stage 3, the loanword involves a semantic change (e.g. *sushi* ‘vinegar-flavored rice with fish/vegetables’ > ‘raw fish’ for some speakers) or occurs with an affix (e.g. the plural marker (*sushis*)), evaluated as evidence for “productivity”. These criteria, however, leave out two types of web data.

One is the case where *sushi* is used in a phrase or sentence as-is (e.g. *flavor of the sushi; you can order sushi* ...), and these appearances constitute approximately 80% of the iWeb corpus data. The web search also reveals that *sushi* can be part of a unique construction: e.g. appearing in a snowclone, *X is the new Y*, as in *Sushi is the new pizza*., or in an Internet meme (cf. Dancygier and Vandelanotte 2017), *One Does Not Simply ...*, as in *One Does Not Simply Make Sushi* (<https://makeameme.org/>). The other is the case where *sushi* develops a nomenclatural network in a ‘restaurant frame’ (cf. Coulson 2006): *sushi* has a subset category, *sushi rolls*, which continues to expand membership by adding new dish names (*Volcano roll, Samurai roll*, etc.); or *sushi* creates new food names via blending (e.g. Fauconnier and Turner 1998) (*sushi donuts* or *doshi* [**donut-shaped sushi**] etc.).

To consider data beyond OED, a more flexible and encompassing model of the naturalization process is called for. This paper proposes a preliminary model, which considers different factors that can interact with each other (e.g. morphological, word-network development). It also assumes a layered model, which permits co-existence of “old layers” and “new layers” (Hopper 1987: 159). Examination of other loanwords would offer insight into how the process of naturalization can be more appropriately modeled for Japanese loanwords in English and loanwords in general.

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Pejorative derivation from spatiality: A comparative case study of Japanese *burabura*, *daradara* and German *herum*

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Keywords: pejoration, grammaticalization, reduplication, word formation, pragmatics

The object of this paper is the process of the semantic development of the Japanese local onomatopoeic adverbs *burabura* (swingingly), *daradara* (drippingly), and the German adverb of direction *herum* (around). Since these elements share pejorative meaning, my aim is to point out typological similarities between them as well as to identify salient differences. Therefore, I will focus on influences from onomatopoeic characteristics, original spatiality or spatial movements, lexical aspects and constructions. Moreover, based on a corpus analysis, I will discuss in which context and in which speech acts this pejorative meaning tends to appear.

There are numerous iconic reduplication adverbs in Japanese, which are typically combined with verbs (cf. Kakehi et al. 1996, Elsen 2016). According to previous studies, reduplications that begin with voiced consonants correlate with bigger/heavier, while those beginning with unvoiced consonants with smaller/lighter entities. *Burabura* and *daradara*, which have a reduplication property and include voiced consonants, are grammaticalized to the negative marker and carry pejorative meaning such as 'aimless' or 'senseless' productively as a verbal particle (as in (1) and (2)). In a similar way, the German verbal particle *herum* (abbreviated as *rum*), which stands for circular movement, is also used as a pejorative marker with the meaning of 'aimless' or 'senseless' as in (3) (Thurmair 2008, Dammel 2011).

- (1) *Burabura*-shi-te-nai de hatarake ba?
Swingingly-do-AUX-not PTCL work PTCL?
"Why don't you stop living idly and start working instead?"
- (2) Imōto-wa itsumo *daradara*-benkyōshi-teiru.
Sister-TOP always drippingly-study-AUX
"My sister is always lazy and slow at her study."
- (3) Was stehst du da (*herum*)?
What stand you there around?
"Why are you just standing there idly?"

Thus, despite the genetic differences, both languages have a similar pejorative derivation from spatiality and each adverb can be productively combined with verbs.

It can be concluded that the Japanese adverbs acquired a negative meaning under influences of their reduplication and voiced consonants, while the pejorative meaning of the German *herum* arises from the causes of its original spatial movement and syntactic property as "not object focused". The common derivation point of both languages is the redundancy due to their iterative-durative aspect. From the perspective of pragmatics, it has become clear that they appear often as a reproach (e.g. rhetorical question) and work as indirect directives.

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A corpus-based diachronic analysis of register variation in English comparatives

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Keywords: corpus, language change, analyticization, register variation, English comparatives

Traditionally, languages in which grammatical relations are expressed by grammatical words rather than inflectional morphemes are often described as an analytic type, while those in which grammatical relationships are expressed by means of inflectional morphemes are described as a synthetic type (Whaley 1997). Drawing on the notions of “analytic” and “synthetic”, it has been mentioned that languages in the world commonly show changes from a synthetic type to a more analytic type (Haspelmath and Michaelis 2017). The general trend toward a morphologically less complex language type (i.e. analytic) also holds true of English, because English, which was once a heavily inflectional (i.e. synthetic) language in the Old English period (Hogg and Denison 2006), is now a fairly analytic language having developed a host of periphrastic expressions (McArthur 1992). The present study explores the system of comparative formation in the English language from a diachronic perspective. English comparatives are among the many other morphosyntactic contexts where “analyticization” is in progress, i.e. an ongoing shift from a synthetic type to an analytic type (e.g. from the synthetic inflectional form *fuller* to the analytic periphrastic form *more full*). In this talk, I focus on register variation in the English comparative formation system (the term “register” is used here in the same sense as in Biber and Conrad 2009). Drawing on a sample extracted from the Corpus of Historical American English (COHA) and the results obtained through a series of quantitative analyses, I show that English comparatives, at least as far as American English from Late Modern English times to Present-Day English times is concerned, exhibit significant variation both in the rate of development and their “register bias” (a bias between a register and a chosen comparative form). With respect to the former point (i.e. the rate of development), the present study shows, on the basis of the correlation coefficients computed by means of Kendall’s *tau*, that it is only in the register of Non-fiction Books that the analytic type (the one with periphrastic *more*) is on the increase; in the registers of Fiction and Magazine, it is actually the synthetic type (the one with inflectional *-er*) that is on the increase (note that the synthetic type is also on the increase in the register of Non-fiction Books). As for the second point (i.e. register bias), I show, by computing deviations of proportions (Gries 2008; Lijffijt and Gries 2012), that the analytic type has a stronger register bias than the synthetic type. The implication of these results is that register plays an important role in the system of comparative formation in English, and more generally, that issues of analyticization cannot be fully resolved without reference to register variation.

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Semantic change from sociocultural perspective

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Keywords: semantic change, socio-cultural approach, lexical complex, diachronic perspective, interpretations

Semantic change is a key object of interest for historical linguistics (Anttila 1989; Campbell 1998; Traugott & Dasher 2001), and, during recent decades, has also attracted an increasing number of researchers in cognitive linguistics (Geeraerts 1997; Győri 2002; Winters et al. 2010; Korfhagen 2017). In general, three aspects of semantic change (linguistic, cognitive, and sociocultural) are singled out (e.g., Győri 2002, 147). Linguistic instruments for semantic change (metaphor and other figurative language) and its results (extension, restriction, melioration, pejoration, etc.) have been explored thoroughly (e.g., Hock 1986; McMahon 1994); however, there is no explanation from this perspective why a particular semantic change happens in a particular moment of time, but not earlier or later. It is unclear how potential links providing semantic change could be actualized, which processes are responsible for that. This leads, in particular, to a consistent opinion that semantic change is essentially sporadic (e.g., Hock & Joseph 1996, 244).

A cognitive approach to semantic change can clarify this issue. From the cognitive perspective, communicative demands are the main triggers for semantic shifts (Geeraerts 1997, 102-122; Győri 2002, 124, 144-154). An exploration of basic elements of these demands (such as expressivity and efficiency) alongside with an analysis of cognitive mechanisms providing a communicative response to them (e.g., analogy) and possible correlations between communicative needs and characteristics of particular lexical units or groups of units (expressed, e.g., in such factors as cue-validity, cognitive economy, perceived world structure, conjunctivity (Győri 2002, 144)) has been in the focus of research interests in this scope. Meanwhile, researchers point to an obvious discrepancy between limited space-time characteristics of a semantic shift during a particular communication (chain of communications) and its validation in language in the long run.

In order to explore some regularities in the process of such validation, it is worth looking at this issue from the sociocultural perspective. The key point which underpins this avenue of research is a postulate that language change is, in many cases, a response to a particular sociocultural demand, that language change happens in the wake of a sociocultural change. This can be a local change, for instance, concerned with an emergence of a new domain in technology, but this can also be a radical transformation of basic elements of a worldview. Thus, despite a widespread view that machine metaphors came about in the early modern time as a result of the Industrial Revolution, there is robust evidence that such metaphors emerge in the Early Middle Ages because of a remarkable change of the image of the Universe from the self-contained *κόσμος* in Antiquity to a God's creature in the Middle Ages (Glebkin 2013).

Importantly, a typology of sociocultural change entailing semantic change as a response, has not been, to the knowledge of the author, an object of a special analysis in linguistics so far. In this work, a draft of such typology based on the Sociocultural Theory of Lexical Complexes (STLC) (Glebkin 2013; Glebkin 2014; Glebkin 2014a; Glebkin 2018), is presented. One of the cornerstones of STLC is the description of a conceptual structure and conceptual evolution of a particular lexical complex on two levels: Level A (everyday use of the lexical complex); and Level B (interpretations). The interplay of these levels is presented from a diachronic perspective. This provides new underpinnings for exploring the sociocultural aspect of semantic change.

Interaction Between Text Genres and Constructions

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Keywords: passive construction, genre-specific text, text construction, report text, topic

The relationship between text genres and constructions has attracted a great deal of attention in recent studies (Nikiforidou & Fischer (eds.) 2015). A dynamic interaction between constructions and their elements at various levels has been consistently observed. Each genre comprises various text types, each of which exhibits particular conventionalized patterns and thus can be taken to be a construction in broad sense, and for each text type an appropriate set of clausal constructions serves as constituting elements. A text type can be defined as a set of properties that characterize the text as, for example a “fact report” in the journalistic genre, or a “description of the scene” in fictional narratives, which affects elements’ properties as well as the property of the elements’ influence on the text.

Shiba (2015) examines passive constructions in four types of genres: (1) conversation in fiction, (2) narrative parts in fiction, (3) reports in newspapers, and (4) academic articles. Shiba demonstrates that some constructions exhibit highly uneven distributions across genres, appearing much more frequently in some genres than others. However, she does not explore the results in detail, and does not consider, for example, the positions of those constructions in texts or their relationship with other constructions occurring in the same text. We surveyed passive constructions of the type that we refer to as “hold-event passive constructions” in “The Balanced Corpus of Contemporary Written Japanese”:

(1) Hold-Event Passive Construction

Form: [TIME.NP PLACE.NP EVENT.NP-ga HOLD.V-(r)are-ru]
time place theme -NOM. HOLD-PASS.-TENS.

Meaning: At a certain time in a particular place, an event is held.

“*Sakujitu daigaku-de taikai-ga hirak-are-ta.*”

There was a congress at the university yesterday.

This construction consists of hold-event type verbs, such as *okonau* (hold), *hiraku* (open), *kaisaisuru* (open), and *moyoosu* (hold). It appears abundantly in “Report Texts” in the journalistic genre and contributes to the objectivity or neutrality of the text by means of defocusing the agent(s) and highlighting the occurrence of the event. Moreover, we found a subkind of the construction observed mainly in “Sports Report Texts”, exemplified in (2):

(2) Hold-Event Passive Construction -Theme Topicalized Type

Dai 3kai taikai-wa sakujitu Osaka-de okonaw-are, ...

the third meeting-TOP yesterday Osaka-in hold-PASS.

The third meeting was held yesterday in Osaka, and...

Normally the topic marker *-wa* functions to show old information in the text. However, in this construction type, the theme (the subject) is topicalized albeit the construction is used at the beginning of the text. In any other kinds of text genre, such as academic essay, placing this construction at the beginning would lead to unnaturalness. We can observe here that the genre-specific characteristic of “Sports Report Texts” leads to the admissibility conditions of the construction, so as to allow highlighting the event briefly in a limited number of words and indicate the status of the subject as the discourse topic. This can be seen as a case of interaction between text genre and clausal construction; the property of the hold-event passive construction influences the property of the report text and at the same time report text property affects the way the subject is expressed in the hold-event passive construction.

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Greetings from the festival – how listing is used in a signed postcard

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Keywords: construction grammar, list construction, information structure, cohesion, sign language

This study looks the information structure of a video message a native sign language user has sent to her local sign language community's Facebook group. This is a so called single-case analysis. The signer is attending a culture festival abroad and posted the message which is like a postcard we send from holidays: 'hi', where am I, how is it here, what have I done here, what has been the best so far, 'bye' (Östman, 2004). The message is short, like postcards tend to be, and it is signed without long preparations before putting the camera on, background being what it is, and other people are hanging around. The structure is, using a written language comparison, built up with kind of bullet points and with specific, cohesion creating words and expressions.

How does the signer create a coherent message to the community from this festival? There are several lists in that short message – the signer mentions different types of program and debate topics – and they are marked with various surface mechanisms, signs and gestural elements that create cohesion that exploit the morphosyntactic system around the signer (Barberá Altimira, 2012; Liddell, 2003; Morgan, 2000; Siltaloppi, forthcoming; Siltaloppi, 2018). The different methods in the video are (1) signing the listed item (item being an action, program number, or place) and simultaneously making an upper body movement forward, back, or sideways to express the needed reference place, (2) giving the items a reference place on the fingers of the other hand – this signer is right handed and uses the fingers of the left hand as a reference place for the listed items (again, actions, program numbers, places), and (3) signing a listed item and then either PLUS or ALSO before an another item to make these listed two items belong to a same list.

In this study it is shown that these listing methods in the video postcard can, in the terms of Construction Grammar, be called a LIST CONSTRUCTION, and that the different physical realizations of this construction could be interchangeable in those listing events. The LIST CONSTRUCTION is not just something you do with your hands. Rather, it is a combination of various actions of the signer's hands and body and it is a pairing of form and meaning that is similarly understood both by the signer and the viewer. In this short video message, the LIST CONSTRUCTION is realized in three different ways. This poses a question of the role of "form" in "form-meaning pairings" in constructions in general.

This video is signed in Finland-Swedish Sign Language (FinSSL), an endangered sign language with approximately 90 native deaf users in Finland (Andersson-Koski, 2015). The video is one-minute long and filmed with the signer's own mobile phone.

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Transitive constructions under negation in Russian: a usage-based approach to the genitive-accusative competition

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Keywords: Construction Grammar; Genitive, Negative Transitive Constructions; Russian

It is a well-known fact that Russian transitive sentences under negation display some variation in case patterning, including nominative-accusative and nominative-genitive options (Timberlake, 1975; Bailyn, 1997; Borschev, Partee, 2002; Paducheva, 2006; Fesenko, 2016; and others), as shown in the examples below:

(1) *ne ob"javit' vojn-u*
NEG declare war-ACC

(2) *ne ob"javit' vojn-y*
NEG declare war-GEN

Under several perspectives, linguists have tried to understand which factors impact the choice of one or another case pattern. Some studies (Schvedova 1980, Paducheva 2006, Fesenko 2017) have shown the existence of contexts in which only one of the options is possible, contexts in which one of them is preferable and contexts displaying variation between both patterns (Schvedova 1980). Some scholars suggest that the nominative-accusative pattern is spreading over the original nominative-genitive, assuming some kind of competition between those forms (Timberlake, 1975). However, despite the available efforts to solve this question, the reasons to justify preferences for one case or another in Russian remain not totally unclear. This paper aims at providing an empirical analysis of the variation of case patterning in transitive negative constructions in Russian under a usage-based constructionist account. According to this view, language is conceived as a complex adaptive system, consisting of multiple agents interacting with one another, including the interrelation among experience, social interaction and cognitive domain-general processes (Bybee 2010). In a Construction Grammar approach, the basic unit of language is the construction, a symbolic unit pairing form and meaning (Croft 2001, Goldberg 2006, Diessel 2015). Nominative-accusative and nominative-genitive patterns will be analyzed as different pairs of form and meaning, which may be in some kind of competition in Russian. In this research, real instances of negative transitive constructions in Russian oral discourse, extracted from Russian National Corpus (available at www.ruscorpora.ru), are collected and then a factor analysis is applied, considering aspects like gender inflection, animacy, verbal semantics, genres of discourse, etc.. Preliminary results suggest that nominative-accusative pattern displays a greater type frequency of verbs occurring in the construction, an evidence that the accusative option may be a more productive and schematic construction, maybe as a result of its associative link to the positive transitive construction, which displays the combination nominative-accusative as its preferable pattern.

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Metonymy-guided discourse inferencing. A qualitative study

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Keywords: metonymy, pragmatic inferencing, qualitative research, reading comprehension

Cognitive-linguistic research on metonymy has argued cogently that conceptual metonymies guide or facilitate discourse-pragmatic inferencing, together with contextual factors and general pragmatic principles (see *inter alia* Barcelona 2003, 2005, 2007; Panther & Thornburg 2003, 2018; Ruiz de Mendoza & Galera 2014). Metonymy is thus a crucial factor guaranteeing discourse coherence. Barcelona (in preparation) includes a detailed study of the metonymies guiding the pragmatic inferences claimed to be invited by the reading of a small fragment (19 lines) of the only scene in Act 1 of O'Neill's *Long Day's Journey into Night*. In the study, I propose a number of such inferences and a number of metonymies that seem to guide them. A very simple example: I suggest that one of the inferences that might be invited to some readers by the penultimate line of the stage direction for that scene (*Tyrone's arm is around his wife's waist as they appear from the back parlor. Entering the living room he gives her a playful hug*) is that Tyrone loves / likes his wife. The metonymies that, I suggest, might jointly guide that inference are (1) MEMBER (PUTTING ONE'S ARM AROUND ONE'S BELOVED) FOR CATEGORY (LOVING BEHAVIOR) + (2) EFFECT OF EMOTION (PUTTING ONE'S ARM AROUND ONE'S BELOVED) FOR EMOTIONAL CAUSE (LOVE). The analysis of the fragment, though internally consistent, is based on my own close reading of the text. It is thus necessary to investigate whether or not native speakers of English derive at least some of the inferences I propose, and whether or not they are guided by those or by other metonymies. In this presentation I will describe in detail the qualitative study I conducted to this end. After reading the fragment, a questionnaire was anonymously answered by nine volunteer American undergraduate college students, all female native speakers of English, with no training in linguistics and who had never read or watched the play before. The questionnaire included this question on the last two lines of the stage direction: "What does the first sentence suggest to you about Tyrone's affective relationship with Mary?" Then the subjects were asked to give their reasons for their reply and to state their agreement or disagreement with an additional set of interpretations of the same passage. The results of the study seem to confirm some of the inferences proposed in Barcelona (in preparation) and to suggest that, whether or not the respondents derive the same or different inferences, they do so in part on the basis of metonymic reasoning. For example, the prevalent reply to the above question was that Tyrone and Mary have a good relationship and the reason given was their behavior (physically touching each other, including Tyrone's arm around Mary's waist). The further interpretations of that sentence chosen by most respondents were that Tyrone seemed to love and/ or like his wife. The responses to the questionnaire on more complex inferences based on the fragment and the limitations of the study will be discussed in the presentation.

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Cognitive and cultural preferences of metonymy in Japanese

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Keywords: metonymy, preference, bodily experience, cultural conventions

Unlike metaphorical mappings, the source and target in a metonymic mapping are reversible, such as PART FOR WHOLE and WHOLE FOR PART, but there are preferences for one direction in metonymic processes. Radden and Kövecses (1999) argued metonymic preferences are organized by a number of cognitive, cultural, and communicative principles. Although some of them appear to be universal, strictly speaking, any metonymic relation depends on anthropological, social, cultural, and other parameters of relevance (Koch 2012). Therefore, principles underlying metonymic preference are still to be elaborated by case studies of various languages and culture. This paper describes the preferred sources and targets of metonymy in Japanese and discusses the principles which motivate the descriptive tendencies.

163 examples of referential metonymy from literary texts in *Japanese Corpus of Figurative Language* (JC-FigL) were annotated in terms of meanings of the source and target. Table 1 shows how frequently a source and a target cooccur in Japanese. The number in each cell indicates the correlation coefficient: the larger the number is, the more frequently the source and target co-occur.

The analysis revealed that, as for metonymy targeted at PERSON, fashion (e.g. ACCESSORY and HAIRSTYLE) and location (e.g. CITY and SHOP) are preferred as the source. Interestingly, this fashion-oriented tendency of the source accords with Chinese preferences, which significantly differs from English (Zhang 2016). In the bodily sources, physical traits (e.g. *kao* 'face' and *ashi* 'leg') sharply contrasted with internal organs (e.g. *mune* 'heart' and *nou* 'brain'), which strongly correlated with non-physical entities such as EMOTION. An exception is TORSO FOR MIND metonymy, which might be rooted in Japanese cultural convention: the word *hara* 'stomach' means one's thought or feeling.

General tendencies of metonymy can be generalized by cognitive factors grounded in bodily experience. However, this paper suggests that social and cultural factors in the language community capture more specific preferences in metonymy.

Table 1: The correlation between sources and targets of metonymy in Japanese. Bracketed numbers indicate the number of examples. Negative correlations were replaced by hyphens for visual help.

		Target concept				
		PERSON (66)	EMOTION (4)	MIND (9)	PERSONALITY (7)	ACTION (12)
Source concept	PERSON (8)	-	0.15	0.08	0.38	0.06
	FACIAL PART (15)	0.08	-	-	-	0.01
	TORSO (3)	-	-	0.17	-	-
	LIMBS (8)	0.13	-	-	-	0.06
	HEART/NERVE (4)	-	0.49	0.31	-	-
	HEAD/BRAIN (4)	-	-	0.49	-	-
	ACCESSORY (7)	0.21	-	-	-	-
	HAIRSTYLE (4)	0.13	-	-	-	-
	WEAPON (5)	-	-	-	0.14	0.36
	TOOL (10)	-	-	-	-	0.33
	CITY (4)	0.20	-	-	-	-
	SHOP (3)	0.18	-	-	-	-

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Dynamic Metonymy: perspectives from lexical semantics and Blending theory

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Keywords: metonymy; polysemy; lexical semantics; blending; frame

This paper explores and discusses the theoretical notion of metonymy, aiming to enrich our understanding of the metonymic phenomena in Japanese and Chinese Mandarin. Two perspectives will be mainly provided in this study, i.e., from lexical semantics and from the blending theory. In lexical semantics, metonymy is often used as one of the mechanisms that give rise to semantic extensions. In a case study of Japanese word トイレ ‘toilet’, it is found that the interaction between the modified elements (or “construction”) and the target word is crucial for the metonymic readings caused by “toilet”, leading to its semantic extensions as the action (e.g., Example 1), the event (e.g., Example 2), and its related events (e.g., Example 3). However, the core meaning of トイレ should be the location sense, and it is the dynamic metonymic mechanism that provides the basis for those polysemous readings. From the perspective of blending theory, it is well recognized that in word formation, two words can blend into a new word, such as brunch (breakfast + lunch), which can be taken as a type of metonymy (cf. Koch 2012). This paper provides a case study to discuss another type of blending, involving a non-present element which instead causes a blended reading (e.g., Example 4). In example 4, those are two names of Taiwanese political figures who happen to have very virtuous Chinese characters in their names. When the netizens in Taiwan try to make fun of them, they manipulate their names. By omitting the character in their names to refer to them, netizens create an ironic effect. Hence, *Yao Wen Zhi* 姚文智 becomes *Yao Wen* 姚文 (losing *Zhi* 智)(4a), and the missing part causes an implicit reading of *being unwise*. In this way, we can see that the blending process is triggered by the non-present element, which becomes a marked reading instead. In sum, this study provides two case studies to discuss the dynamic aspect of metonymy, which is often overlooked in the previous literature. Our data is retrieved from the BCCWJ corpus and the online forum (PTT Bulletin System). More analysis will be provided and discussed at the conference.

Examples:

(1) 歩行が不自由なので、夜間のトイレは危険だから便器でと指導していた。

‘Because of not being able to walk, the toilet at night is dangerous, so I instructed him/her to use the chamber pot.’ (“action” reading)

(2) 犬のトイレのしつけはどうすればいいのですか？ (Yahoo!知恵袋)

‘Any suggestions for potty-training a dog?’ (“event” reading)

(3) トイレと言えば、ペットのトイレも私がやってるんですね〜。(Yahoo!ブログ)

‘As for the toilet, it is me that clean our pet’s pot (toilet).’ (“a related event” reading)

(4) a. Person’s name: 姚文智 (*Yao, Wen Zhi*; ‘Yao, letter-wisdom’) --> 姚文 (*Yao Wen*) (implying ‘losing wisdom; dementia’)

b. Person’s name: 賴清德 (*Lai, Qing De*; ‘Lai, clean-virtue’) --> 賴清 (*Lai Qing*) (implying ‘lacking virtue; villainous’)

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Two stars in the bassoon sky: metaconstructional compounds and metaphor extraction in Norwegian

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Keywords: Metaphor, construction, conceptual integration, word formation, Norwegian

Recent years have witnessed “an empirical bent in metaphor research” (David 2017), where the constructional context has gained importance for metaphor extraction (David, Lakoff & Stickles 2016). At the same time, cognitive linguists have long been interested in the word-formation process of compounding, pointing out the relevance of metaphor and conceptual integration for compounds (Turner & Fauconnier 2002, Geeraerts 2002, Nessel & Sokolova to appear). The present study brings together these traditions, focusing on “metaconstructional compounds”. While such compounds are found in many languages, my material consists of examples from Norwegian. I suggest that metaconstructional compounds are always metaphorical, and that metaphor is evoked by the constructional context. It is argued that the semantic relations between heads and non-heads of compounds constitute a hierarchical system, where context-based metaphor may override conventional interpretations.

Consider *fagotthimmel* ‘bassoon sky’ in (1). This compound does not have a conventional interpretation, and it is hard to imagine a natural interpretation without context. However, the context specifies that two young bassoonists are “stars in the bassoon sky”, which facilitates the interpretation of the compound. The head of the compound, *himmel* ‘sky’, evokes a metaphor together with *stjerne* ‘star’ in the context. The non-head *fagott* ‘bassoon’ functions as a “topical anchor”, connecting the metaphor to the discourse topic (recruiting young bassoonists). Compounds of this type are metaconstructional in the sense that they place one construction, the morphological compound construction, “on top of” a syntactic construction available in the context. The role of the context is clearer in *sjakkskygge* ‘chess shadow’ in (2), where the construction *leve i skyggen av noen* ‘(lit.) live in someone’s shadow’ evokes the metaphor that someone is overshadowed, while the topical anchor *sjakk* ‘chess’ relates the metaphor to the discourse topic – chess.

While metaconstructional compounds are most often unconventional words like *fagotthimmel* and *sjakkskygge*, my material also contains conventional compounds like *kjøkkenhåndkle* ‘kitchen towel’ in (3), which normally denotes a towel used in a kitchen. However, in a newspaper article about the bankruptcy of a kitchen store, the noun is used in the context “throwing in the kitchen towel”, where the context forces a metaphoric interpretation, which changes the semantic relation between head and non-head from “used in” to “about” since *kjøkken* ‘kitchen’ represents the topic of the newspaper article. Arguably, the “about” relation occupies a privileged position in a hierarchical system of relations between heads and non-heads, where it overrides other relations when triggered by metaphor.

My analysis of the Norwegian data is the first step in a larger investigation of metaconstructional compounds. The preliminary analysis shows the theoretical importance of such compounds, which both inform empirical metaphor research and the study of word-formation in cognitive linguistics.

- (1) Dei er likevel berre to små stjerner på ein bekmørk fagott-himmel. (NRK online news service)
‘They are nevertheless no more than two small stars in a pitch-dark bassoon sky.’
- (2) Stormester J. L. Hammer har lenge levd i sjakkskyggen til verdensener M. Carlsen.
‘Grandmaster J. L. Hammer has for a long time lived in the chess shadow of the number one world champion Magnus Carlsen.’ (NRK online news service)
- (3) Kaster inn kjøkkenhåndkleet
Throwing in the kitchen towel (newspaper headline, *Østlendingen* August 1, 2017)

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The legacy of Primary Metaphor Theory: What to take home and what to build on

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Since the beginning of the theory (Grady, Taub, and Morgan 1996, Grady 1997ab), the idea of Primary Metaphor (e.g. Anger Is Heat, More Is Up, Difficult Is Heavy, Functional Is Erect; PM, hereafter) has largely been welcome and accepted (Lakoff and Johnson, 1999; Goldberg p.c.; Gibbs 2018).

However, how precisely PM theory works and what it predicts may not be so clear: For example, we do not seem to know the followings.

- 1) How do we distinguish PMs from non-PMs.
- 2) Is it a two-layer system with primary level and compound level or a multi-layer system?

In this paper, I will take up Grady (1997ab) and his papers after (Grady 1999, 2005), and claim (1) and (2).

- (1) Grady's original idea is presented with a two-layer system, but does not exclude a multi-layer system.
- (2) A multi-layer system fits the data.

I will show several examples to support (2). Examples from Event Structure Metaphors (ESMs, Lakoff 1993) show the possibility of multiple compositions. ESMs consist of independent components such as (3).

- | | | |
|------------------------------|------------------------|------------------------------|
| (3) a. States Are Locations | b. Changes Are Motions | c. Causes Are Forces |
| d. Purposes Are Destinations | e. Difficulty Is Heavy | f. Relationship Is a Vehicle |

(3a)~(3f) can be thought of as independent primary metaphors and they form the basis for Love/Life Is a Journey metaphor. If that is the case, a composition of more than two primary metaphors should be allowed. Another example is (4).

- (4) She deliberately sowed the seeds of dark and thorny flowers, rather than brightly colored ones.

In (4), it is known from the context that the plant represents emotions metaphorically. Here, Emotion Is Plant, Causes Are Forces, and Bad Is Dark are at least needed. These results seem to support my claim (2). In addition to (1) and (2), the nature of composition and decomposition, the definition of primary metaphors, and the need for the concept of instantiation will be discussed.

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Developing Metaphoric Concepts with Constructions: A Corpus Based Analysis

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Keywords: metaphoric concept development, construction, conceptual integration theory

In the course of concept development motivated by metaphors, how the “right” schemata are consistently extracted, elaborated, and applied to further mappings is an important issue. Fauconnier (1997) and Fauconnier and Turner (2002) discuss the diachronic development of metaphors within the conceptual blending theory and specify six stages of conceptual development: (a) analogy and schema induction; (b) categorization and new conceptual structure; (c) naming and projected structure; (d) blending and conceptual integration; (e) motivated polysemy; (f) divergence and extinction. The “career of metaphor” hypothesis (Bowdle & Gentner, 2005) proposes to describe the evolutionary path of metaphoric development as “a shift in mode of mapping from comparison to categorization as metaphors are conventionalized.”

Based on the notions that “metaphoric language depends not only on the choice of words, but also on particular grammatical constructions” (Sullivan, 2013) and that grammatical constructions are systematically involved in the expression of metaphor (Dancygier & Sweetser, 2014, pp. 128-129), this paper accounts for the development of metaphoric concepts by incorporating constructions into the theory of conceptual integration, proposing that language speakers extract and elaborate conceptual schemata in the course of metaphor conventionalization by inheriting from three types of constructions: analogical constructions, framing constructions and downgrading constructions. The analogical constructions are used to fuse two mental spaces together and prompt conceptual integration; the framing constructions from source domain and target domain provide syntactic frames for composition and completion in conceptual integration; the downgrading constructions are used to establish relationship among the elements inside the blend and the relationship between the blend and other mental spaces.

The proposal is illustrated in the paper with case studies of two Chinese metaphors, wherein corpus evidence is collected from a large diachronic corpus, showing that the three types of constructions are adopted in time order to develop the schemata involved in the course of conventionalization of the two metaphors.

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Difficulty as Weight and Solidity in English and Chinese

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Keywords: primary metaphor, DIFFICULTY IS WEIGHT, DIFFICULTY IS SOLIDITY, linguistic manifestation, linguistic pattern

As a subclass of conceptual metaphors, primary metaphors are metaphorical patterns motivated by tight correlations between fundamental dimensions of human experience. Such experiential correlations recur frequently in specific scenarios in our everyday life, in which experiences associated with primary source and target concepts consistently co-occur in coherent and predictable ways (Grady 1997; see also Grady and Ascoli 2017; Winter and Matlock 2017). Primary metaphors are generic metaphor patterns that exist at a high level of schematicity within the hierarchical system of conceptual metaphors. Their source and target concepts are both very basic in nature, “defined as concepts that are grounded in universal (rather than culturally determined) aspects of human experience” (Grady and Ascoli 2017: 29). They give rise to metaphorical mappings between highly schematic frames that do not evoke rich visual or motor imagery. They have a pivotal role to play in constituting “the foundation of much of our complex cognition” (Grady 1997: 288).

This linguistic study focuses on two primary metaphors with the same target concept, DIFFICULTY IS WEIGHT and DIFFICULTY IS SOLIDITY, in English and Chinese. Both link two distinct dimensions of our recurring embodied experiences in specific situations: subjective experience and judgement of difficulty and sensorimotor experience of weight and solidity (i.e., degree of hardness and toughness). In both cases, the motivations lie in the experiential correlations between perceiving weight or solidity of physical objects and experiencing difficulty as we try to lift or manipulate them (Grady 1997). The study employs both lexical and corpus-based approaches in order to gain insights, through both qualitative and quantitative evaluations, into their manifestation in the two languages. The study lays out the linguistic patterns that reflect the underlying conceptual associations across the metaphorical domains and analyzes the differences as well as similarities between English and Chinese. While the findings do support the validity and applicability of the two primary metaphors in both languages, their linguistic manifestations, however, vary considerably within and across language boundaries.

One difference between the two languages is that the English weight and solidity adjectives have largely developed lexicalized “difficult” senses, but the same is not true of their Chinese counterparts. Another difference is that in English, DIFFICULTY IS SOLIDITY exhibits a much richer (types) and stronger (frequencies) linguistic pattern than DIFFICULTY IS WEIGHT, but in Chinese the reverse is true. Further, as observed in the cognitive linguistic literature, pairs of antonymous adjectives do not appear equally in the linguistic instantiations of conceptual metaphors. Thus, DIFFICULT IS HARD yields a linguistic pattern by far stronger than EASY IS SOFT in English. In Chinese, the former is manifested quite limitedly whereas the latter is not at all. Also, the Chinese “light” adjective has a stronger showing for EASY IS LIGHT than its opposite for DIFFICULT IS HEAVY. On the other hand, the reverse is true of their English counterparts.

The findings support the views that conceptual associations of primary metaphors may or may not lead to productive linguistic patterns in a language (Grady and Ascoli 2017; Svulund 2007), and that speakers’ linguistic experience may play an important role in shaping their metaphorical conceptualizations, in conjunction and interaction with their bodily and cultural experience (e.g., Casasanto 2017). The study, therefore, sheds light on the mutuality between language and thought (Gibbs 2017).

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Why ‘ahead of Christmas’ but not ‘ahead of Friday’? On semantics of Finnish FRONT adposition constructions in SEQUENCE IS RELATIVE POSITION ON A PATH metaphor of time

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Keywords: metaphor, adposition, grammar, space, time

The recent cognitive linguistic research distinguishes the field-based metaphor of time, called SEQUENCE IS RELATIVE POSITION ON A PATH (SRP), from the ego-centered metaphors (Moore 2014; cf. Lakoff & Johnson 1980). Unlike the ego-centered metaphors that locate times relative to the experiencer of time (*We are approaching summer; Winter is coming*), SRP locates times relative to other times (*New Year’s Day follows Christmas*). Thus, SRP metaphor does not focus on the deictic notion of ‘now’ but rather on the order of temporal entities in relation to the same encompassing background.

Many languages, including Finnish, utilize adpositions of the sagittal front–back axis when coding the order of temporal entities: in instances of SRP, FRONT corresponds with ‘earlier’ while BACK corresponds with ‘later’ (*The days ahead of Christmas are busy*; e.g. Boroditsky 2000; Huumo 2015, 2017; Moore 2014). In this study, I analyze Finnish FRONT adposition constructions that instantiate SRP. My focus is on the semantics of the Ground entities, that is, entities coded as adpositional complements in the studied expressions. I will explore what types of temporal entities (e.g. holidays, historically or socially significant events, personal events) the speakers of Finnish code as Grounds in order to locate another event, the Figure. My aim is to understand why some temporal entities (e.g. days of the week, time units, months) are less salient than others with SRP: why is it that a speaker of Finnish could easily say that ‘the meeting was held ahead of Christmas’ (1), but would probably not say that ‘it was held ahead of Friday’ (2)? In addition to semantically categorizing the Ground types used in instances of srp, I will study the relationship between the Figure and the Ground. This is done by defining whether the Ground element offers a contextual frame in which the Figure is to be understood (3), or is the Ground used merely as a temporal anchor for locating the Figure on the timeline (1).

- | | | | | |
|-----|---|-----------------------------|----------------------------|---|
| (1) | Kokous
meeting
‘The meeting was held ahead of Christmas’ | pide-ttiin
hold-PST.PASS | joulu-n
Christmas-GEN | ede-llä.
front-ADE |
| (2) | ?Kokous
meeting
‘The meeting was held ahead of Friday’ | pide-ttiin
hold-PST.PASS | perjantai-n
Friday-GEN | ede-llä.
front-ADE |
| (3) | Joulu-n
Christmas-GEN
‘Ahead of Christmas, there’s a lot of talk about overconsumption’ | ede-llä
front-ADE | puhu-taan
talk-PRS.PASS | paljon
a.lot
ylikulutukse-sta.
overconsumption-ELA |

Even though much is already known about the use of FRONT adpositions in spatial metaphors of time, there is yet no comprehensive corpus-based evidence of the Ground entity types commonly used in FRONT adposition constructions in instances of SRP in Finnish, neither has there been previous studies investigating the nature of the relationship between the Figure and the Ground when both of the elements are temporal entities. With the data obtained from two electronic corpora, 1) *Suomi24 corpus* and 2) *The Newspaper and Periodical Corpus of the National Library of Finland*, and building from the framework of Cognitive semantics, I argue that the events with high historical, cultural or social significance are more likely to be chosen as Ground entities in instances of SRP than the often recurring, mundane events and times.

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On the Experiential Bases of the Two Meanings of Temporal “*Saki*” in Japanese

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Keywords: Japanese, “*saki*”, motion expression, temporal meaning, experiential basis

Japanese “*saki*”, which originally represents spatial meaning, has two distinct temporal meanings in its metaphorical usages. This study re-examines the experiential bases of the two temporal meanings of *saki* focusing on grammatical forms of motion and time expressions.

The two meanings of *saki* are shown in (1) and (2). In (1), *saki* is interpreted as representing “later”, while the word is considered to represent “earlier” in (2).

(1) *Kurisumasu no saki wa gakkou ga yasumi da.* ‘(Our) school is closed after Christmas.’

(2) *Osyougatu yori saki ni kurisumasu ga aru.* ‘There is Christmas ahead of the New Year.’

According to the view of Shinohara (2008), (1) and (2) are respectively regarded as examples of Moving Ego and Ego-centered Moving Time metaphor within Moore’s view on spatiotemporal metaphors (cf. Moore 2017 etc.). However, there is room for examination in the adequacy of considering (2) as metaphorically extended from spatial expressions relating to the motion of objects. Rather, the EARLIER IS FRONT sense of *saki* is considered to be based on the order of encounter with two different landmarks which are captured in the moving subjects’ view field.

From the observations here, I subdivide the two temporal meanings of *saki* into [1] progressive *saki* (corresponding to LATER IS FRONT) and [2] ordinal *saki* (corresponding to EARLIER IS FRONT). The two types are both considered to be based on the motion of subjects on a path (cf. Honda 2011). This view can be consistent with the result of an experiment on our spatial and temporal cognition shown in Shinohara (2007).

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Linguistic and co-speech gestural patterns of spatiotemporal metaphors in Indonesian

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Keywords: Indonesian, spatiotemporal metaphors, co-speech gesture

The construal of TIME has received a lot of attention in cognitive linguistics, and cognitive science in general, as a test case for a broader inquiry of how people talk about, and conceptualise, an abstract domain in terms of another embodied concept. Previous works have shown that a wide range of languages and cultures construe TIME using concepts and vocabularies from the domain of SPACE (Sweetser & Gaby, 2017). Yet, only two studies have attempted to investigate this topic for Indonesian (Casasanto et al., 2004; Prayogi, 2013). Our project builds on these works to investigate the spatial construal of TIME in Indonesian language and co-speech gesture.

Linguistic evidence based on the *Indonesian Leipzig Corpora* suggests that Indonesian exhibits the two dominant models of TIME where Ego acts as the reference point (Sweetser & Gaby, 2017). These models are referred to as (i) *Ego-Reference Point (Ego-RP) Moving Ego* (e.g., *kita sudah melewati zaman Order Baru* ‘we already passed the New Order era’), and (ii) *Ego-RP Moving Time* (e.g. *masa panen tiba* ‘harvest period arrives’; *masa lalu* ‘passing time’; *masa yang akan datang* ‘time that will come’). The Ego-RP models also concern how deictic times (i.e. future and past) are positioned relative to Ego. Indonesian shows similar patterns with most of the studied languages whereby the FRONT space of Ego is mapped onto the FUTURE (e.g., *masa depan* ‘future; lit. front time’) while PAST is located BEHIND Ego (e.g., *kita harus optimis, jangan menoleh ke belakang* ‘we must be optimistic, do not look back [i.e. dwell on the past]’).

Evidence from co-speech gestures, sourced from five episodes of a talk show, reflect and extend the patterns observed from linguistic data for the spatial construal of TIME. We found evidence for gestures along sagittal (frontward-backward) axis for describing deictic timelines: backwards gestures may accompany past time expressions relative to speakers’ ‘Now’, which is co-located with the speakers (as evidenced by a clip showing a speaker points down to her feet when saying *tahun ini* ‘this year’). Lateral (leftward-rightward) gestures are also found when speakers describe a temporal succession of events, whereby earlier events are placed to the left of the later events in the gestural space. Speakers also tend to gesture from the left to the space in front of them when describing progression of events from the past to the present.

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Metaphor Use in Aphasia: Evidence from AphasiaBank (Mandarin)

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Aphasia is a combination of diverse symptoms of brain damage, and it affects the production or understanding of speech and the ability to read or write. Even though it is a language disorder, metaphor may still be helpful comparative devices meant to explain something unknown in an aphasic context. It can illustrate the prominence of metaphor in uncovering people's abstract thoughts and their emotional experiences (Gibbs, 2008:3).

Some previous studies (Barrow, 2008; Ferguson et al., 2010; Mitchell et al., 2011; Pound, 2013) have investigated metaphor use by English-speaking people with aphasia (PWA), their family caregivers and the medical staff, within the framework of Conceptual Metaphor Theory (CMT). Conceptual metaphors relating to aphasia, such as aphasia as battle/tragedy/restitution/thief/gift..., have also been examined (Mitchell et al., 2011). Researchers have also used metaphor to explore PWA and their family caregivers' dissatisfaction with the experience of acute hospitalization (Ferguson et al., 2010).

This research tends to go through Mandarin data in the American database AphasiaBank, and analyse metaphor use by Chinese PWA and the controls without any language disorder from linguistic, conceptual and communicative perspectives, according to Steen (2008, 2011)'s three-dimensional model of metaphor, which involves metaphor in language, thought, and communication. It aims to explore how to apply MIPVU (Metaphor Identification Procedure VU University Amsterdam, Steen et al. 2010) to Chinese language, perform qualitative analysis on metaphor in thought within aphasic and control groups and discuss communicative functions of these metaphors in aphasic settings.

All data are drawn from the sub-database of AphasiaBank. These videos were recorded in Nanjing, south China, and then transcribed and annotated by local researchers. They are all conversations between medical staff and PWA (the aphasic speakers), or medical staff and family caregivers (the controls).

Through this study, it is expected that differences in metaphor use between Chinese PWA and the controls can be revealed, and aphasia-related metaphors in form, thought and function can be scrutinised and analysed.

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Making the most of peer review: Is going anonymous the way forward for Asian learners of English?

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Keywords: peer review, peer feedback, anonymity, L2 writing, EFL learners

Incorporating peer review into the writing process is popularly practiced in English writing courses both in English as a second language (ESL) and a foreign language (EFL) contexts. While a majority of research investigating the effects of peer review claims that it positively affects student writers' writing performance, some studies suggest that Asian students exhibit difficulty in criticizing others' work for cultural reasons that value group consensus over verbal negotiations (e.g., Allaei & Connor, 1990; Carson & Nelson, 1996; Mangelsdorf, 1992; Nelson & Carson, 2006). Since these studies were undertaken in an ESL context with a relatively small number of participants, this study set out to verify and extend the previous findings. A total of 114 EFL college students—57 from Japan and 57 from China—participated in the study. They engaged in peer review in both face-to-face and anonymous review modes and responded to surveys administered at the beginning of the semester (the pre-review survey) and after the completion of the last peer-review session (the post-review survey). The survey items were designed with a specific aim to examine the participants' attitudes toward writing in English, the importance of writing successive drafts, competence in the target language, the level of trust toward peer reviewers, and the value of peer review in the writing process. All survey items in the pre-review survey were included in the post-review survey to track the changes in attitude after the participants took part in peer-review sessions over a semester. The post-review survey asked additional Likert-scale questions concerning their preference for the face-to-face or the anonymous mode as a reviewer and a writer, respectively. At the end of the semester, approximately 30 percent of the participants were randomly chosen for semi-structured interviews, which were conducted in the interviewees' L1s to elicit in-depth responses about their peer-review experiences and perspectives. The collected data were analyzed using (1) a *t*-test to examine whether there is a significant difference between the pre- and post-survey data and (2) an exploratory factor analysis to detect associations among the observed variables (answers to individual survey items) that form a latent variable (factor). The results of the data analyses did not support the previously held views that Asian learners are predisposed to be reluctant peer reviewers. Rather, a majority of the participants responded that they preferred the face-to-face mode because it was easier to give honest feedback and they could work collaboratively to make corrections. It was indicated that EFL learners' preference for a certain peer-review mode interacts closely with a number of factors, such as self-assessed target language competence and learning style. Chinese students, in particular, were shown to be overly conscious of the correctness of the feedback they provided and, consequently, kept seeking confirmation and oversight from an authoritative figure (the teacher) rather than taking initiative. Possible pedagogical implications are discussed in relation to ways to better implement peer-review sessions in EFL contexts.

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Developmental trajectory of L2 syntactic representation: Evidence from structural priming

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Keywords: developmental trajectory; L2 syntactic representation; structural priming; L2 proficiency

Structural priming paradigms have been influential in shaping theories of bilingual syntactic representation. However, until recently there have been few attempts to provide priming evidence for the development of bilingual syntax. The developmental model of L2 syntactic representations in late L2 learners for the first time tries to account for how shared bilingual syntax develops in the course of L2 acquisition (Hartsuiker & Bernolet 2017), which delineates several distinct testable developmental phases. Despite its theoretical promise, supporting evidence for the Model is limited and mainly comes from rather proficient L2 learners whose L1 & L2 were both Indo-European languages (e.g. Bernolet et al. 2013). Whether the Model applies to lower proficiency foreign language learners with distant L1 & L2 needs more research.

To bridge the gap, a within-L2 and a L1-L2 structural priming experiments were carried out on Chinese-speaking English learners, whose L2 proficiency ranged from beginner to advanced level. Three research questions were addressed: 1) Does the within-L2 priming effect increase with L2 proficiency? Does verb repetition modulate the effect of L2 proficiency on the priming effect? 2) Does the magnitude of L1-L2 priming increase with L2 proficiency? Does semantic equivalence modulate the effect of L2 proficiency on cross-linguistic priming? 3) Is within-L2 priming effect as strong as that of L1-L2 priming?

In Experiment 1, we primed English datives with English in 53 Chinese EFL learners. Half of the prime-target pairs used the same verb (e.g. give–give), and half used different verbs (e.g. give–pass). LME analysis showed significant increase of priming with the increase of L2 proficiency only under the same verb condition ($p < .002$). The priming effect size when verbs were repeated ($d = .78$) was larger than that when verbs are different ($d = .35$). The results indicate that the priming effect still rely on verb repetition. The results are consistent with the prediction of the Model that L2 syntactic representation might develop from null to item-specific and also support the idea that the link between L2 verbs and syntax strengthens with the increase in L2 experience (Coyle & Kaschak 2008). We claim that the relation between within-L2 priming and L2 proficiency is non-linear: it increases with proficiency when the link between verbs and syntax is developing and decreases when abstract L2 syntactic representations are formed across different verbs. Experiment 1 added evidence to the first 3 stages of the Model. In Experiment 2, we primed English datives with Chinese datives in 52 Chinese EFL learners. Half of the prime-target pairs were translation equivalents (e.g. 赠–give), and half were not (e.g. 赠–pass). LME analysis showed significant increase of priming with the increase of L2 proficiency ($p < .008$) and no translation equivalent boost was observed ($p > .90$). The results support the prediction of the Model that shared bilingual syntactic representations develop gradually. A comparison of the priming effects in both experiments found that the priming effect size in within-L2 experiment ($d = .564$) was larger than that of L1-L2 priming ($d = .403$), which indicates that the participants' L1 & L2 syntactic representations have not fully shared (Bernolet & Hartsuiker 2018). In addition, according to the Model, no cross-linguistic priming might occur before the within-L2 abstract structural priming under different verb condition. The current results seem inconsistent with this prediction. The cross-linguistic priming in the current study might be partly due to the similarity between Chinese and English usage of datives. The results suggest that when L1 & L2 syntax are highly similar, item-based bilingual syntactic sharing is possible, and shared bilingual syntax might develop together with abstract L2 syntactic representations.

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The effect of individual factors on second language lexical attrition in bilingual returnee children

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Keywords: L2 lexical attrition, returnee children, individual differences

Attrition refers to a phenomenon where one's language knowledge changes as a result of shift(s) in the language environment. The factors that motivate this linguistic change is still an underexplored area of research, especially in the case of second language (L2) attrition where a change in L2 knowledge is caused by an interrupted contact to the L2. The current study longitudinally examines the effect of individual differences—L2 exposure, length of L2 residence, age of L2 onset, and L2 proficiency—on the degree of L2 lexical attrition in Japanese-English returnee children. Returnees are children who lived in a L2-dominant (English) environment for some time and returned to their native language (L1; Japanese) environment. This study is one of the first to provide quantitative evidence for the modulating effect of individual factors on attrition, as most previous studies were small-scale case studies and thus qualitative in nature (Flores, 2015; Reetz-Kurashige, 1999; Tomiyama, 2008).

The participants were 36 Japanese-English bilingual returnee children (21 female, 15 male; mean age= 9.8, SD = 1.42). The results from the BiLEC questionnaire (Unsworth, 2016) showed that while their English exposure at home and school decreased from 46.8% to 4.5 % upon their return to Japan, their Japanese exposure increased from 53.2% to 95.5%. We used a verbal fluency (VF) task to measure the children's lexical access ability. The participants named as many items as possible in English from particular semantic categories within one minute. The returnee children were tested twice: the first round took place approximately three months after their return to Japan, and the second round was conducted a year later. A few weeks before the first round of testing, an English proficiency test (sections include: reading, writing, listening and speaking) was administered to the returnee children in order to establish their baseline L2 proficiency.

Results from the linear mixed effects model showed that both Japanese and English verbal fluency performance increased in a similar rate from first to second round of testing. Moreover, there was a significant three-way interaction among Length of L2 residence, Language (Japanese, English), and Time of testing (first test, second test). That is, the longer the children lived in the English-dominant environment, the better they maintained (and even increased) their L2 English verbal fluency performance over the course of a year since their return to Japan.

The findings showed that the returnee children, on a group level, were able to increase their lexical performance in both Japanese and English, despite receiving limited input in English. Nevertheless, on an individual level, our results demonstrated that length of L2 residence is a significant predictor for the degree of L2 maintenance. This is in line with the account of maturational constraint in language attrition: the idea that it takes some time for the children's language knowledge to be established and stabilize in the human brain for it to become resistant to effects of attrition (Flores 2015). Our study supports this account by demonstrating that the longer time the returnee children had to stabilize their L2 knowledge (i.e., longer length of L2 residence), the more resistant they become to attrition effects when they are back in their L1 environment.

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Teaching and Learning of English Count/Mass Nouns by Mandarin Chinese Speakers

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Keywords: cross-linguistic conceptualization, countability construals in English and Chinese, EFL Pedagogy

One of the toughest challenges with learning English for EFL (English as a Foreign Language) learners is its distinction between countable and uncountable nouns. This challenge is even more pronounced for learners whose first languages are Mandarin Chinese, Japanese, or Vietnamese, which all encode countability very differently. A pilot study was therefore designed to explore this issue by examining how learners in a tertiary environment in Taiwan, whose proficiency levels ranged between pre-intermediate to intermediate, learned the concepts of countability in English. The research questions included: 1) what aids are used in order to learn countability in English: translations, dictionaries, or grammar books? 2) What kind of nouns do they find most difficult to comprehend and use: count, mass or abstract nouns? And finally, 3) will the explicit instructions enriched with the cognitive clues that emphasize the construal aspects of countability, enhance the awareness of the use of articles (a/an, and the)? A group of 19 college students of intermediate level English in Northern Taiwan completed the exploratory study, which adopted a mixed methods research design (Brown, 2014) with both qualitative and quantitative data collection and analyses. For the first two questions, a set of qualitative data were generated from interviews, and learners' self-reports on their learning and understanding of English count/mass and concrete/abstract nouns. The data was complemented by quantitative data elicited by a pre- and post-test of a countability judgement test (Tsang, 2017) along with a recognition test that consisted of a 750 words essay written by a student of similar proficiency background who did not participate in the study. Results demonstrate that the majority of the participants had not learned countability systematically before the treatment. They would use on-line dictionaries and some grammar checking websites to check the use of plurality when they wrote essays. They also had not learned about the fact that mass nouns could also be countable, depending on the 'boundedness' or 'atomicity' of an object or concept. Some of these concepts are language specific such as *luggage* and *furniture*, while some others are 'semantic universals' (Choi, Ionin & Zhu, 2018), such as *sand*, *air*, and *oil*. The participants understood these variations after treatment, as shown by the statistically analysis on the countability judgement test whereby a significant progress was detected at the post-test ($p < .001$). However, the scores on the recognition test did not improve significantly, suggesting that although participants had a heightened awareness of the use of plurality without any article which is linked to generality, they still had difficulties with the use of 'the' for specific situations. Following these findings, a main study has been conducted, with a control group added to compare the said approach with a traditional approach consisting of grammar translation and implicit teaching.

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Language Proficiency and Instructional Effects: A Cognitive Linguistic Approach to the Count-Mass Distinction

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Keywords: explicit grammar instruction, boundedness, individuation, proficiency, count-mass distinction

This paper examines how the effect of explicit grammar instruction based on cognitive linguistic terms differ by language proficiency, looking at L2 learner's understanding the count-mass distinction in English. Boundedness and individuation are cognitive linguistic notions to characterise the countability of nouns (Croft & Cruse, 2004; Langacker, 2008). Although the application of such notions to language teaching has proven to be beneficial to some extent, there was a domain that the instruction partly failed to improve: flexible nouns (Cho and Kawase, 2011; Akamatsu, 2018; Ogawa et al. 2018). They are the type of nouns which can equally be count or mass depending on context (e.g., hair, stone). Akamatsu (2018) and Ogawa et al (2018) tested Japanese learners of English on the understanding of flexible nouns and found no positive effect of instruction on their count interpretation (e.g., I was surprised to find grey *hairs* in my beard.), while some improvement was observed with their use as mass (e.g., She has beautiful black *hair* and brown eyes.). The result indicates a potential transfer of cognitive preference from the L1 that Japanese native speakers prefer, by default, mass (unbounded, unindividuated) interpretation for an unknown entity (Imai & Gentner, 1997; Cook et al, 2006).

In order to see whether such a transfer is affected by the learner's proficiency, the current study administered cognitive linguistic instruction on two levels of proficiency groups and compared their outcomes. Participants were Japanese university students in an EFL environment, divided into basic (N=23), intermediate (N=18), and control groups (N=25). Procedures involved a pre-test, three sessions of explicit instruction based on boundedness and individuation, post- and delayed post-tests. Test items were typical count and mass nouns (e.g., book, cat, sand, bread), and flexible nouns. Results revealed a marginal interaction of Test, Noun type, and Learner group, suggesting different degrees of the effects by noun type and proficiency. In particular, intermediate learners improved significantly on both uses of flexible nouns (count and mass), whereas basic learners only showed better understanding on mass interpretation of flexible nouns. The findings indicate that learners need a certain level of proficiency to take full advantage of cognitive linguistic instruction which requires the application of abstract notions (i.e., boundedness, individuation) to form-meaning mappings in the L2. The study can also give an important pedagogical suggestion on at which proficiency level this type of instruction may best be introduced.

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Bi-directional Transfer in Second Language Idiom Comprehension

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Keywords: Idiom comprehension; second language learning; bi-directional transfer; cross-linguistic similarity; decomposability

Studies on second language (L2) idiom comprehension have shown that learners are sensitive to the influences of factors such as idiom decomposability (Libben & Titone, 2008), context of use (Liontas, 2002), and cross-linguistic variations (Irujo, 1986). A number of these studies have attempted to examine whether and to what extent the similarities and differences between learners' L1 and L2 facilitate or impede their idiom comprehension in the L2. The current study approaches this question by investigating whether there is a bi-directional transfer in L2 idiom comprehension. Mandarin Chinese and English were selected as the target languages.

Forty-six advanced learners of English (EFL) and twelve advanced learners of Chinese (CFL) participated in the study. A short version of the Language History Background Questionnaire (Li, Sepanski, & Zhao, 2006) was administered to both groups. We adopted a 3 (cross-language similarity) x 2 (decomposability level) design in the current study. The main instrument of the study was a multiple-choice idiom comprehension test modeled on Irujo (1986). 30 idioms were sampled from both English and Chinese, and were grouped into three types: (1) Type-1 idioms that are identical in form and meaning in English and Chinese (E.g., 'Skating on thin ice' & '如履薄冰'); (2) Type-2 idioms that are similar in form and meaning in English and Chinese (E.g., 'Make no bones about' & '直言不諱'); and (3) Type-3 idioms that are different in form and meaning in English and Chinese (E.g., 'chew the fat' & '樂不思蜀').

English idioms were selected with reference to the idiom database (e.g. Becker & Weber (2016)) and dictionary. All the Chinese idioms adopted were fixed formulated expressions named "chengyu". Based on the English idioms, corresponding partially and fully matched Chinese idioms were selected after meaning verification with Chinese idiom dictionaries (Lin & Leonard, 2012). The test sentences were extracted from English and Chinese corpora respectively (e.g., Corpus of Contemporary American English, the UCLA Corpus of Written Chinese). Each test item had three multiple choices: the correct paraphrase of the idiom and two other choices that provided the wrong paraphrases of the idiom but were semantically plausible in the given sentence context.

Results have shown a near symmetrical trend of accuracy level across the three types of idioms in both groups, with highest accuracy in fully matching idioms. This shows the influence of cross-language similarity in L2 idiom comprehension. The results from two-way ANOVA showed no significant interaction effects but significance difference was detected between type 1 idioms and type 2 & 3 idioms in the ESL group. The current results provide some initial evidence of bi-directional transfer with the debatable role of decomposability. It is hoped that findings from the contrastive group setting in this study could expand our understanding of bilingual idiom processing as well as shedding light to the pedagogy of L2 idioms.

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The Effects of Conceptual and Semantic Crosslinguistic Influence in Explicit L2 Instruction of Temporal Adpositions

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Keywords: crosslinguistic influences, explicit instruction, temporal prepositions, adpositions

This study investigates the correlation between general language proficiency and explicit knowledge of English temporal prepositions and the effects of crosslinguistic conceptual and semantic influence in second language instruction. Temporal adpositions (e.g., English prepositions of time and Japanese post-position particles) have shown to be one of the most difficult aspects of language acquisition. Thus, there is a clear need to examine and understand the effects of explicit instruction of temporal prepositions to improve pedagogical approaches for enhancement of second language learning (Jarvis & Pavlenko, 2008; Jarvis, 2011; Suzuki & DeKeyser, 2017).

To accomplish these research objectives, a study with 86 1st-year Japanese university students was initiated to promote the usage of nine frequent one-word prepositions of time: *at*, *by*, *for*, *from*, *in*, *of*, *on*, *to*, and *within*, with two experimental treatment groups: Participants_{Low} ($n = 35$) and Participants_{High} ($n = 35$), and a comparison Control group ($n = 16$). Accuracy of temporal prepositions was promoted through *focus on form* treatment exercises including visual representations of the scenes depicted in the treatment items. Pretest, immediate post-test, and delayed post-test results were examined in order to scrutinize the hypothesis that as a second language develops, general language proficiency and prepositional accuracy can develop concurrently. The second hypothesis this study proposes is that the effects of instruction on prepositions of time, as revealed by the grammar test, are constrained by differences in the influence of crosslinguistic conceptual and semantic features, which may be revealed through the observation of crosslinguistic influences, discrepancies in developmental-accuracy orders, and individual differences.

The results show a significant lack of correlation between participants' language proficiency scores and their ability to understand temporal prepositions. Improvements in explicit knowledge due to the treatment were maintained and statistically significant for the experimental treatment groups. In particular, gains in accuracy of *to* for expressing the endpoint, duration, or the beginning of another event could be easily represented by the use of the Japanese post-position particle *made*. Another outcome of this study was the further confirmation that conceptual and semantic influences of Japanese particles (for example *ni*, see Kabata, 2016) play a significant role in approximating correct usages of English prepositions; e.g., utilizing *ni* (a specific point in time) for *at*, *in*, and *on* (indicating a specific point in time within a time continuum).

The implications of this investigation illustrate that the learning of adpositions may be seen as a distinct cognitive area not necessarily parallel to gains in general language proficiency (e.g., Granena, Jackson & Yilmaz, 2016). In addition, crosslinguistic transfer, lexicalization, and semantic extension may all have an influence on individual differences in learning of English prepositions of time and that focus on form treatment exercises with the incorporation of semantic and conceptual visual illustrations and can be generalized to other second language learning contexts and used to enhance the teaching of temporal adpositions.

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Can Verbal Short-Term Memory Training Lead to Greater Gains in L2 Vocabulary Learning?

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Keywords: language learning, short term memory, working memory

Working memory is an important cognitive factor in language learning and is of significance to language education teachers. Research has shown that those with higher working memory capacity perform and learn better in vocabulary learning, language production and comprehension, and mastering grammatical constructions (Alptekin & Ercetin, 2011; Bergsleithner, 2010; Martin & Ellis, 2012; Williams & Lovatt, 2003). Because of working memory's importance in language learning and individual differences in its capacity, an interesting question arises: is there a way to improve working memory capacity and does it have an impact on language learning?

Working memory training is one way to improve working memory capacity; however, working memory training is still controversial (Melby-Lervag, Redick, & Hulme, 2016). Nevertheless, Melby-Lervag et al. found in their meta-analysis that there were moderate transfer effects for phonological short-term memory training (2016). Because higher verbal short-term memory capacity is associated with greater gains in L2 vocabulary acquisition, the aim of this preliminary experiment was to investigate if verbal short-term memory training can lead to greater gains in vocabulary learning (Martin & Ellis, 2012; Masoura & Gathercole, 2005).

The participants in this study were 31 college students ($F = 18$, median age = 18.32) randomly divided into a control group and a verbal short-term memory training group. The training group underwent a verbal N-span training task consisting of Japanese phonemes. A nonword repetition task taken before training showed no significant difference between the control group ($M = 2.86$, $SD = .351$) and training group ($M = 2.81$, $SD = .403$), $t(29) = .397$, $p = .694$. After verbal short-term training, another nonword repetition task was administered and the training group ($M = 3.87$, $SD = .500$) showed more improvement than the control group ($M = 2.93$, $SD = .258$). The difference was statistically significant $t(29) = -6.52$, $p < .001$.

In order to test if training had any effect on vocabulary learning, both groups underwent 3 vocabulary learning phases consisting of 20 three-syllable Japanese concrete nouns over the span of 5 days. 5 days after the final learning phase, participants took a delayed post-test on the 20 vocabulary words. The mean vocabulary score on the delayed post-test for the verbal short-term memory training group ($M = 16.31$, $SD = 1.70$) was higher than for the control group ($M = 12.53$, $SD = 1.95$). The difference was statistically significant $t(29) = -1.26$, $p < .001$ supporting that working memory training can help with greater gains in vocabulary learning.

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Demolishing walls and myths: Cognitive salience of literal and metaphorical meanings in L1 and L2 speakers

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Processing of metaphorical vs. literal meaning has been widely discussed in the literature with two opposing approaches. The indirect access approach suggests that we access the literal meaning first and then process the figurative meaning (Grice 1975; Weiland et al. 2014). In contrast, the direct access approach suggests that figurative and literal meaning are processed using the same cognitive mechanisms, and that there is no real primacy of the literal (Gibbs, 1984; Glucksberg, 2003). However, preliminary research on L2 figurative comprehension suggests that comprehension of metaphorical meaning is hard for L2 speakers (Littlemore et al. 2011). Our study explores potential differences in L1 and L2 processing of completely conventionalized metaphorical expressions, which are of the same frequency and contextual saliency as their literal counterparts. Our aim is to explore whether the alleged special status of metaphor causes difficulties in L2 comprehension even when the figurative meaning is very common and conventionalised.

We conducted a cross-modal lexical decision task with semantic priming. Participants were presented with spoken nouns followed by a written target which was either a verb or a pseudoword, and had to decide if the target was an existing English word. For instance, in the literal condition they would hear *cash*, and see *INVEST*; in the metaphorical condition, they would hear *effort* and see *INVEST*; and in the unrelated condition, they would hear *garden* and see *INVEST*. The L1 group included 48 British English speakers, and the L2 group consisted of learners of English split in two groups, i.e. advanced ($n = 27$) and intermediate proficiency ($n = 27$), all native speakers of Croatian.

For the L1 group, the results showed that reaction times for both literal ($t = -3.329$, $p = .0009$) and metaphorical condition ($t = -2.979$, $p = 0.0029$) are significantly faster in comparison to the unrelated condition. Furthermore, the results indicated that there is no significant difference ($t = -0.349$, $p = 0.7268$) between the literal and metaphorical condition. For the L2 groups, the results show that in the intermediate group there are no significant differences between any of the conditions. In the advanced group, there is a significant interference effect: the literal condition is significantly slower than the unrelated condition ($t = 2.516$, $p = 0.012$), while there are no statistically significant differences between any of the other conditions (met vs. unr: $t = 1.5228$, $p = 0.1281$; lit vs. met: $t = 0.9885$, $p = 0.3231$).

The L1 results show that processing of conventional metaphorical expressions is as easy as processing of the literal meaning, suggesting that the literal meaning does not hold a privileged status over the metaphorical meaning in conventional metaphorical expressions. The L2 results show that the intermediate proficiency speakers are not proficient enough to be sensitive to this type of semantic priming, but more importantly, the advanced group results show that there is an interference effect between the literal and the unrelated condition, which we interpret as showing that L2 speakers are aware of the connection between the literal prime and the target. However, this is not true for the metaphorical condition, which is treated no differently than the unrelated condition. This supports the previous findings from the literature: for L2 speakers, metaphorical meanings are indeed special and potentially difficult, even when they are completely conventionalised and their frequency and contextual saliency does not differ from their literal counterparts.

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Creating an aura of mystery in multimodal film setting: A cognitive analysis of Denis Villeneuve's *Arrival* and *Blade Runner 2049*

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Keywords: cognitive coherence, cognitive film analysis, conceptual blending, multimodal metaphor, science-fiction film

This paper aims at analysing selected examples of visual, audio-visual and verbal representations of meaning presented in two science-fiction films directed by Denis Villeneuve – *Arrival* (2016) and *Blade Runner 2049* (2017). The focus of this paper is on how cognitive linguistics tools (such as embodiment, image schemas, metaphor, metonymy and blending) can explain the ways in which certain aspects of meaning emerge in multimodal film setting, where image is the dominant mode of presentation, supported by other modalities, including the verbal (dialogues or written language) and auditory inputs (sound and music composed for the film), whereby the last two modalities may be used either as prominent or liminally ostensive stimuli in the film.

In particular, the paper examines how these three modalities (visual, auditory, verbal) interact to create a cognitively coherent atmosphere of mystery which is present in the analysed science-fiction dramas. The two source materials selected for examination share the film genre and the director, but are vastly different with regard to their plot and discussed themes; also, other teams were responsible for cinematography and music. The methodology applied in this study combines the elements of cognitive film analysis (cf. Bordwell 1989; Coëgnarts & Kravanja 2012; Coëgnarts 2017) with cognitive linguistics, focusing in particular on multimodal metaphor (Forceville 2016) and conceptual blending (Fauconnier & Turner 2002; Brandt 2013).

As a result of this study, a number of specific patterns of visual and multimodal conceptual integration have been identified, which can give rise to or strengthen the atmosphere of mystery permeating the examined films, as intended by the film director. These involve, among others:

- the camera shift from long to close-up shots for metonymic construals of concepts that are crucial for the film plot, but presented only implicitly;
- the use of scenes where image and dialogue are presented asynchronously or even non-simultaneously;
- quick alternation of different types of shots to introduce emotional tension accompanied by non-diegetic sounds with oscillating pitch and change in lighting (e.g. hard high-key lighting vs. soft backlighting);
- the use of generally subdued colours and simplistic soundscapes for better focus, while salient objects/concepts/events are highlighted by the use of saturated colours and change in sound volume, frequency and timbre;
- repetition or slight alteration of visual imagery and accompanying musical themes for better plot continuity and coherence.

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**I'm surprised to hear you say that:
The use of *raised eyebrows* in oral and written contexts**

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Keywords: raised eyebrows, emotion, multimodality, surprise, discourse

In this corpus analysis, we explored the role and meaning of *raised eyebrows* in oral and written contexts. Ekman (1979) discussed the role of raised eyebrows as expressions of human emotions, such as surprise, as well as their role in underlining important parts of speakers' speech (see also Bouvet 1996 for sign language). Tabacaru & Lemmens (2014) argued that raised eyebrows are used as "gestural triggers" in television shows such as *The Big Bang Theory* and *House M.D.* that facilitate the interpretation of humor in what was explicitly said. Gestural triggers in interaction come as helpers, marking and allowing the listeners to switch from a serious to a non-serious mental space (Fauconnier 1984, Brône 2008). However, would the phrase "raised eyebrows" in text, devoid of gestural triggers, also function in a similar way?

We analyzed examples in American media taken from the Corpus of Contemporary American English (COCA), which indexes magazines and newspapers, along with closed captioned-cable news programs from 1990 to 2017. We found a large number of examples of "raised" (n=379) compared to "raising" (n=56), which suggests a preference in the media's use of the simple past tense compared to the progressive form. Two raters independently coded the sentences in our "raised eyebrows" subcorpus using Ekman's (1979) scheme. First, we describe the number of semantic categories that we found in the corpus. Second, we show that while surprise tokens are most frequent, a significant amount of disagreement tokens are also found. We also tested Ekman's view that raised eyebrows would stand for surprise; inter-reliability was very low ($k = -0,05$). In particular, 29% of the time when one rater would categorize the meaning as disagreement/questioning, the other rater would mark it as an expression of surprise.

Our data show that the most frequent meaning of the expression is surprise or disagreement, while in multimodal communication, it is mostly frowning that would stand for disagreement (or 'cognitive effort'; see Arndt and Janney 1987), rather than raised eyebrows. This shows that, when used in written texts, the phrase has a rather ambiguous meaning. In this talk we will discuss the implications of these results for theories of language comprehension and emotion.

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Crosslinguistic perspectives on the use and meaning of emoji in Asia and Europe

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Keywords: semiotics, emoji, multimodality, digital communication, emotion

The new ways of communicating in the 21st digital era gave rise to new ways of communication thanks to the social media and the ubiquitous use of the smartphone. This phenomenon has started to get a lot of attention in the field of linguistics (Evans 2017) and semiotics (Danesi 2016) regarding the universality of such modes of communication and the role they have in daily interactions. Similar to non-verbal cues in face-to-face interactions (gesture, facial expressions, tone of voice, etc.), emoji represent a powerful means of analyzing human communication, focusing on the emotional side of the speaker's message and their attitude. Recent research focuses on their figurative use (Danesi 2016), their emotional aspect (Barbieri et al. 2017), or speakers' intentions, for instance with the use of irony (Weissman & Tanner 2018).

This paper explores variation in interpretation of meaning of emoji between Chinese and French speakers. We focus on common emoji used by both Chinese university students (gathered from WeChat, a Chinese social media platform) and French university students. Surveys have been carried out in order to find out how often the participants use certain emoji and the meanings they attribute to them (as well as their negative-neutral-positive roles in conversations; see also Kralj Novak *et al.* 2015) which allows comparing their use in Asia and Europe. The findings show that, while some emoji have the same meanings for both Chinese and French users, others undergo semantic shift.

These findings will be compared to Ekman's (1979) analyses regarding facial expressions and emotion (such as anger, happiness, sadness, etc.), emphasizing the semantic/pragmatic role they have in daily communications across different media platforms. Our analysis emphasizes interaction and intersubjectivity, allowing to present these emoji within a background of dynamic meaning construction in a shared common ground between interlocutors (Clark 1996; Zlatev *et al.* 2008). The results bring into question claims of universality of emoji (Danesi, 2016) as well as of facial expressions and emotions (Ekman 1979), suggesting that their meaning is not universal but depends on several factors to which the users are exposed.

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The Role of Gesture in Scopal Ambiguity: A Comparison of Japanese and English

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Keywords: gesture, negation, quantification, semantic interpretation, prosody

Gestures can play a facilitative role in the interpretation of structural ambiguities (Guellaï et al., 2014; Prieto et al., 2013; Tubau et al. 2015) and are associated with spoken expression of negation, with research on Open Hand Prone gestures (Kendon, 2004), head shakes (e.g. Kendon, 2002; Calbris, 2011), and their interaction and synchronization (Harrison, 2014; Harrison & Larrivéé, 2016). The current production study examines a context of negation in which the presence of quantification yields scopal ambiguities and asks to what extent gestural forms and timings are associated with intended interpretations.

In a quasi-experimental design, 23 native speakers of Japanese and 25 native speakers of English were familiarized with scopally ambiguous sentences containing negation and quantification, embedded in disambiguating contexts drawn from Syrett et al. (2014b). A target sentence examples is shown below with the quantifier and negator underlined.

- | | | | |
|------------------|--------------|------------|---------------------------|
| (1) <u>すべての</u> | マグノリアの | 花は | 咲かないでしょう。 |
| <u>Subete-no</u> | magnolia-no | hana-wa | sak- <u>anai</u> -desyoo. |
| All-GEN | magnolia-GEN | flower-TOP | bloom-NEG-will |
- (2) All the magnolias won't bloom. (Syrett et al., 2014a)

Under one interpretation, the negator takes wide scope, indicating that some magnolias bloomed and some did not. In the alternative interpretation, the negator takes narrow scope, indicating that no magnolias bloomed. Speakers were instructed to produce the target sentences as unambiguously, given the context, and expressively as possible, and were video recorded. Analyses focused on the gestures produced while speaking: the articulator used (e.g. hand/head), the type of gesture (e.g. head shake / beat / open hand prone), and the length of the gesture stroke (in number of overlapping words).

Analyses of 317 gestures from English revealed a preponderance of head gestures as well as statistical relationships between the form, placement, and length of gestures and scopal interpretations, specifically, use of semantically congruent head shakes, alignment of gestures with the negator, and lengthening of gesture strokes where interpretations involved narrow-scope negation. Preliminary parallel analyses for Japanese suggest cross-linguistic similarities and differences. In line with English, head gestures also predominated in the Japanese corpus; some lengthening of gesture strokes was observed with interpretations involving narrow-scope negation, and gestures rarely aligned with the quantifier. In contrast to English, gesture frequency was overall higher in Japanese; prosodically motivated head beats were much more frequent than semantically congruent head shakes, and gestures relatively frequently aligned with the negator when it appeared at the end of the utterance, suggesting a key role for the prosody-gesture interface in Japanese.

Results will be discussed with reference to cross-linguistic expression of negation and related contexts in gesture, and with reference to scope of negation as reflected in gesture (see Harrison, 2010, 2013, 2014a, b). Moreover, the possible contribution of gesture in communication of specific interpretations of scopally ambiguous sentences will be evaluated in the context of mixed results regarding the robustness of prosodic cues for similar contexts in English (e.g. Syrett et al. 2014b).

Spatial deixis and gestures in Brazilian Portuguese and American English: a crosslinguistic multimodal analysis

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Keywords: Multimodality. Gesture Studies. Spatial Deixis

Departing from the view that Cognitive Linguistics is a Usage-based theory (Langacker 2007, Cienki 2016), and that there is a very tight relation between Cognitive Linguistics and Gesture Studies (Cienki 2016), in this paper, we aim at discussing gesture patterns that emerged from an empirical comparative analysis made between the spatial deictic expressions ‘here’ and ‘there’ in American English, and ‘aqui’, ‘ali’, ‘aí’ and ‘lá’ in Brazilian Portuguese. Our initial hypothesis was that there is a predominance between pointing gestures and spatial deictic expressions in verbo-gestural compounds in both languages. We collected and analyzed 10 videos containing a verbo-gestural occurrence of each cited deictic, totalizing 60 verbo-gestural occurrences. The videos were collected from The Distributed Little Red Hen Lab, a multimodal library hosted at UCLA. We departed from the concept of gesture as an “deliberate visible movement” (Kendon 2004) made by the utterer to convey a meaning co-related to the speech. We focused on hand gestures, because “in particular, manual gestures can represent ideas in space in a way that is much less feasible for other bodily articulators” (Cienki 2016: 607). Furthermore, the analysis of hand gestures can be tightly correlated to a linguistic analysis of speech, due to the facts that: “a) gestures can be segmented and classified, b) gesture show regularities and structures on the level of form, meaning and syntagmatics, gesture have the potential for combinatorics and hierarchical structures, d) gestures show syntagmatic as paradigmatic relations” (Bressemer 2013: 1081). Regarding this speech-gesture correlation, we followed the Linguistic Annotation System for Gestures (Bressemer et al 2013) steps, which include: the gesture stroke isolation and description, considering four features: handshape, palm orientation, movement direction and position in space. Partial results showed that a five-member radial scale, with a central and four gradually peripheral members, could be established, encompassing the verbo-gestural occurrences of both languages. Nevertheless, although pointing gestures were the more central members of the prototype, as we hypothesized, they weren’t the only ones that co-occurred with the spatial deictic expressions: other patterns could be designed, especially when the gestures performed a metaphoric referential function (Cienki 2017) or cooccurred with micro-constructions, such as, for example, ‘Escuta aqui’ (‘Listen here’, in Brazilian Portuguese). The results showed systematic patterns pervasive to both analyzed languages, as well as some overlapping categories on the peripheral members of the prototype.

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The effects of spatial manipulation and mental imagery skills on gesture production

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keywords: gesture production, spatial reasoning, mental imagery, speech, iconic gesture

Why do some people gesture more than others? Prior work (Hostetter & Alibali, 2007) shows that spatial reasoning skills are one predictor of gesture rate. The Gesture as Simulated Action (GSA) framework (Hostetter & Alibali, 2008) posits that iconic gestures arise from mentally simulated action and perception, and further predicts that speakers will gesture more when simulating mental action or perception. We extend this prediction to consider the effects of individual variation on gesture rate. We consider two types of spatial reasoning skills: *spatial manipulation* (the ability to rotate and manipulate imagined objects) and *mental imagery* (the ability to keep detailed visuals in the mind's eye). Given that an individual with greater skill should have a stronger degree of mental activation, we predict a positive correlation between each spatial reasoning ability and gesture rate during tasks that rely on that skill. Individuals with high spatial manipulation skills will gesture more during spatial manipulation description tasks, and individuals with high mental imagery skills will gesture more during imagery description tasks.

One hundred native English-speaking undergraduate students participated in the study. Here we report the results of the first 12 participants as a pilot. Participants completed two spatial cognition assessments and two tasks intended to elicit gestures. The cognition assessment tasks were a paper folding task (i.e., spatial manipulation) (Ekstrom et al., 1976), and a visual template task (i.e., mental imagery) (Reed, 1974). Each production task mainly required one of the two types of spatial cognition. They were an origami explanation task (i.e., spatial manipulation) and a picture (BrainPOP, 2013) description task (i.e., mental imagery). Speech and gesture were coded separately. Gestures were coded in ELAN and categorized as representational or non-representational.

We found a moderate correlation between gesture rate and spatial skills for the spatial manipulation tasks (Fig. 1). There was only a weak correlation between gesture rate and spatial reasoning for the mental imagery tasks (Fig. 2). There was also a moderate correlation between the paper folding score and picture description gesture rate (Pearson's $r = 0.58$). There is a weak correlation between gesture production rates ($r = 0.34$); hence it is not simply the case that participants gestured at consistent rates between tasks. Results suggest that some aspects of spatial reasoning skill, such as spatial manipulation, may be stronger predictors of gesture production rates than others. They also support the claim of the GSA that heightened simulated action leads to increased gesture production.

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Fig 1.

$r = 0.57$,
 $p(df=10)$
 $= 0.055$

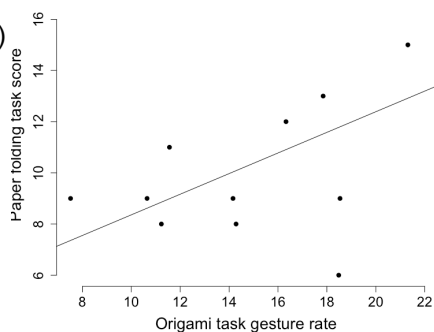
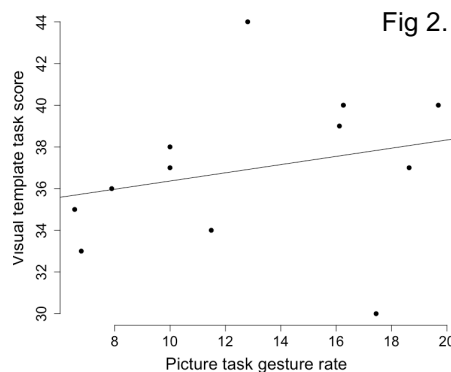


Fig 2. $r = 0.25$,
 $p(df=10)$
 $= 0.433$



Watch! The Olfactory Time Machine!

- A Study of Synesthetic Metaphors in Japanese Winespeak-themed Manga

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Keywords: multimodality, multimodal metaphor, synesthetic metaphor, winespeak, Japanese manga

This study investigates the seldom explored nonverbal cross-modal conceptualization between smell and vision by analyzing a Japanese winespeak-themed manga, *神の雫* (*The Drops of God*). Winespeak is a common research topic in synthetic studies, focusing on how individuals use figurative languages to describe the abstract smell perception (Caballero & Suárez-Toste, 2008; Creed, 2013; Suárez Toste, 2007). It utilizes verbal description to demonstrate one's drinking experience, which involves the descriptions of sight (e.g. color, opacity of wine), smell (i.e. aromas in wine) and taste (i.e. sweetness, acidity, tannins and body). However, most of them use verbal description as the research material; there is scant literature dealing with the cross-sensory metaphor of visualizing smell. Since Japanese winespeak-themed manga involve pictorial conceptualizations of smell, they provide us an insightful tool of how individual describes the smell through multimodal metaphors.

This research applies Metaphor Identification Procedure of Manga to identify the synesthetic metaphors of visualized smells in Japanese winespeak-themed manga. Since both metaphor and metonymy play important roles in conceptualizing abstract concepts, several olfactory metaphors and metonymies have been found in manga. Same as verbal descriptions, the aroma of the wine can be metonymically visualized as "rose", "almond" or "blackberry". Because of its abstractness, the visualization of the aroma firstly relies on metonymy. For instance, ROSE FOR THE AROMA OF ROSE is an internal metonymy commonly occurred in the winespeak-themed manga. After visualizing the invisible aroma metonymically, the metaphorical concept WINE IS ROSES can be interpreted as well. For instance, the freshness of the wine is metaphorically portrayed as the vitality of roses (Urios-Aparisi & Forceville, 2009).

The result also suggests that the olfactory is like a "time machine" which brings the experienter to an imaginary scenario or a memorial scenario. The imaginary scenario is usually poetic or surreal, which might be inspired by fairytale or art creation. For example, the manganist depicted Miller's *The Angelus* to visualize the aroma of the wine. On the other hand, smell the aroma of wine is like taking a time machine, which evokes the experienter to an autobiographical memory, as shown in Figure 3. This kind of representation is in fact related to the scientific fact that smelling perception is linked closely to memory and emotion. Thus, "odor memory" or "olfactory memory" might be evoked by olfaction irresistibly and unconsciously (Herz & Engen, 1996; Rubin, Groth, & Goldsmith, 1984).

In sum, this study sheds light on our overall understanding of cross-modal synesthesia and contributes to the theories of both multimodal metaphors and manga art creation.

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Connecting language, vision and force: Analyzing emotional forces of FRUSTRATION in Japanese manga

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Keywords: causation, emotions, facial expressions, force, (inter)subjectivity, manga

Emotions are not necessarily expressed through direct predicative forms (e.g., *I'm angry*) (Minagawa 2016), if expressed at all. This tendency is prevalent in Japanese, which has a rich inventory of grammaticalized and discursive markers of emotivity spanning across the domains of subjectivity and intersubjectivity (Maynard 1993, Suzuki, 2006). Furthermore, emotions are encoded visually, for example, through facial expressions, inviting observers' speculations, judgments or empathy concerning how people feel. The present study offers an integrative approach to emotions, language and vision by employing the framework of "force," focusing on expressions of FRUSTRATION in Japanese. Drawing on data from selected manga works (20,000+ characters, 500+ images), the study aims to schematize the concept in question in terms of causation and force, as has been discussed in previous work on emotions (Lakoff 1990, 1993; Kövecses 2000, 2015), and links the schemata to visual and linguistic contexts in manga. The analysis begins with conceptual labelling tasks by informants as readers, who assign to each image "facial expression tags" judged based solely on facial expression, and "emotion tags" judged together in the context of the story (Tokuhisa et al., 2006). It then employs Talmy's (1988, 2000) *force dynamics* (FD), a schematic system, which contains two opposing force elements, Agonist (AGO) and Antagonist (ANT); FD can be extended to psychological and social domains and thus, in this case, can represent the ambivalence that exists within a speaker's (or character's) psyche (Abe 2007, 2016 on Japanese). Two types of situations are identified: 1) frustration over a state/event that does not occur or is not realized ("inability to move"); and 2) frustration over a state/event that occurs or is realized ("inability to suppress"). The former is represented in terms of a blockage that prevents and overpowers the ego's inclination to "move" (Ago blocked by Ant); the latter, in terms of him/her being forced to "move" despite of resistance against doing so (Ago forced to move by Ant). A preliminary study shows that the "inability to move" type tends to be associated more often with explicit facial expressions, as well as open class items, while the "inability to hold" type tends to correspond to less intense visual cues and closed-class markers. The visual and linguistic analysis further tackles the dimensions of subjectivity and intersubjectivity (Traugott and Dasher, 2002), exploring the possibility that the second type of frustration is more closely associated with these non-propositional domains, which may partially explain the results above.

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Abstract for ICLC-15

A Multimodal Cognitive Poetic Study of Postmodern Picturebook:
The Stinky Cheeseman and Other Fairly Stupid Tales

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Keywords: multimodality, cognitive poetics, cognitive narratology, postmodern, picturebook

Jon Scieszka's *The Stinky Cheeseman and Other Fairly Stupid Tales* (1992), winner of many prizes, has been commonly acknowledged as the typical contemporary postmodern picturebook. Its characteristics of postmodernity have been widely discussed by scholars in children's literature and children's education, enhancing our understanding of its charm as a masterpiece in children's literature. And yet so far most of these studies are predominantly preoccupied with sorting its postmodern devices and analyzing their implications to the young readers on researchers' literary expertise. Few approaches its postmodernity as a sophisticated cognitive phenomenon mediated via multimodal semiotics. The existing literary study of the picturebook fails in providing adequate account for complicated cognitive mechanisms underlying those postmodern devices which can cast light on readers' comprehension. Drawing on Text World Theory, the notions schema and subjective/objective construal, the present study conducts a multimodal cognitive poetic analysis over the book, with a view of disclosing its "tricks", metafictional devices in particular, the enabling cognitive mechanisms for readers agency and functionality. The multimodal deviations and subversions at three planes, narration, story and design, are produced mainly on three types of cognitive operations: multiple embedded objectification, intertextual subversion of fairy-tale schema; and coupling double situatedness. Postmodern picturebooks, via means of the dynamic interplay visual-verbal representations, play with readers' existing story schema at multiple dimensions, triggering uncommon reading experience, encouraging rebellious and challenging mindset. As a collection of innovated fairy-tales, this picturebook is a perfect carrier of postmodern ideology: rule-breaking, authoritative deconstruction, ontological fictionality and readers' agency. This study helps to broaden the scope of cognitive narratology and promote the advancement of burgeoning multimodal cognitive stylistics.

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Online image searches as indicators of lexical nuance between Japanese and English

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Keywords: lexical nuance, cross-linguistic pairs, bilingual dictionaries, online image searches

Many users of bilingual dictionaries, especially inexperienced users such as students, assume that all lexical entries are cognitive equivalents and are completely interchangeable. However, as true cognitive equivalents are rare, most bilingual dictionaries offer translational equivalents that are similar provided that the usage contexts are comparable (Adamska-Salaciak, 2013). In fact, in most cross-linguistic situations lexical items exhibit near-synonymy (Edmonds & Hirst, 2002) and are more likely to be plesionyms that have almost the same, but not the exact same, meaning (Hirst, 1998). While bilingual dictionaries strive to provide the context necessary for near-synonymous meaning, most can only offer a few examples, and only those that are the most typical (Adamska-Salaciak, 2013). Failing to understand the actuality of bilingual dictionaries can often lead to inappropriate lexical choices by novice L2 users that lack nuance of semantic meaning and/or pragmatic distinctions.

The Internet includes a vast number of images that have been labeled with keywords. These keywords can be searched to find images that demonstrate both the semantic meaning and pragmatic context of a lexical item and can be thought of as a visual language corpus. This visual corpus can be used in similar ways to a textual corpus (e.g. frequency counts) to bring nuance to cross-linguistic lexical pairs.

For example, the lexical pair of *okorareru* and *scold* is often found in Japanese-English bilingual dictionaries as equivalents. Both have the meaning of **engaging in negative evaluation in an emotive way**. An online image search of the term *scold* yields three general types of images: parents scolding children, teachers scolding pupils, and humans scolding pets. However, an image search of *okorareru* also yields these three types of images as well as images of bosses scolding workers. In fact these types of images seem more prominent. So while a sentence such as (*watashi wa*) *jōshi ni okorareta* in Japanese would be both linguistically and pragmatically correct. The English equivalent, *I was scolded by my boss*, would be linguistically correct but not pragmatically accurate. Instead the more appropriate English expression *yelled at* as in *I was yelled at by my boss* yields more appropriate images of bosses criticizing employees.

In this presentation I will examine six commonly misused Japanese-English lexical pairs and show how online image searches can be used to discover cross-linguistic nuances. Three lexical pairs commonly misused by Japanese speakers in English: *okorareru-scold*, *kusuri-drug*, and *asobu-play*; and three lexical pairs commonly misused by English speakers in Japanese: *entrance-genkan*, *welcome-irashaimase*, and *fan-otaku* will be discussed. Attendees should come away with an understanding of the ways that visual representations of vocabulary can highlight subtle semantic, conceptual, and pragmatic differences in cross-linguistic-comparisons.

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Minority Languages & Cognitive Linguistics: towards a two-way relationship

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Studies of minority languages (both signed and spoken) have not only played a significant role in the inception of Cognitive Linguistics (CL) four decades ago, but have continuously provided researchers with unique insights into the study of language ever since (Rice, 2017). The 'preconception-altering' fieldwork experience of linguists, and the cross-linguistic perspective that comes with it, has indeed been one of the most fertile sources of inspiration for contributions to CL frameworks. Many of the most prominent figures in cognitive linguistics have tapped into the diversity of the world's languages to develop models, theories and methods to better understand language as a dependent cognitive faculty in a variety of domains of inquiry. A far from exhaustive list includes: research on spatial semantics and cognition, lexical categorization, polysemy, event representation and semantic typology, the interface of syntax and semantics, and so on. In sum, studies of minority languages have been pivotal to CL. But what can CL do for Minority Language communities? The UNESCO reported in 2010 that 2,700 of the world's 6,700 languages, each carrying generations of worldviews and cultural traditions, are at risk of extinction. This is certainly tragic for modern social sciences scholarship, but more importantly, it threatens the linguistic and cultural heritage of minority language communities around the world. With 2019 declared the International Year of Indigenous Languages, the time is ripe not only to celebrate how this rich cultural heritage has contributed to cognitive linguistics, but also to consider how cognitive linguists can support indigenous and other minority language communities in retaining the use of their languages into the future.

In this theme session, we bring together researchers with experience in the study of minority languages from a CL perspective who can effectively contribute to a discussion of the path to a more balanced two-way collaboration between (indigenous and non-indigenous, deaf and hearing) cognitive linguists and signed and spoken language communities. The theme session as a whole will address the two following questions and aims to make concrete proposals to improve the two-way relationships between CL & ML communities:

- How can the study of minority languages illuminate and enrich the study of language from a cognitive linguistic perspective?
- How can minority languages and communities benefit from the cognitive linguistics enterprise? Especially in cases where the cognitive linguist's expertise is more specific than the broad knowledge required for more 'standard' revitalization and maintenance practices.

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How to speak “geocentric” in an “egocentric” language: A multimodal study among Ngigua-Spanish bilinguals and Spanish monolinguals in a rural community of Mexico

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Keywords: gesture; bilingualism; frames of reference; linguistic relativity; endangered languages

It has recently been shown that individuals residing in rural, indigenous communities rely on geocentric conceptualizations of space, e.g., north/south/east/west, even after they have shifted to a language that is known to favour egocentric conceptualizations, e.g., right/left (Meakins, Jones & Algy 2016; Adamou & Shen 2017). In this paper we explore how this combination works in practice by conducting a study in a previously non-investigated indigenous community of Mexico, the Ngiguas. The originality of our study is twofold: First, we investigate linguistic conceptualizations among the last Ngigua-Spanish bilingual speakers when they speak their native language, Ngigua, and the colonial, state language, Spanish, to see whether they have different linguistic conceptualizations of space or a single one. Second, we compare the linguistic conceptualizations of the bilinguals, as expressed in speech and co-speech gesture, to those of the monolingual Spanish speakers from the community.

To study speech and co-speech gesture we used a verbal localization task for community-scale relations. We filmed the responses of 17 early bilinguals in Ngigua (Otomanguean, ISO-639 code: coz) and in Spanish as well as of a control group of 17 Spanish monolinguals from the same rural community. We measured dominance among the bilinguals using a verbal fluency task and comprehension through an online picture-matching task. Statistical analysis of speech and co-speech gestures reveals that bilinguals use the geocentric linguistic conceptualizations in both languages, but restrict the egocentric ones to the new, dominant language, Spanish. Against our predictions, Spanish monolinguals also use high rates of geocentric gestures that they frequently combine with cardinal terms.

In sum, the Ngigua data confirm that geocentric conceptualizations can be transmitted to monolingual generations, including in a language where egocentric means prevail in other settings, provided there are no major disruptions in the community's habitat and way of life. This result is in accordance with the Sociotopographic Model, which stresses the importance of environment and people's interactions with it in their everyday lives (Palmer et al. 2016). Our study also shows that this process of transmission relies on conceptual convergence between the two languages that takes place at the level of the bilingual generation of speakers.

Regarding the second question of the Workshop, we will discuss ways in which our research can be relevant to revitalization efforts, such as those undertaken by the Regional Committee for the language Ngiba/Ngigua. As the collaboration is ongoing, we will draw primarily on our past experience within an ELDP language documentation programme on a closely related language, Ixcatec, where community initiatives are engaged in indigenous language teaching. In particular, we will report on a workshop conducted by E. Adamou in the local primary school with pupils and teachers. The goal of the workshop was, on the one hand, to raise confidence in the ability of the pupils to relate to the endangered indigenous language through their access to a variety of conceptualizations of space and, on the other hand, to inform teachers of the diversity of spatial conceptualizations available to their pupils. Indeed, both the Ixcatec and the Ngigua studies show that the more educated speakers rely on Spanish cardinal terms to strengthen the existing geocentric representations, therefore consolidating locally-relevant conceptualizations of space rather than abandoning them altogether for the benefit of the egocentric, literacy-based representations.

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Signed Languages as Minority Languages

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Keywords: sign language, cognitive grammar, minority, language documentation, Japanese Sign Language

In this presentation we first discuss the reciprocal ways in which the study of the world's signed languages has benefitted from key concepts of cognitive linguistics, and cognitive linguistics has been enriched and expanded by the study of signed languages. In the second part of our presentation, we offer suggestions for how cognitive linguists can aid in maintaining signed languages as vital minority languages and can contribute to signed language communities by collaborating with and expanding opportunities for their deaf colleagues.

Much of the early work on signed languages was based in structuralist and formalist theory. As a result, the significance of properties of signed languages such as iconicity, metaphor, and metonymy was for the most part overlooked. As sign linguists began to adopt cognitive linguistic models, the significance of these aspects for the grammars of signed languages began to be revealed. Cognitive linguistic principles have been used to explore new areas of the grammars of signed languages, such as fictivity, body partitioning and blending, and the role of mental spatial rotation in verb morphology.

More recently, Wilcox and his colleagues have begun to apply cognitive grammar to the study of signed languages. Reviewing this work, we will show how these studies are revelatory in accounting for such problems as the use of symbolic space to express antecedent-anaphor relations and nominal grounding, as well as addressing in a cognitively-informed way the problem of the relation between language and gesture.

In the second part of our presentation we will discuss how signed languages as minority languages can benefit from the cognitive linguistic endeavor. It can be argued that signed languages are inherently endangered languages. This is due to educational, societal, and medical pressures that work to diminish the vitality of signed languages and deaf communities. Although the practice of instructing deaf children in a natural signed language is expanding in many countries, in others it is still far too rare (Hayashi & Tobin 2013). In countries where medical treatments such as cochlear implants are becoming more and more accessible under national healthcare programs, the vitality of signed languages and deaf communities has been shown to be negatively impacted.

Finally, using Japan as a case study, we will suggest ways in which linguists, working with native signers of Japanese Sign Language (JSL), can collaborate on projects incorporating usage-based, cognitive linguistic principles designed to collect, archive, and describe JSL. As a team consisting of hearing cognitive linguists and a deaf signer of JSL, we will suggest ways in which members of Deaf communities who wish to acquire or advance their linguistic knowledge and skills can be assisted by their cognitive linguist colleagues.

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Ethics and collaboration between cognitive linguists and speakers of minority languages

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Keywords: fieldwork, metaphor, indigenous languages, research ethics, collaboration

Collaborations between (indigenous and non-indigenous) linguists and speakers of minority languages typically involve a lot of goodwill. The goodwill of speakers who are willing to share their knowledge and insights is obviously foundational to the success of any fieldwork-based research. But while many fieldworkers report the desire to reciprocate by supporting the language interests of the individuals and communities they collaborate, they may be unsure how to do so and/or how to balance this desire against the demands of their home institution. This tension might be most keenly felt by cognitive linguists working on topics that are not of immediate relevance to language maintenance and revitalisation.

This talk will draw on interviews with linguists and Indigenous community members in Australia (Woods 2017) as well as case studies of linguistic collaboration (e.g., Carew 2017; Couzens, Eira & Stebbins 2014; Garde 2017) to consider the following questions:

1. What are the respective needs, wants and interests of linguists and Indigenous communities? Where do these align and where are they in tension?
2. How can Indigenous ownership of language knowledge be preserved?
3. What role can universities play to support ethical collaboration between linguists and Indigenous communities?
4. What role(s) can linguists play in supporting Indigenous communities and their languages?

On this basis, we make some recommendations for both individuals and institutions in how to support ethical linguistic collaboration in project and program design. In particular, we consider how cognitive linguists can involve their community collaborators in selection of research topic, study design and analysis, and why this is important both for the language community and the linguistic project itself. We present evidence from two case studies (a qualitative study of kinship metaphors and a quantitative experimental study of time metaphors) that Cognitive Linguistic research is enhanced by the input of community collaborators at every stage.

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North Sámi Possessive Constructions in the Era of Truth and Reconciliation

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Keywords: Language change, indigenous languages, North Sámi, possessive constructions

Our study of North Sámi possessive constructions illustrates a two-way relationship between **cognitive linguistics**, which can help to document injustices perpetrated against indigenous peoples, and an **indigenous language** that sheds light on the semantics of possession.

North Sámi is spoken by approximately 20,000 people in northern Norway, Sweden, and Finland, where it is under contact pressure from majority languages. Discriminatory policies against the Sámi people and their language were in effect in all three countries until the second half of the 20th century, and unofficial discrimination continues. Parliaments of Norway and Finland approved the establishment of Truth and Reconciliation Commissions to address these issues in 2017, whereas Sweden rejected a parallel proposal in 2018 (Barents Observer 2018). We present two datasets: one longitudinal (>2K examples culled from >.5M words representing literary works), and one from a digital corpus of contemporary newspapers (20M words). We examine two possessive constructions in North Sámi: “NPx” possessive suffixes attached to the possessum noun triggering complex morphophonological alternations, and “RefIN” a morphologically simpler analytic construction.

What Cognitive Linguistics Contributes to Documenting Discrimination Our longitudinal data track the distribution of the two possessive constructions through three generations, showing that the simpler RefIN construction (initially used mostly in non-prototypical expressions of possession) is gradually replacing NPx. Trudgill (2002) and McWhorter (2007, 2011) argue that the “normal” state of language is highly complex, and that languages that are most exposed to contact and adult learners (which is the case for North Sámi, Keskitalo et al. 2013) show evidence of morphological simplification, favoring analytic constructions such as RefIN (cf. also Bentz & Winter 2013). The fact that this change is observed also in Finland (Finnish has a possessive suffix) shows that this is a language change, not merely the result of language shift. The timing of this linguistic change corresponds to educational policies that removed Mid generation speakers from their L1 environment during their school years, creating a socio-linguistic situation that disadvantaged morphological complexity. This usage-based analysis provides concrete documentation of a language change catalyzed by discriminatory policy.

What North Sámi Contributes to Understanding of Inalienable Possession Languages with multiple possessive constructions tend to distinguish inalienable vs. alienable possession. Use of North Sámi NPx vs. RefIN constructions attested in contemporary newspaper data suggests a semantic distinction resembling inalienable vs. alienable possession, where possessums referring to kin and body parts have higher use of NPx than other nouns. This follows the iconic relationship between conceptual distance (closer for inalienable) and formal markers (closer for affixes) observed cross-linguistically (Haiman 1985:130; Croft 1990: 174-176). Our usage-based analysis of North Sámi data extends the traditional understanding of inalienable possession, since frequent use of NPx is also found with other possessums that one cannot easily disown, such as the products of authorship (*reive* ‘letter’, *sárdni* ‘speech’), actions (*dáhpi* ‘custom, habit’, *suddu* ‘sin’), and culturally essential possessions (*eallu* ‘reindeer herd’, *boazu* ‘reindeer’). Furthermore, there is evidence of productivity, especially for products of authorship such as *preassadieđáhus* ‘press release’. Differences in distribution of possessive constructions cannot be attributed to frequency alone, bolstering the argument that these are semantic distinctions.

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Paamese sand drawings: insights into the polysemiotic nature of human communication and revitalization efforts of an endangered practice

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Keywords: sand drawings, polysemiotic communication, multimodality, speech, gestures, pictures

We present the analysis of 20 hours of spoken, gestural, and pictorial data of Paamese sand drawings, a unique form of communication, practiced by only four elder storytellers on Paama, Vanuatu. This critically endangered communicative tradition provides a unique opportunity to study the inherently polysemiotic (speech, gesture, drawing) & multimodal (hearing, sight, touch) nature of human communication. Although Paamese sand drawings are unique in many respects, they display patterns found across many different cultures: different kinds of semiotic resources are recruited and combined, when it comes to transmitting complex knowledge such as moral values (DeMarrais *et al.* 1992, Green, 2014), kinship structures (Dousset 2003, Enfield 2005, Gaby 2016), or mathematical concepts (Ochs et al. 1996). Analyzing language within its broader polysemiotic and cultural dimensions allows revealing “organizing principles, which would otherwise be invisible” (Gaby 2016, p.160). In accordance with the cognitive linguistic perspective, it is increasingly being acknowledged that human communication involves a number of interacting resources for meaning-making, and that an approach with adequate theoretical and methodological tools is required in order to provide insights into the nature of this process. The methods employed to annotate and analyze the polysemiotic and multimodal data are inspired from Green’s (2014) methodology and adapted to the cultural specificity of Paamese sand drawings.

Studies of minority languages have not only played a significant role in the inception of Cognitive Linguistics four decades ago, but have continuously provided researchers with unique insights into the study of language ever since (Rice 2017). The study presented here follows this tradition, but we would also like to start a discussion on how to make the collaboration with indigenous communities a more balanced two-way relationship. These UNESCO listed mnemonic devices for local histories, indigenous cosmologies, kinship systems, and scientific knowledge are only practiced by four Paamese elders and thus critically endangered. We also propose methods to incorporate the study of sand drawings into school curricula in their essential dynamic nature and cultural context in an attempt to support its revitalization.

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**The respective roles of culture and grammar in shaping emotion metaphors
The case of the Gunwinyguan family
(Australian, non-Pama-Nyungan)Forename Surname**

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Keywords: metaphors and metonymies, emotions, linguistic relativity, Australian languages, minority languages, field linguistics

In Lakoff’s (1987) classical definition, linguistic metaphors reflect conceptual metaphors, and are therefore influenced by culturally shared representations. At the same time, some linguistic metaphors can be conceptually outdated when they are historical retentions (Geeraerts & Gevaert 2008); and in addition, metaphors may be constrained by the grammatical resources of the language in which they are expressed. For instance, in a language where emotion nouns are grammatically barred from clausal-argument status, speakers will not be able to personify emotions or attribute them metaphorical agency (Ponsonnet 2014) – even if these representations are culturally valid.

In order to assess the respective roles of culture, history and grammar in shaping figurative language, we need to improve our understanding of figurative language across a diverse range of languages and cultures (Kövecses 2005). This will be addressed in this presentation on the basis of first-hand data on emotion metaphors in at least six Gunwinyguan languages (Arnhem Land, Australia) (Bednall: Anindilyakwa; O’Keeffe: Kunbarlang and Kunwinjku; Ponsonnet: Dalabon, Rembarnga, Kune and Kunwinjku). The grammatical and geographical proximity between languages in this family, as well as cultural proximity and the dynamics of contact amongst the corresponding groups, afford us particularly insightful observations.

Firstly, data from Anindilyakwa, a fairly geographically isolated member of this language family, suggests that emotion metaphors are relatively permeable to contact influence – which, in turn, sheds light upon the role of history and culture in shaping figurative language. At the same time, the comparison between Kunbarlang and other languages in the family confirms that even when the cultural context remains the same, differences in grammar do result in differences in metaphorical representations of emotions. We will present these results and their consequences, which also highlight how the tools provided by cognitive linguistics to analyze figurative representations can help prevent racial exoticization and essentialization of linguistic minorities, in applied as well as academic contexts.

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EEG in PNG: A report on the neurolinguistics of clause chain processing

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Keywords: neurolinguistics, sentence processing, Nungon, Papuan, EEG, clause chains

Models of recursion in sentence processing have largely relied on experiments with speakers of a small sample of familiar languages. Hundreds of other languages, however, involve multi-clausal sentences—'clause chains'—that differ syntactically from English sentences. This paper reports on an experiment using mobile electroencephalography (EEG) to evaluate how speakers of Nungon in Papua New Guinea (PNG) process clause chains. Of special interest are: correlates of working memory, syntactic agreement, and semantic expectation.

In psycholinguistics, recursion can be studied by examining the processing and learning of long-distance dependencies (e.g., Friederici, 2004). Clause chains are important to study in this context as they involve multiple interdependent clauses combined into one sentence. Clause chains differ from English-style sentences in: a) length, b) syntactic dependency, and c) switch-reference marking.

Previous work has examined long-distance dependencies with two to three relative clauses in English (Gouvea et al., 2009), German (Fiebach et al., 2002), and Chinese (Lin & Bever, 2006), as well as subject-verb agreement and prediction in verb-final languages, such as German (Friederici & Frisch, 2000). In these languages, including one or more hierarchical structures within a sentence can negatively affect participants' reaction times and comprehension accuracy (e.g., King & Just, 1991). However, Nungon has no limit to the number of clauses in a sequence, with over 20 attested.

Our study focuses on three brain-potential components: the P600, the anterior negativity (AN), and the N400 as Nungon speakers are auditorily presented with Nungon sentences that contain one of two types of syntactic violation. Because the P600 response is typically taken as a response to grammatical violations (e.g., Gouvea et al., 2009), we expect to see P600 effects for sentences that include a violation. We will further examine the amount of working memory load attested in the EEG signal as chains of multiple clauses including switch-reference markers are processed. As the number of clauses increases, we expect to see a higher working memory load in participants, which can be quantified by a larger AN response after stimulus presentation (King & Kutas, 1995). Finally, semantic switching related to switch-reference markers within the chain will be quantified by the N400, which is greater in amplitude for unexpected compared to expected stimuli (Kutas & Federmeier, 2011). Last, we report on the results of our exit survey of experiment participants, conducted by a Nungon speaker in Nungon.

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Finding a new place for pragmatics in CL through minority languages

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Keywords: Indigenous languages and Cognitive Linguistics; Pragmatics; Language ideologies; Reported speech; Style; Language revitalization

The so called ‘social turn’ in Cognitive Linguistics (cf. Harder, 2010; Sinha, 2015) challenges several core assumptions of classic Cognitive Grammar, not least of which the tenet that ‘any strict line of demarcation [between semantics and pragmatics] is arbitrary’ (Langacker, 2009: 93). For example, in order to understand what meaning properties are socially shared, Sinha (2015) argues that it is necessary to revalue conventional meaning (semantics) as a separate level of analysis, distinct from interpretation (pragmatics), a view recently also voiced in cognitive constructionist approaches to modality (Cappelle and Depraetere, 2016).

Determining the boundaries of conventional meaning in large written languages like English is particularly complicated by the fact that judgements about ‘correctness’ and the distinction between meaning and use are clouded by long histories of prescriptive grammar, and entrenched conceptualisations of written (more normative) versus spoken (less normative) versions of the respective language. This is where the study of minority languages and newly described languages can play a significant role.

In this paper I examine Australian Aboriginal views on the meaning-use distinction as a pathway towards disentangling semantics and pragmatics and finding a new place for the distinction in Cognitive Linguistics. Specifically, I examine the relevance of semantic convention vs. pragmatic use in two phenomena that are commonly taken to defy classification as either semantic or pragmatic, reported speech and genre/avoidance speech styles (Laughren, 2001; Fleming, 2015). Based on newly collected fieldwork data from three Worroran languages (Non-Pama-Nyungan; Kimberley region) I demonstrate that Aboriginal conceptualisations of reported speech and genre give evidence for the relevance of a socially based interpretation of convention in Aboriginal speech communities that is compatible with cognitive views of language.

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Integrating iconicity: recent work and future directions

theme session convened by

Mark Dingemanse & Arie Verhagen with Jonas Nölle & Thomas Van Hoey

The study of iconicity—the resemblance- or simulation-based mapping of form and meaning—is seeing a renaissance across the language sciences (Perniss et al. 2010; Svantesson 2017). Studies of signed and spoken languages show the importance of iconicity alongside other organizing principles in lexical and grammatical structure, learning experiments shows how iconicity may help word learning and rely on widespread cross-modal associations, the study of natural discourse organization demonstrates how theatrical staging of action plays a fundamental role, and work in experimental semiotics reveals the affordances and limitations of iconicity in the origin and evolution of communication systems (Fay et al. 2014; Perniss & Vigliocco 2014; Winter et al. 2017; Ferrara & Hodge 2018).

With growing interest in iconicity there is also a growing need to clarify its place in the larger network of the language sciences (Dingemanse et al. 2015). While it may be rhetorically attractive to cast iconicity as slayer of the dogma of arbitrariness or solution to the enigma of language evolution, ultimately its explanatory power must be positioned relative to (and in interaction with) other known principles of linguistic organisation such as frequency, economy, conventionality, or systematicity; and its roles in learning and communication must be understood in relation to factors like multimodality, embodiment, and intersubjectivity.

This session is devoted to the theme of integrating iconicity. It brings together current work on the varied roles of iconicity in linguistic organisation and communication, with a special focus on linking recent findings from iconicity research to insights from comparative and cognitive linguistics. The session features empirical and theoretical contributions from across the language sciences. Themes covered include typology, semiotics, language evolution, reduplication, sensitivity to sound-symbolism, and embodiment.

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The not so self-evident iconicity of reduplicative word-class derivation

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Keywords: iconicity, reduplication, typology, word-class derivation, temporal stability

This paper examines the iconic nature of word-class changes by morphological reduplication. For said process – often similar to, yet distinct from, processes like identical constituent compounding (Hohenhaus 2004) –, in which formally a whole word or some specifically circumscribed subpart is repeated, already Sapir (1921: 60) noted its “self-evident symbolism, to indicate such concepts as distribution, plurality, repetition, customary activity, increase of size, added intensity, continuance.” This assessment has been variously (re-)formulated in terms of Peircean and Jakobsonian iconicity, one of the most popular versions of the iconic principle of reduplication saying that “[m]ore of the same form stands for more of the same meaning” (Kouwenberg & LaCharité 2005: 534). The formulation crucially highlights a relative (the more pairing) and an absolute (the same pairing) component of reduplicative form-meaning mappings (Dingemans et al. 2015), ultimately enhancing the iconically grounded salience of reduplication patterns in the world’s languages. While this characterization works fine for all sorts of reduplicative plurality and intensity, diminution as another widespread, yet seemingly counter- or non-iconic, function of reduplication presents a well-known difficulty for motivating the process in an analogous way. However, several reasonable proposals exist by now to incorporate diminutive and attenuative meanings into the general iconicity of reduplicative formations (e.g. Fischer 2011).

The function of word-class derivation, in lacking a concretely referential basis, offers a similarly prevalent challenge for reduplicative iconicity, but a much less investigated one. The present contribution expands on previous functional-typological observations (Schwaiger 2017: 102–106) by conceptually integrating a general crosslinguistic asymmetry in transpositional directions via Givón’s (2001) semantic criterion of the temporal stability of word classes: Semantically more and most time-stable classes like A(djectives) and N(ouns) are frequently derived by reduplication, while less and least time-stable stat(ive) and dyn(amic) V(erbs) are rarely or never the outcome of derivation (Figure 1). In this way, the at first glance not so self-evident iconicity of reduplicative word-class changes can likewise be subsumed under the more-of-the-same type, for the clear prevalence of an increase in temporal stability (least/less stable > more/most stable) can be interpreted as a more abstract kind of plurality/continuity. Additionally, including in the investigation the more central functions of reduplication, more marginal word classes and special combinations like light verb constructions allows finer-grained typological implications to be advanced and tested (inter alia with respect to apparent counterexamples like N, A > A, V [stat]). The findings reveal an interplay of more obvious as well as subtler aspects of the iconicity principle in reduplication and its cognitive impact on the lexical and grammatical structure of language(s). At the same time, the results provide a case for demonstrating that the proposed difference between linguistic iconicity and systematicity (Dingemans et al. 2015) is one of degree rather than kind.

most stable				least stable	
N < A, V		N > A < V		N, A > V (stat)	
N	A	A	V (stat)	V	V (dyn)

FIGURE 1. Scale of temporal stability and (im)possible directions of reduplicative word-class derivation

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Reduplication as a trigger of intersubjectivity: Mandarin Chinese ideophones and reduplication in the CHILDES corpora

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Keywords: *ideophones, reduplication, Chinese, intersubjectivity, CHILDES*

Given that previous studies suggest that the L1 acquisition of verbs and other relational items is facilitated in Mandarin Chinese when compared to that of non-relational items (Tardif 1996; Lee & Naigles 2005; Tardif 2006; Imai et al. 2006; Ogura et al. 2006), and the fact that reduplication is pervasive in Mandarin (Li & Ponsford 2018), this study explores the role that reduplication and ideophones play in early childhood communication, which thus far has been understudied.

Using *chilDesr* (Sanchez et al. 2018), an R package mirroring the CHILDES database (MacWhinney 2000), it is possible to approach this research topic from both qualitative and quantitative perspectives. As an example, we show how caregivers use reduplication forms to induce children's reactions, and children construe sensory descriptions with reduplicative constructions when they are given a task such as describing an apple, even though other competing alternatives are readily available. This pragmatic use of reduplication can trigger intersubjectivity, which aids in communication, especially since the child repeats the adult's reduplication.

However, whether or not such reduplicated ideophonized constructions are used does depend on the age of the target child and the item in question: ideophonic construal and reduplication are influenced by frequency effects and their depictive function (Dingemans 2012), and are item-based, like most of L1 acquisition (Tomasello 2003; MacWhinney & O'Grady 2015).

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Sensitivity to sound symbolism in Japanese Hard-of-Hearing children

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Key Words: sound symbolism, language acquisition, iconicity, deaf and Hard-of-Hearing, multimodality

Sound symbolism—a form of iconicity between speech sound and meaning—has shown to play a role for language acquisition (Imai & Kita, 2014), especially for young children. This scaffolding effect has long been assumed to be irrelevant for Hard-of-Hearing (HH) children in their learning of oral language. However, Eberhardt (1940) reported that deaf children are sensitive to some sound symbolism, relying more strongly on kinaesthetic iconicity than the hearing children. Thus, HH children might detect iconicity between sound and meanings through multi-modal mappings. This research examines this possibility by testing Deaf-or-Hard-of Hearing children, using the stimuli with which hearing Japanese and English speaking children and adults detected sound-meaning correspondence.

Study 23 HH children were tested. They were enrolled in a special school for the Deaf-or-Hard-of-Hearing (Grade 1-3). Twenty-seven hearing 4-year-olds were additionally tested on the same stimuli. Both groups of children went through 24 trials. In each trial, a novel mimetic and two videos of motion, one sound symbolically matching and the other non-matching, were presented. The children were asked to choose the video that matched the word. Novel mimetic words were created following Imai et al. (2008)'s procedure. To the HH children, the words were presented orally and in letters.

The HH children selected the matching video 71.4% of the time, which was highly significantly above chance level ($<.001$), and was not different from the performance by hearing children (70.8%). The pattern of success rate across items was similar between the HH and the Hearing children, $r=.704$, $p<.01$. The performance did not differ across children with cochlear implant and those with hearing aids ($p>.05$). This study thus established that HH children were able to sound-meaning correspondences in motion.

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Comprehension of Non-Linguistic Vocalizations across Cultures

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Keywords: iconicity, sound symbolism, vocalization, cross-linguistic analysis, typology

It is widely observed that visual communication with gestures enables successful communication between speakers of different languages. When people lack common words to convey their meaning, they are able to improvise iconic gestures to ground communication about varied domains like actions, shape and size, and spatial relationships. This remarkable human ability is the foundation of the parlour game ‘charades,’ and it is thought to play an important role in language acquisition and evolution. But can people also innovate iconic vocalizations to communicate meanings? To find out, Perlman and Lupyan (2018) conducted a contest with a \$1000 prize that invited participants to create novel vocalizations—no words permitted—for 30 different meanings. The meanings spanned actions, humans, animals, inanimate objects, properties, quantifiers, and demonstratives. The vocalizations were evaluated by the ability of naive listeners to guess their intended meanings from multiple alternatives, with the winning submission determined as the set of 30 that was guessed most accurately. Overall, guessing accuracy was well above chance for most of the submissions and across almost all of the meanings. Thus, the results suggested that people are able to communicate successfully with iconic vocalizations about various concepts, without the use of words. However, strong evidence for this claim depends on the potential for vocal communication across widely disparate cultures and linguistic backgrounds. Perlman and Lupyan’s contestants were English speakers, and their listeners were all American English speakers, raising the possibility that culture-specific cues were used by listeners in determining the intended meanings.

The current project is investigating whether the vocalizations produced for the contest can be understood by people from a wide range of cultural and linguistic backgrounds. Using Percy (Draxler, 2011), a web-tool for experiments, we are conducting comprehension surveys with listeners from more than 20 diverse languages. Here, we report results from four languages: English (N = 67), German (N = 81), Polish (N = 49), and Japanese (N = 57). Participants listened to the three vocalizations for each meaning that were guessed most accurately in the English experiment, and for each, guessed it’s meaning from six alternatives. Given that the vocalizations were produced by English speakers for an English-speaking audience, we predicted that the response accuracy of listeners would depend on the genetic distance of the given language from English, which we took as a rough approximation of cultural and linguistic overlap. The preliminary results of a generalized mixed model analysis show that speakers of all examined languages perform significantly above chance level (16.7%)—and even significantly better than 50%. As expected, accuracy was higher for languages closer to English: English (72%), German (71%), Polish (62%), and Japanese (60%). Overall, guessing accuracy was higher than chance for all 30 meanings. Guessers across the four languages were most successful with actions and animate nouns, while Polish and Japanese speakers, in particular, were less accurate with the other categories. These results provide the first strong evidence that people are able to improvise iconic vocalizations for successful, cross-linguistic communication about a variety of meanings. They also point to semantic domains where iconic vocalizations may be less effective. Altogether, they speak to the universal potential for vocal iconicity to scaffold communication between speakers without a common language and thus ground the formation of spoken symbols.

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Iconicity and the origins of symbolism and grammar

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Keywords: language evolution; iconicity; ostensive-inferential; symbolisation; grammaticalisation.

The emergence of symbols and the inception of grammar are commonly conceptualised as two distinct explananda in evolutionary linguistics (Tomasello, 2003). We claim here that both emerge from the same process of repeated communicative interaction. Our account is built on the pillars of ostensive-inferential communication (Scott-Phillips, 2015) and the memorisation of shared communicative experience (Langacker, 1987), which rely on cognitive capacities supporting both the recognition of common ground (Clark, 1996) and communicative relevance (Sperber and Wilson, 1995), and the ability to use existing knowledge to interpret behaviour as indicative of something meaningful.

Icons are communicative tools whose forms are motivated to such an extent that an observer can infer their intended meaning without prior specialist linguistic or cultural knowledge (Keller, 1998). Many behaviours can be iconic, from onomatopoeic mimicking of natural sounds (Dingemanse, 2012) and gestural mimicking of salient actions (Perniss and Vigliocco, 2014), to representations of abstract semantic properties such as the number of participants or temporal structure of an event (Dingemanse, 2011). Iconic associations are created when ostensive behaviour is sufficiently conspicuous to be unmistakably intended as a deliberate communicative act, and sufficiently similar to a salient property of the intended meaning.

Memorisation of successful interactions establishes associations as common ground, and repeated usage leads to their entrenchment (Langacker, 1987) and conventionalisation (Barlow and Kemmer, 2000). Repeated communicative interaction gradually transforms icons into symbols with apparently arbitrary relationships to their meanings, via either the simplification of their forms (Fay et al., 2010) or the metaphorical extension of their meanings (Smith and Hoefler, 2017). This cycle of innovation and conventionalisation is an example of the ratchet effect of cumulative cultural evolution, whereby complex cultural artefacts arise through the accumulation of innovations maintained through faithful social transmission (Tomasello, 1999).

We demonstrate that the same mechanisms underpin the emergence of grammaticalised constructions from ad-hoc discourse strategies (Givón, 1979). Lexical and grammatical items differ in productivity, complexity and schematicity (Gisborne and Patten, 2011), and grammatical material is created gradually through the development of increasingly schematic forms, via the interpretation of discourse-related effects as intentionally communicative cues to meaning (Hurford, 2012), and increasingly functional meanings, through innovative invited inferences (Traugott and Dasher, 2005). In both cases, memorisation and repeated usage lead to entrenchment and conventionalisation of linguistic innovation, and thus to the gradual accumulation of increasingly grammatical material in interlocutors' construction inventories.

The widespread assumption of different origins for symbolism and grammar is thus unwarranted: both are best accounted for as emergent from the same processes of repeated acts of ostensive-inferential communication and cumulative cultural evolution, in which iconicity plays a pivotal role.

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Beyond iconicity: aspects of metonymy and indexicality in sign grounding

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Keywords: iconicity, indexicality, metonymy, symbol grounding, language evolution

Recently there has been renewed interest in how communication systems ground their meaning (e.g., Harnad, 1990; Galantucci, 2005; Nölle et al., 2018), with a focus on the mechanisms underlying language evolution (see Kirby, 2017 for a review). A recurrent experimental finding is that participants tend to resort to iconicity as a main strategy for bootstrapping meaning when creating a communication system from scratch (Garrod et al., 2007; Tamariz, 2017). This resonates with another set of recent studies suggesting that languages are less arbitrary than originally thought in that they display systematic sound-meaning correspondences, so-called sound symbolism. (Dingemanse et al., 2015; Blasi et al., 2016). While iconicity undoubtedly plays a central role in symbol grounding, we argue that a more nuanced look at grounding mechanisms is overdue (hence the title “beyond iconicity”). We hypothesize that some of the experimental findings (our own included) might be biased by a particular kind of experimental design, where participants communicate concepts to each other using drawing, touchpad or gesture, without sharing a visual-spatial context. This leaves deictic communication (such as pointing) impossible that otherwise could point to indexicality as another fundamental grounding mechanism (Deacon, 1997; Diessel, 1999; Tomasello, 2008). In this paper, we argue that even the kind of experimental observations that are currently discussed under the headline of iconicity might in fact incorporate central elements of indexicality, metonymy and systematicity. Reanalysing data from a recent study (Nölle et al., 2018), we suggest that iconicity interacts with such other fundamental cognitive strategies. In fact, we present evidence that participants are not really preoccupied with representing the referent as they are with disambiguating the referent from contextual competitors. Thus participants are often not making signs (in this case gestures) that point to the referent as a whole by means of resemblance, but are rather identifying the minimally discriminating traits of the referent that differentiates it from competing referents in the context. The resulting signs are thus not icons of the referents, but of individual traits that metonymically refer to their referents. Similar observations can be made in graphical communication studies (Galantucci, 2005; Garrod et al., 2007; Fay, Garrod, Roberts, & Swoboda, 2010). A reinterpretation of this grounding behaviour thus embeds iconicity in an indexical effort to disambiguate referents (rather than representing them) in a proto-Saussurean fashion, where meanings from very early in the grounding process are defined in opposition to other meanings in the particular context of communication. In conclusion, indexicality might be another fundamental cognitive strategy and grounding mechanism in language evolution besides iconicity.

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Iconicity – embodiment – image schemas

Towards a spectrum of different sources and levels of gesturally enacted schematicity

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Keywords: *Gesture, embodiment, iconicity, image schemas, metonymy, schematicity, enaction*

Iconic aspects of communicative body postures and hand movements have always been a central issue in gesture research (e.g., McNeill 1992). A speaker's body may become a living, viewpointed *icon* (Peirce 1960) of someone or something else; or hands may trace or otherwise form iconic signs (e.g., Müller 1998). However, largely due to varying understandings of *similarity*, iconicity in gesture is not uncontested, and questions of what exactly gestures are iconic of are not trivial (e.g., Mittelberg 2014).

Starting from an understanding of iconicity in gesture that goes beyond what is generally understood by *iconics* (McNeill 1992), this paper suggests that through combining Peirce's semiotic theory with concepts central to cognitive linguistics, one may distinguish between distinct, yet typically interacting, sources and levels of iconicity in gesture. Peirce's semiotics and cognitive linguistics share certain premises concerning the fundamental role of experience and embodiment, e.g., habits of thinking, acting, and intersubjective meaning-making. I present a first version of a spectrum of modality-specific manifestations of iconicity that spans from gestures metonymically derived from physical actions and organism-environment interactions, e.g., evoking embodied scenes and semantic frames, to highly schematic gestural patterns predominantly motivated by image schemas, force gestalts, and diagrammatic iconicity (e.g., Mittelberg 2018, 2019a; Müller 2017; Wehling 2017; Zlatev 2014).

Narrowing in on deeply embodied conceptual structures, I will highlight some flexible structural correspondences between image/force schemas and certain gestures (e.g., Cienki 2013; Mittelberg 2018). This is to account for the fact that gestures often only consist of evanescent, metonymically reduced hand configurations, motion onsets or movement traces that suggest, for instance, the idea of a PATH, CONTAINMENT, BALANCE, or RESISTANCE. Such rather schematic semiotic gestalts have the capacity to vividly convey essential semantic and pragmatic aspects of high relevance to the speakers. In doing so, they typically participate in more complex construal operations involving, for instance, metonymy, metaphor, frames, and constructions (e.g., Mittelberg 2019b; Müller 2017).

Examples of the different gestural patterns are enriched by motion-capture data stemming from American English and German multimodal discourse. It will thus be shown how numeric kinetic data allow one to visualize otherwise invisible movement traces and thus provide augmented, 3D insights into the dynamic, gestalt-like nature of bodily enacted icons exhibiting various degrees of schematicity.

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Aug. 10th (Saturday)

8:20-9:00	COFFEE (near room 101 in Bldg. G)				
room #	101	103	104	105	108
category	THEME: Cognitive perspectives on Linguistic Creativity (Organizers: Th. Hoffmann & A. Bergs)	phonology (Chair: Yoshihiko Asao)	cognitive grammar (Chair: Akira Machida)	THEME: Causation in discourse and cognition: Crosslinguistic perspectives (2 nd day)	construction (Chair: Yoshikata Shibuya)
9:00-9:25	Introduction	C. Poppe Cognitive phonology and the accented-unaccented opposition in Japanese	A. Sarkar Understanding Control and Modality: Comparative study between English and Bangla Modals	A. Ariño-Bizarro & I. Ibarretxe-Antuñano Causality in Spanish	H. Kim & G-H. Shin Effects of verb frequency and L1 transfer in L2 processing of English dative constructions
9:30-9:55	G. Trousdale Linguistic creativity and musical improvisation: some similarities and differences	X. Chen & Y. Nan Modularity or non-modularity of pitch deficits in Congenital Amusics? A developmental perspective is the key	L. Yapei The syntactic realizations of the epistemic predicate <i>likely</i> and its Chinese equivalent <i>ke'neng</i> : A corpus-based cognitive study"	Y-T. Lin Causality in Cognition and Language in Taiwanese Southern Min	K. E. Jensen & Y. Shibuya Variation in constructional productivity: The case of English modal constructions
10:00-10:25	P. Uhrig Creative Intentions: The thin line between 'creative' and 'wrong'	S. Rahandaz Progressive Assimilation in Cognitive Phonology: A Case from Iranian Azerbaijani	Y.-N. Wang & Y. Li Subjectivity of Chinese and English Topic Constructions: A Grounding Analysis	K. Kawachi et al. Iconicity in usage: A cross-linguistic study of causative event descriptions	O. O. Silvennoinen Not only contrastive but also mirative? Additive negation constructions in English
10:25-10:45	BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)				
category	THEME (cont.)	grammar and semantics (Chair: Naoaki Wada)	grammar (Chair: Seongha Rhee)	THEME (cont.)	construction (Chair: Toshio Ohori)
10:45-11:10	M. Turner Conceptual Blending as a Source of Creativity in Constructions	S. Sokolova From lexical triggers to contextual cues: Sentence complexity and aspectual choice in Russian narrative sequences	Ch. Maekelberghe A cross-linguistic perspective on 'nominal' vs. 'verbal' construal in English and German	N. Levshina Causatives of the world, unite! How efficiency can explain cross-linguistic generalizations	H. Jiang Speaking of speaking: Construction-coerced change of semantic roles for verbs of speaking in Puyuma (Austronesian)
11:15-11:40	Th. Hoffmann Constructionist Approaches to Creativity	D. Zhang [YAO + V] in Chinese / [Aller + V] in French: prospective aspect or tense of future?	L. Lu A Cognitive Study of Deadjectival Nominalization as Shell Nouns in German Language based on German News Corpus	J. Bohnemeyer Predictability and informativeness in iconicity of complexity: A Gricean perspective	Y. Keromnes As simple as that? A corpus-based contrastive analysis of the [ADJ as NP] and related constructions in English, French and German
11:45-12:10	Discussion	N. Wada On the so-called volitional use of <i>will</i> : Semantic or pragmatic or both?	L. Wu Crossover Effects in English and Chinese	Discussion	D. McColm Exploring recent changes to the Dutch <i>way</i> -construction using a web-based corpus
12:10-13:10	LUNCH (BIG PAPA or other locations)				
13:10-14:40	PLENARY 6: Sally Rice. Cognitive Linguistics and the Study of Indigenous Languages (Central Auditorium)				
14:40-15:00	CLOSING (Central Auditorium)				

COFFEE (near room 101 in Bldg. G)

204	205	206	207	208	301
<p>semantics (Chair: Emiko Kihara)</p>	<p>corpus (Chair: Laura Janda)</p>	<p>pragmatics (Chair: Dennis Tay)</p>	<p>pragmatics (Chair: Elizabeth Riddle)</p>	<p>multimodality (Chair: Sabina Tabacaru)</p>	<p>THEME: Cross-linguistic perspectives on gesture: Recurrency as a basis for comparison (Organizers: S. Harrison & C. Müller)</p>
<p>Y. Sugaya Cross-Linguistic Differences in Taking Another's Perspective: The Case of Adjectives Production</p>	<p>M. Montes et al. Checking the adequacy of second-order vector space models of meaning</p>	<p>M^a S. Peña-Cervel & F. J. Ruiz de Mendoza On hyperbolic scenarios, hyperbolic load, and the potential communicative impact of hyperbolic uses of language</p>	<p>M. Kuha et al. The Social Construction of Public "Apologies"</p>	<p>M.-Y. Kuo A Multimodality Analysis of The Taiwanese History Textbook From 1985 To 2018: The Developing Representation of Colonial Japan</p>	<p>K. Tsuchiya Open hand oblique in female politicians' speech</p>
<p>Y. Tanaka How Do People Understand Linguistic Empathy? The Case of Japanese Giving Verbs</p>	<p>M. Matsui & T. Nessel Addressing the address function: A corpus study of the Russian new vocative</p>	<p>Y. Asai Onomatopoeia as Signs of Naturalness: Semiotics on the Language and Environment Nexus</p>	<p>X. Yuan & A. Sopina Frames, metaphors and morality: Multimodal discourse analysis of the whaling conflict</p>	<p>M. X. Pan A Comparative Study of Two Approaches to Metaphor Identification in Video Ads</p>	<p>S. Harrison Exploring bodily, collaborative, and coupled contexts for recurrent gestures associated with negation: Insights from communicative events in Chinese</p>
	<p>M. Láznička & V. Janda Grammatical profiling of Czech nouns: what do cases tell us about nouns' meanings</p>	<p>D. Tay A factor analysis of metaphor functions in psychotherapy</p>	<p>J. Perrez et al. The evolution of metaphors over time: a longitudinal analysis of metaphor usage by Belgian politicians over the period 1980-2017</p>	<p>K.-M. Wessman Multimodal and verbal Finnish internet memes</p>	<p>D. Boutet, A. Morgensstern & Ch. Prisse A cross-linguistic approach to the formal features of recurrent gestures: shrugging in spoken and signed languages</p>

BREAK (Coffee at 2nd floor lounge and near room 101 in Bldg. G)

semantics (Chair: Nathan Hamilitzsch)	corpus (Chair: Sadayuki Okada)	metaphor (Chair: Maria Sandra Peña-Cervel)	pragmatics (Chair: Kyoko Ohara)	sign language (Chair: Inez Beukeleers)	THEME (cont.)
<p>Th. Poulton Smelling in English: From perception to description</p>	<p>S. Kim & R. Yeates A corpus-based discourse analysis of the linking adverbial <i>besides</i></p>	<p>A. Kalda & M. Uusküla Culture and context in translating perception metaphors: Using eye-tracking methodology in English-Estonian empirical research</p>	<p>Q. Lu The function of theme / rheme in the French Presidential New Year Speech</p>	<p>Y. Takashima & E. Kuroda The MEAN constructions in Japanese Sign Language: from causality to inferred evidentiality</p>	<p>R. Lopez-Ozibleo Gesturing to indicate time in L2 speakers of English</p>
<p>K. Hoemann et al. Network Analysis as a Means of Assessing Translatability of Emotion Words</p>	<p>S. Okada On the rise of truncated causal adjuncts in English</p>	<p>C. Rasse Conceptual metaphors in poetry interpretation: A psycholinguistic approach</p>	<p>B. Zhang Interaction of Metaphor and Political Frames in the Language Critique Activity "Unwort des Jahres" (the Non-Word of the Year)</p>	<p>L. Ferrara Linking conversational moves through pointing actions in signed language interaction</p>	<p>L. Hotze Recurrent gestures and multimodal patterns in pre-school children</p>
<p>M. Kumamoto Conceptualization of negative social emotions in French. A Behavioral Profile Approach to <i>honte</i>, <i>honteux</i>, <i>culpabilité</i> and <i>coupable</i></p>		<p>M^a S. Peña-Cervel Exploring some metonymy-related figures of thought in the light of cognitive modeling</p>		<p>I. Beukeleers & M. Vermeerbergen On the role of eye gaze in depicting and enacting: A case study of Flemish Sign Language narratives</p>	<p>Discussion w/S. Kita</p>

LUNCH (BIG PAPA or other locations)

PLENARY 6: Sally Rice. Cognitive Linguistics and the Study of Indigenous Languages (Central Auditorium)

CLOSING (Central Auditorium)

Cognitive perspectives on Linguistic Creativity

Thomas Hoffmann (KU Eichstätt) & Alexander Bergs (Universität Osnabrück)

Creativity is an important evolutionary adaptation that allows humans to think original thoughts, to find solutions to problems that have never been encountered before and, potentially, to fundamentally change the way we live. This theme session focusses on one particular domain of human creativity – language. Languages are complex symbolic systems that allow speakers to produce novel utterances that they have never heard before. In fact, linguistic creativity is considered one of the design features (Hockett 1960) of human language, or as Chomsky (1965: 6) put it, ‘an essential property of language’. Now, for Chomsky, linguistic creativity is the result of abstract universal syntactic principles and parameters. Over the last 30 years, however, a large body of scientific evidence from L1 acquisition (cf. Diessel 2013), L2 acquisition (cf. Ellis 2013), psycho- as well as neurolinguistics (cf. Bencini 2013 and Pulvermüller, Cappelle & Shtyrov 2013) has accumulated against models of language that assume a strict dichotomy of meaningful words and purely syntactic rules/principles. Instead, the empirical evidence supports holistic and cognitively plausible approaches such as Construction Grammar (Croft 2001; Goldberg 2006; Hoffmann and Trousdale 2013; Hoffmann 2017a,b).

However, while usage-based studies in cognitive linguistics have achieved considerable success in describing and explaining everyday language use, so far little attention has been paid to linguistic creativity. Goldberg (2006: 22), e.g., claims that ‘[c]onstructional approaches share with mainstream generative grammar the goal of accounting for the creative potential of language’ and that ‘[a]llowing constructions to combine freely as long as there are no conflicts, allows for the infinitely creative potential of language’. Yet, when looking at literary examples of linguistic creativity, it becomes clear that this definition is problematic: in the final scene of *Groundhog Day*, Bill Murray’s character says *Today is tomorrow*, which should lead to conflict due to the different temporal semantics of subject and complement – yet, if you know the context of the movie, it turns out to be a perfectly natural thing to say.

In this theme session we will look at linguistic creativity from a cognitive point of view. Our topics will range from definitional or theoretical problems to empirical studies of creative language use in everyday utterances and in literary discourse, and from particular linguistic frameworks, such as construction grammar, to interdisciplinary perspectives incorporating findings from psychology, cognitive science, and philosophy.

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Linguistic creativity and musical improvisation: some similarities and differences

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Keywords: language change, creativity, music, improvisation, cognition

Certain cognitive theories of language (e.g. Hudson 2007) suggest that creative tokens of use form temporary nodes in a speaker's linguistic network; entrenchment of such expressions can lead to language change, i.e. the generalisation of a type across a set of tokens in a community of speakers. Innovations may or may not be consciously created, but the development of new linguistic constructions involves innovative 'sense-making' on the part of language users. Recent work on musical improvisation from the perspective of cognitive science (Torrance & Schumann 2018) has also foregrounded the importance of 'sense-making' in enactivism (Dreyfus & Dreyfus 2005). In this approach, the importance of improvisation as a general human trait is highlighted; furthermore, repeated improvisations may lead to an entrenched routine over time. The acquisition of procedural knowledge and its application to the performance of printed music in the western art tradition has been explored (Bangert, Schubert & Fabian 2014), but the connections to improvisation in music, and to the parallels between the acquisition of musical knowledge and the acquisition of linguistic knowledge remain under-researched.

In this talk, I explore parallels between linguistic creativity and patterns in musical (especially jazz) improvisation. The study draws on evidence from a corpus of improvised performances of English versions of the 1928 Brecht/Weill composition *Die Moritat von Mackie Messer* (i.e. *Mack the Knife*) over time. The harmonic structure of the piece accords with typical jazz progressions (e.g. I – ii7 – V7 – I in the A section), but allows for improvisations on the melodic and rhythmic levels, as well as tonal shifts against the harmonic foundation, and the use of different instrumentation. I show how, in a way that is parallel to innovations in language, performance in jazz improvisation involves a feedback loop between conventionalised harmonic progressions and creative 'tokens of use'. These creative patterns may be consistent with the overarching harmonic structure, and involve repeated structural repetitions (melodic, rhythmic and chordal) which themselves can conventionalise over time. This allows a further exploration of parallels between language and music (Steedman 1984, Jackendoff & Lerdahl 2006), but from a usage-based perspective. In the same way as we often see the creation of new constructional patterns as expansions of existing constructions, so the basic harmonic organization of the circle of fifths which underlies the structure of *Mack the Knife* allows for improvisational expansions and the crystallization of new patterns over time. These patterns reflect the establishment of particular routines over instances of use, and provide further evidence for some of the central principles of cognitive linguistics.

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Creative Intentions: The thin line between ‘creative’ and ‘wrong’

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Keywords: Construction Grammar, Creativity, Errors, Usage-based approaches

Highly creative language use, as regularly found in poetry, song lyrics and advertising, has often been characterized along the lines of “deviation from the norm, breaking of rules, doing things differently, that is, law-breaking” (Cropley/Cropley 2013). In fact, this characterization does not only apply to creative language use, which is usually regarded as positive, but also to linguistic errors and – in the case of the quote by Cropley/Cropley (2013) above – crime. Salcedo-Albarán et al. (2009) on the other hand maintain that illegal and creative actions can be distinguished as follows (among other criteria):

- A. When examining the nature of the broken rule:
- a) If the broken rule is a formal one –or an explicit law- then illegality happens.
 - b) If the broken rule is an informal one –or an implicit social rule or custom- then creativity may happen. (Salcedo-Albarán et al. 2009: 3)

Accepting Coseriu’s (1952/1973) distinction between *System* and *Norm*, one could then argue that violations of the system result in errors and violations of the norm can result in creativity. However, such a distinction is much more difficult to make in a usage-based Construction Grammar framework such as the one proposed by Goldberg (1995, 2006), where input and abstractions over input lead to linguistic behaviour instead of abstract formal rules. Without such rules, what are appropriate mechanisms to define what is wrong and at the same time distinguish it from creative language use?

Comparing examples of E-creative language use (Sampson 2016 and Bergs 2018 for discussion) to linguistic errors, I will show how pre-emption (or negative entrenchment in the sense of Stefanowitsch 2006) can help differentiate between ‘creative’ and ‘wrong’ in a Construction Grammar framework even without recourse to abstract rules. Special attention will also be paid to the different expectations and assumptions hearers have when faced with (a) slips of the tongue by native speakers, (b) creativity, or (c) with errors in learner language. I will argue that here the perceived intention (see Uhrig 2018) plays an important role in the categorization of an utterance and that objective criteria in the analysis of the utterance alone cannot lead to a psychologically plausible distinction between ‘creative’ and ‘wrong’ language use.

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Conceptual Blending as a Source of Creativity in Constructions

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Keywords: conceptual blending, construction grammar, creativity, multimodality

Human beings are confronted by a fundamental problem: conceptual systems are vast and rich and open-ended, while linguistic systems, impressive though they be, are relatively quite thin. How can a linguistic system be used to convey the products of conceptual systems, and how can these products find expression in language, given the stark mismatch in their respective infinities? If forms of language had to represent complete meanings, language could communicate very little. The evolutionary solution to this problem is to have systems of forms prompt for the construction of meanings that go far beyond anything like the form itself. Accordingly, despite these limits on linguistic structure, language can be put to use in any situation. We refer to the availability of language to be deployed in all situations as its “equipotentiality.” For any situation, real or imaginary, there is always a way to use language to express thoughts about that situation. The key to linguistic equipotentiality is blending (Fauconnier & Turner 1996, 2002; Turner 2014). Because of blending, most expression of new ideas does not require any new forms. Standard repurposing of forms through blending includes the following: (1) Through selective projection, expressions applied to an input can be projected unchanged to apply to counterparts in the blend, even when those counterparts are conceptually new. (2) Combinations of forms from the inputs may be appropriate for picking out structure in the blend even though those combinations are inappropriate for the inputs. In consequence, grammatical but meaningless phrases can become grammatical and meaningful for the blend. (3) Forms that do not typically blend may nonetheless be blended, creatively, under selective projection. Cognitively modern human beings are specialized for advanced blending, in which inputs that should never be confused, having fundamental conflicts in such basic elements as causal, intentional, participant, temporal, and spatial structure, and so on, are blended. Rarely, new grammar or lexical items do arise under pressure from conceptual blending.

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Constructionist Approaches to Creativity

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Keywords: Conceptual Blending, Construction Grammar, creativity, psychology

Creativity is an important evolutionary adaptation that allows humans to think original thoughts, to find solutions to problems that have never been encountered before and to fundamentally change the way we live (e.g., Goldberg 2018; Kaufman 2016; Sternberg 1999; Turner 2014). One particular domain of human cognition that has received considerable attention is linguistic creativity (Hoffmann 2018a,b; Turner & Fauconnier 1999; Turner 2018). Now, A. Goldberg, e.g., claimed that

[c]onstructional approaches share with mainstream generative grammar the goal of accounting for the creative potential of language (Chomsky 1957: 1965). That is, it is clear that language is not a set of sentences that can be fixed in advance. Allowing constructions to combine freely as long as there are no conflicts, allows for the infinitely creative potential of language. (Goldberg 2006: 22).

Yet, most linguists, including Chomsky and Goldberg, only have a very narrow definition of verbal creativity that, essentially, boils down to productivity (Barðdal 2008). In these cases, speakers make “original use of the established possibilities of the language (Leech 1969: 24; Sampson 2016 calls this “F(ixed)-creativity”). In contrast to this, too little attention has been paid to “E(nlarging/extending)-creativity” (Sampson 2016), i.e. when a speaker “creates new communicative possibilities which are not already in the language” (Leech 1969: 24; see also Bergs 2018)

In this talk, I will outline a constructionist analysis of linguistic F- and E-creativity that combines insights from psychology as well as cognitive sciences. I will argue that instead of unification or constrain satisfaction, it is the domain-general process of Conceptual Blending (Fauconnier & Turner 1996, 2002; Turner 2014, 2018) that underlies all constructional combination. As I will show, this allows for a straightforward analysis of *apo koinu* structures (Auer and Pfänder 2011: 6-7) such as *the more opaque that atmosphere is, the less conductive it is, the bigger the temperature difference you need to cross it* (a tripartite Comparative Correlative construct; Hoffmann 2017). Similarly, it can also explain seemingly contradictory utterances such as *Today is tomorrow*. (from the movie *Groundhog day*) or literary poetic E-creative constructs such as *Eins within a space and wearywide space it wast ere wohned a Mooksee*. (James Joyce, *Finnegans Wake*; cit. in: Leech 1969: 24)

In addition to this, however, I will emphasize that the study of creativity also requires a greater focus on inter-individual differences. As a considerable body of psychological research has revealed, personality traits such as openness and extroversion are significantly correlated with creativity (Kaufman 2016; Kandler *et al.* 2016). Individuals high in openness, e.g., are characterized by a “tolerance of ambiguity and willingness to grow, as well as cognitive flexibility, fantasy, open-mindedness, and having broad interests in several issues” (Kandler *et al.* 2016: 232). For a constructionist analysis of verbal creativity, this means that individuals high in openness will be much more likely to go beyond their entrenched constructions and be much E-creative than other members of the same speech community. In addition to this, a higher level of extroversion, i.e. a “general tendency to seek stimulation, orient attention to external stimuli, and enjoy social attention and interaction” (Kandler *et al.* 2016: 232), is also generally positively correlated with an individual’s creativity. The linguistic input that extroverted speakers are thus exposed to is much more varied and should consequently lead to the entrenchment of more elaborate constructional networks.

Drawing on experimental results (from a Magnitude Estimation study of English Comparative Correlatives) as well as multimodal corpus data (from the RedHen corpus), I will show how constructionist approaches can further our understanding of linguistic creativity. Moreover, I will argue that the in-depth study of creativity also helps to make Construction Grammar a psychologically as well as cognitively more plausible theory of language.

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Cognitive phonology and the accented-unaccented opposition in Japanese

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Keywords: cognitive phonology, content requirement, Japanese, pitch accent, schema competition

Cognitive linguists tend to adhere to the idea that a speaker's grammar may not include references to negatively specified structure, a stance which for instance is reflected in the restrictions of Langacker's (1987) 'content requirement'. While this approach makes sense intuitively, it remains to be shown that phenomena that at least at first sight seem to require reference to binary features and/or negative constraints can be insightfully analyzed in alternative cognitive-phonological analyses. The opposition between accented and unaccented words in Japanese seems to form a good test case: some types of words prefer to be accented, while other types of words prefer to be unaccented, depending on their morphological and/or phonological structure.

I start by comparing three different representations of (Tokyo) Japanese pitch accent: one based on privative specification, one based on a binary feature [\pm accent], and an approach based on two opposed 'features' in the form of schematic abstractions from actual exemplars. After concluding that the privative analysis is to be preferred, I will continue to investigate whether the proposed representation can be maintained in the light of three different (morpho-)phonological patterns related to accent in Japanese. The first pattern shows how the attachment of a derivational morpheme may delete the accent of the base form: *gengo*⁰*gaku* 'linguistics' + *-teki* '-like' = *gengogaku-teki*⁰ 'linguistic'. The question is how to analyze these forms without making use of the feature [-accent] or a construction-specific constraint that prohibits an accent ('NOACCENT'). The second pattern involves the accentual behavior of verbal forms. There are two groups of verbs in Japanese: inherently accented ones and unaccented ones. The location of the accent depends on the following suffix, but only in verbs of two moras or longer with accented stems, e.g. *tabe*⁰*-ru* 'eat-NONPAST' vs. *ta*⁰*be-ta* 'eat-PAST'. The challenge here is to prevent output schemas abstracted from accented verbal forms ([$\dots\mu^*$ -ru] and [$\dots\mu^*\mu$ -ta]) from applying to verbs with unaccented stems, which surface without an accent (e.g. *ake*-*ru*⁰ 'open-NONPAST', *ake*-*ta*⁰ 'open-PAST'). The third test case concerns the accent patterns of loanwords. In loanwords, the length of a word largely determines not only the location of accent, but also whether a word gets an accent in the first place. More concretely, bimoraic, trimoraic, and pentamoraic words tend to get penultimate or antepenultimate accent (*pa*⁰*ri* 'Paris', *ka*⁰*nada* 'Canada', *ba*⁰*ruse*⁰*rona* 'Barcelona'), whereas quadrimoraic words tend to be unaccented (*ame*⁰*rika*⁰ 'America'). The challenge here is how to prevent the assignment of an accent to the antepenultimate mora in quadrimoraic words. In the analysis proposed by Ito and Mester (2016) this is accomplished by adopting constraints on prosodic structure, several of which are prohibitions.

In the analyses I propose, the distinction between first-order and second-order schemas (Nesset 2008) plays an important role. To account for the behavior of deaccenting morphemes, which can be seen as examples of what Langacker (2016) calls 'subtraction', we need a unidirectional second-order schema that links the schema of the base with a schema of the derived word, with the accent being absent in the latter. This construction-specific schema will block more general accent-assigning and/or accent-preserving schemas. For the accent patterns of verbs, we need second-order schemas that capture bidirectional relations between forms that share the same stem, which will again block the less specific first-order schemas that include an accentual specification. For the accent patterns of loanwords first-order schemas in combination with principles of schema competition such as 'elaborative distance' and 'entrenchment' (see Taylor 2002) seem to be sufficient, although I will also consider an analysis which makes use of if-then relations and inhibitory links between schemas (see Kreyer 2013).

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Modularity or non-modularity of pitch deficits in Congenital Amusics? A developmental perspective is the key

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Abstract

Cognitive modularity is important for understanding the mechanisms of learning and brain development. In the music domain, congenital amusia is a neurodevelopmental disorder which specifically impairs pitch processing. As pitch is a common element in both music and speech, increasing interests has been focused on the integrity of pitch processing in the speech domain. The current consensus (e.g., Vuvan et al., 2015) is that amusics' pitch deficits in music domain also compromise linguistic pitch processing. However, this is mainly based on adults' data. For Congenital amusia which is known as developmental disorder, a developmental perspective is lacking. In the current study, we aimed at examine cross-domain pitch processing of amusic adults in light of the cross-domain pitch development in 9-year-old normally developing children. We tried to reexamine the issue of pitch modularity by comparing the end results of the developmental pitch disorders in amusic adults with the on-going dynamic cross-domain pitch development in normally developing children.

Using lexical tone pairs and musical pitch pairs with matched intervals (approximately 5 semitones), we collected electrophysiological data with a passive oddball paradigm and behavioral performance with an active discrimination task.

For musical pitch processing, as expected, amusics performed similar to the children group as reflected by the mismatch responses and behavioral performance, both groups lagged significantly behind the control adults. Time frequency analysis also demonstrated the same group differences, amusics showed inter trial coherence (ITC) similar to the children group, whereas both of these two groups had significantly weaker ITC than the control adults. For lexical tone processing, however, although both amusics and the children group lagged behind the control adults as indexed by the mismatch responses and behavioral performance, amusics outperformed children group in these two measures. More importantly, amusics and the control adults both had stronger ITC than the children group, whereas the former two groups were not statistically distinguishable.

Taken together, our results highlighted the importance of a developmental perspective for the issue of pitch modularity among amusics. Although part of our results regarding the direct comparison between amusics and the control adults seemed supportive of earlier non-modularity notion, the additional contrasts gained from the normally developing children group speaks against it. Our results showed that pitch processing in amusics is modularized. Pitch modularity is a result of development rather than innate.

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Progressive Assimilation in Cognitive Phonology: A Case from Iranian Azerbaijani

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Keywords: progressive assimilation, cognitive phonology, Iranian Azerbaijani, morphophonology, second-order schema

The present paper investigates a progressive assimilation process in Iranian Azerbaijani, and shows that assimilation can be accommodated in cognitive linguistics without Underlying Representations (URs) and ordered rules. Basically this morphophonological process involves the assimilation of 'l' to 'n' thus making '...[nas]+l...' strings '...[nas]+n...' (where "+" stands for the morpheme boundary). In other words, when a stem ends in a nasal consonant 'm, n' the 'l...' suffix after it becomes 'n...'. This phenomenon occurs in the plural suffix and every other suffix beginning with 'l' in its elsewhere form.

The author uses Nessel's (2008) cognitive model to extract the relevant morphophonological schema. A major difference between a cognitive approach and a generative one (such as SPE) is that in the former the linguist does not posit a UR. Therefore, there are no ordered phonological rules to derive the Phonetic Representation (PR). Another difference is that the lexicon, in the cognitive approach, includes predictable information. Nessel's model, which is largely based on Langacker's (1987) ideas, introduces the concept of 'second-order schema' to account for morphophonological alternations and source-oriented generalizations. When two simple schemas (or first-order schemas) are partially or fully compatible, they form a second-order schema and this more abstract schema can capture relationships beyond the product-oriented generalizations. Here, the main difference between abstraction in generative phonology and cognitive phonology lies in what Langacker (1987: 53-54) calls the "content requirement" which only permits structures (phonological, semantic, or symbolic) that actually occur in the utterances.

In a generative approach (such as SPE) the suffix with an initial 'l' would be the UR and a phonological rule "l > n / [nas] + ___" would derive the suffix with an initial 'n' as the PR. But in the present cognitive model, the elsewhere suffix with an initial 'l' is the prototypical allomorph and an extension relation connects it to the 'n...' allomorph. Based on their symbolic similarity, both of those allomorphs (along with other possible allomorphs), form a network as members of a more abstract schema (the morpheme) which is connected to those allomorphs via instantiation relations. For example, the plural morpheme '...+[cor]Ar' is formed based on its allomorphs '...+lAr', '...[nas]+nAr' and '...[distr]+dAr'. All of those allomorphs, regardless of their predictability, exist as schemas in the lexicon.

As for the morphophonological process, a schema ['...+l...' > '...[nas]+n...'] is formed based on all second-order schemas containing the prototypical 'l...' allomorph and the 'n...' allomorph and that schema accounts for this morphophonological phenomenon.

By letting more information into the lexicon, cognitive phonology dispenses with URs and ordered rules and by using common tools such as schema formation and categorization, cognitive phonology gives an explanation which is consistent with other cognitive sciences.

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From lexical triggers to contextual cues: Sentence complexity and aspectual choice in Russian narrative sequences

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Keywords: aspect, sentence complexity, coordination, corpus study, Russian

Selecting a perfective or an imperfective verb presents a challenge for non-native speakers of Russian. Descriptive grammars list various lexical “triggers” that indicate that only one aspect is available (e.g. the Russian adverb *uže* ‘already’ is associated with perfective (PF) aspect whereas *vsegda* ‘always’ is used with imperfective (IPF) verbs). Although lexical triggers predict aspect with fairly good reliability (96%), they appear in association with only 2% of verbs in corpus language samples (Reynolds 2016). Since additional factors are clearly needed, we investigate the relationship between sentence complexity and aspect, hypothesizing that this contextual factor helps predict the choice of aspect. We focus on the number of verbs, the number of subjects, as well as the presence or absence of coordinating conjunctions.

We test this hypothesis through a quantitative study of Russian narrative sequences from the Russian National Corpus (RNC), where a “narrative sequence” is a coordinating sequence of verbs (two or more), with or without a coordinating conjunction, with one or more subjects. Based on the observation made by Stunová (1993), it is assumed that IPFs very rarely appear in Russian narrative sequences. Unlike previous studies that limit their analysis to specific sequences containing IPFs (cf. the sequences V1pf+and+V2ipf and V1pf+V2ipf+V3pf analyzed by Zorichina-Nielsson 2014), the goal of this study is to discover the basic patterns that underlie the distribution of aspectual forms in Russian coordinating sentences.

The first stage of this project included a pilot study, run on the disambiguated modern subcorpus of the RNC (1950-2017). The automatic query searched for two verbs ‘indicative, past’ (aspect unspecified) with a distance between the verbs being defined as “from 1 to 2” (to get short temporal modifiers into the sample if there are any). After randomly extracting one example per author and excluding contexts with subordinate clauses and direct speech, we manually tagged the remaining contexts for: 1) the number of verbs and aspect, 2) conjunctions, and 3) the number of subjects. The predictions were that IPFs would be highly infrequent and would rather appear in sequences with two verbs (since these are likely to express simultaneity, see examples in Xrakovskij 2009: 19).

The results of the pilot study confirmed the first prediction. As expected, IPFs in Russian narrative sequences are rather rare (24 out of 210 sentences) but they are more likely to appear in longer sequences. In the sequences with two verbs, whenever IPF is present it is the last verb in the sequence, bearing the semantic tags ‘existence’, ‘location’ or ‘perception’ ((1) *Zdes’ i rodilsja-PF, zes’ prožival-IPF Arkadij Lukjanovič*). For sequences with three verbs, IPFs that appear usually stand first introducing a contrast ((2) *Šel-IPF on po ulice <...>, upal-PF i umer-PF*), whereas in longer sequences the position of IPF is not specified. The latter sequences usually enumerate various actions of a person over a long time span. All of these basic patterns involve one subject, sentences with several subjects present a combination of these patterns.

Whereas examples like (1) have been described in linguistic literature before (see Dickey 2000; Zorichina-Nielsson 2014), this approach makes it possible to draw additional contexts into the picture. We will show what kind of semantics stands behind each of the patterns mentioned above and will extend the study to sequences with a larger interval between verbs. From a cognitive perspective, this will allow us to investigate whether different coordinating sequences represent different constructions and whether not only the proximate units but also the distant ones trigger aspectual choice.

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[YAO + V] in Chinese / [Aller + V] in French: prospective aspect or tense of future?

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[YAO + V] in Chinese as a temporal-aspectual construction is often translated by [aller + V] in French, as in the following example:

Ex. “黎明前那列车快要到了。” (莫言 2004 : 95)

黎	前	车	快	要	到	了
明						
L	Q	C	K	Yào	D	Le
ímíng	ían	à	iè	hē	uài	ào
D	B	V	R	be.g	A	particl
awn	efore	hat	LF	ehicle	apidly	oing.to
					rrive	e.PRF

The train before the dawn is going to arrive

Le train qui passe avant l'aube va arriver. (MO Yan 2004 : 152)

When [aller + V] is used in the present tense, it can express as well the future tense as the prospective aspect. Like Barcelo, G. J. and Bres, J. have concluded in *Les temps de l'indicatif en français*, "The FS1 and the PRP2, which compete on many usages, share the expression of the future in French today."³ (Barcelo, G. J. et Bres, J. 2006: 175).

Chinese is considered as an aspectual language rather than a temporal language, then how to distinguish these two situations in Chinese?

This study leans on a French-Chinese corpus made and aligned by the present author (about 1 million words in Chinese and about 700,000 words in French) which is composed of 10 novels and their translations, 5 in French, 5 in Chinese.

This study describes the different usages of [YAO + V] as an aspectual-temporal construction, compares it with [Aller + V] in French and tries to discuss the criteria that distinguish the prospective aspect from the future based on the theories of Comrie (1976), Gosselin (1996, 2005), using the concept of prospective aspect, the SdT4 theory, etc.

We postulate that the differences of usages of [YAO + V] come from the distance of the future (near future, mid-term future or far future), the time adverbial etc., which also serve as the criteria to distinguish the prospective aspect from the tense of future.

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¹ "Futur simple" in French, the future tense

² "présent prospectif" in French, the prospective present

³ Translated in English by the author, the original in French is « le FS et le PRP, qui sont en concurrence sur bien des emplois, se partagent donc l'expression du futur en français actuel ».

⁴ "La sémantique de la Temporalité" in French, The semantics of temporality

On the so-called volitional use of *will*: Semantic or pragmatic or both?

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Keywords: *will*, volition, modality, mental attitudes, the three-tier model of language use

There have been numerous studies on the *will*-future (e.g. Close 1977; Collins 2009; Copley 2009; Dancygier 1998; Haegeman 1983; Kissine 2008; Klinge 2005; Wekker 1976) and they never fail to refer to its volitional use, as shown in *I'll write tomorrow*. With respect to the volitional use, the previous studies can be mainly divided into two types of analyses: (i) it comes from a pragmatic implicature; (ii) it is semantically different from the future-tense or epistemic use, here referred to as the predictive use.

Both analyses have drawbacks, however. Type (i) analyses cannot explain why in the volitional use, the active version of the *will*-sentence is different in cognitive meaning from the passive version, as in (1) *John won't meet Mary vs. Mary won't be met by John*, while in the predictive use, the two versions have the same cognitive meaning, as in (2) *The new treatment will cure the disease vs. The disease will be cured by the new treatment*; and why volitional *will* can appear in certain conditional clauses, as in (3) *If he'll pay, I'll go with him*, but predictive *will* cannot, as in (4) **If John will come, Mary will come*. Type (ii) analyses do not agree on whether volitional *will* is dynamic or denotic and the category "root" is often used to accommodate the disagreement, which cannot explain Nuyts's (2005) observation that deontic and epistemic categories are attitudinal and make a natural class. Moreover, they usually treat volitional and predictive *will* separately, not having offered an explanation based on a unified model of tense and modality/mental attitudes motivated by a general theory of language use.

To solve the above problems, I will adopt my model (Wada 2017), a unified model of tense and modality/mental attitudes motivated by the three-tier model of language use (Hirose 2015). In this model, sentential utterances are semantically decomposed into the domains of addressee-oriented speaker's (AS) attitudes, situation-oriented speaker's (SS) attitudes, and propositional content; subjective modalities—epistemic or deontic—are speaker's attitudes while objective modalities are propositional elements. The situation construal tier, where the speaker as private self (the subject of construing/thinking) construes a situation, consists of SS-attitudes and propositional content; the situation report tier, where the speaker as public self (the subject of communicating) conveys the construed situation to the addressee, consists of situation construal and AS-attitudes. The concept of volition derives from the interaction between the propositional content and the context involved in the process of situation construal, being initially attributed to the private self. In situation report, cases which have been labeled "volitional uses" are divided into three. (a) When the private self is taken as identical with the relevant speaker as public self (typically realized as the first-person subject), the volition is an SS-attitude and the *will* involved expresses volition; this explains the low acceptability of *?I'll cut the grass but unfortunately I won't be able to* (Salkie 2010), where the volition as SS-attitude is contradictory to the negative prediction as the same speaker's attitude. (b) When the private self is identified as a different person from the relevant speaker, the volition is a propositional element and the *will* involved is predictive; the volition conveyed in (1) is a propositional element and its attribution to different subjects makes the two sentences "semantically" different. The fact that volitional *-(y)oo* as a Japanese mood marker is basically used only with a (implicit) first-person subject (Miyazaki et al. 2002) cross-linguistically justifies case (a) as an independent category. (c) In conditional clauses made only of the propositional content, the volition illustrates the semantic retention of an older use of *will*, as in (3); speaker's attitudes cannot be involved here and so the predictive use is not allowed, as in (4).

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Understanding Control and Modality: Comparative study between English and Bangla Modals

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In cognitive linguistics, modality is deemed to be one of many manifestations of Talmy's force dynamics. But Langacker (2013) made an attempt to study modality from a unique theoretical perspective, namely 'control'. He proposes that processes are initiated by some **actor**, who is situated in a **dominion** of his own where its relation with all other elements in the dominion is (although momentarily) static and stable. The actor has a **field** of control. Now when a **target/ T** (a thing or a process) enters that field, the stasis is undone by a struggle for control. This paper attempts to compare the unfolding of 'control' through the modals of English and Bangla, a South Asian Language spoken mainly in Bangladesh and the state of West Bengal in India. The distinction (and ambiguity) between *root/deontic* and *epistemic* modalities have been widely discussed in literature and there is consensus among academics on the basic definitions of these categories. Langacker (2013) propounds that *effective control* seeks to 'produce some effect, to have some influence on the world' (e.g. You must take good care of your patients) while *epistemic control* designates 'knowledge of the world as opposed to influence over it' (e.g. Oh its almost seven! He must have reached the concert already). Langacker (2017) also designates evidentials as grounding elements. But this paper sheds light on two specific aspects of modality – first, in a language like Bangla where (unlike English) modality is not expressed by highly grammaticized 'grams', effective and epistemic controls unfold in an elaborate discursive fashion and secondly, this paper attempts to show that the semantics of the Bangla evidential 'naki' cannot be interpreted in terms of 'egocentric' evidential control if we take into consideration its discursive distribution. One needs to recognise that *evidential* is a means to 'assert evidence' (Haan 1999) and cannot be interpreted only in terms of epistemic distance. *Evidentials* hint at shared loci of control by asserting an external source of information. The schema of control requires to expand beyond *subjective* and *objective control*.

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The syntactic realizations of the epistemic predicate *likely* and its Chinese equivalent *ke'neng*: A corpus-based cognitive study

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Keywords: epistemic predicate; raising; topic; speaker control; subjectivity

This study presents a corpus-based cognitive investigation of the syntactic realizations of *likely* and its Chinese equivalent *ke'neng*. *Likely* is generally categorized as a subject-to-subject raising predicate (Langacker 1995), as in (1a-b). Similarly, *ke'neng* also exhibits raising behaviors in Chinese, however, its range of expressive devices is much wider than that of *likely*, as in (2a-e), and *ke'neng* is usually classified as a topic-raising predicate (Tsao 1990).

1. a. Your daughter is **likely** to fail the examination.
b. It is **likely** that your daughter will fail the examination. (Langacker 2009: 319)
2. a. ta **ke'neng** hui ying na-chang qiu.
he likely will win that-CL ball game
'It is likely that he will win the ball game tomorrow.'
b. na-chang qiu **ke'neng** ta hui ying.
c. ta na-chang qiu **ke'neng** hui ying.
d. na-chang qiu ta **ke'neng** hui ying.
e. **ke'neng** ta hui ying na-chang qiu. (adapted from Tsao 1990: 382)

In the framework of Cognitive Grammar (CG), the two predicates are epistemic modals that express the speaker's estimation of the likelihood of a given event in reality. Drawn from Cognitive Control theory in CG (Langacker 2009, 2013), it is claimed that, the specific syntactic realizations of the two predicates is primarily a reflection of the speaker's epistemic control over its complement event.

The English and Chinese data are collected from BNC (British National Corpus) and the corpus of CCL (Center for Chinese Linguistics). 300 complement structures with each predicate are extracted and identified manually in the concordance. With a contrastive analysis of the data, several interesting findings are shown. (1) There is a wider range of raising patterns in Chinese in actual use, but the predominant pattern is subject-raising in both languages (over 80%). (2) Subject and object raising are highly asymmetric in Chinese. Subject raising not only takes a huge percent in the overall data, but also takes great precedence over object raising. (3) While the complement clauses are non-finite in raising constructions and finite in non-raising constructions in English, the corresponding complement clauses tend to be finite in both raising and non-raising constructions in Chinese. Overall, the constructions in Chinese do not show the same syntactic properties as the raising/non-raising counterparts do in English.

These syntactic behaviors are determined in the first place by their speaker-oriented semantic import. The conceptual prominence of the participants in the complement event and the conceptual distance with the speaker are two determining factors as well. The construction choice in English is shown to be constrained by the two factors at a time. The constructional choice in Chinese, however, is primarily subject to the first factor. Comparatively, a greater degree of speaker control over a complement event is found in Chinese, consistent with the topic-prominent and subjectivity-prominent features of the language, while in English, impersonals are more preferable to present the evaluation of the speaker in an intersubjective way.

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Subjectivity of Chinese and English Topic Constructions: A Grounding Analysis

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Key words: Topic constructions; Comment clause; Subjectivity; Grounding; Epistemic control

Topic constructions refer to a series of constructions composed of a topic nominal and a comment clause, which take four main types of manifestations, including subject-topic, object-topic, left-dislocation and hanging-topic constructions. As there are no consensus on the semantic features and functions of these constructions as well as their typicality in a specific language (Chen 1994; Lambrecht 1994; Liu & Lin 2010; Netz & Kuzar 2009; Shi 2000; Wang & Li 2016 etc.), this paper investigates their distribution and grounding features both monolingually and in a contrastive perspective, with a focus on the grounding strata of their comment clauses. Based on a comparative corpus of ten hours' casual conversation in Chinese and English, we get 1789 instances in Chinese and 309 in English, with different preferences in distribution, as showed in the table below.

Construction Language	Subject - topic	Object -topic	Left -dislocation	Hanging – topic	Total
Chinese	567 (31.7%)	560 (31.3%)	182 (10.2%)	480 (26.8%)	1789 (100%)
English	177 (57.5%)	16 (5.2%)	105 (34%)	11 (3.4%)	309 (100%)

In the light of Cognitive Grammar (Langacker 2002, 2008, 2017 etc.), grounding mainly refers to those expressions that establish a connection between the ground (i.e. the speech event, its participants, and the immediate circumstances), and the conceptual content evoked by a nominal or finite clause. After manual annotation of the grounding strategies of all instances in the data exhaustively, we find that there is a significant difference on the grounding options between the two languages. While the Chinese comment clauses tend to grounded with more epistemic and inferential means (应该'should'/真是'really'/够...的'quite'in (1a,b,d)), the English ones are more inclined to use temporal qualification, with limited expression of subjective assessment (*was/is/played* in (2a,c,d)).

- 1) a. [四千多的房价], [Ø]应该是 05 年左右吧。 (Subject-topic)
 Four thousand more de apartment price, should be 05 year or so *ba*-Particle
- b. [住宿费], 真是没白出[Ø]。 (Object-topic)
 Accommodation fee, really no in vain give
- c. [那客厅], 我儿子能在[里面]骑自行车打转。 (Left-dislocation)
 That living room, my son can inside ride bicycle turn
- d. [这个饭]₁, [成本]₂够高的。 (Hanging-topic)
 This rice, cost quite high *de*-Particle
- 2) a. [Another thing I thought was interesting], [Ø]was the, this, the emphasis on transportation. (Subject-topic)
- b. [Some iron] you can't, uh people can't absorb [Ø]. (Object-topic)
- c. You know, [this guy], I can't really believe [that guy]'s her husband. (Left-dislocation)
- d. [The first week]₁, I played with them [all week long]₂, which was really stupid. (Hanging-topic)

A further comparison shows that among the topic constructions in Chinese, hanging-topic is the most subjective construction, subject-topic and left-dislocation are less subjective, and object-topic construction even less. Meanwhile in English topic constructions, only left-dislocation is similarly used with the Chinese counterpart. Further investigation demonstrates that the grounding option in the comment clause is closely related with the speaker-as-conceptualizer's epistemic control over the topic referent. When the topic referent is more accessible in current discourse space, both objective description and subjective assessment can be selected in the comment clause. However, as the topic referent is not prominent in English, speakers tend to give objective description to locate the topic. Another interesting evidence is the dual function of the clause-external grounding elements in Chinese, both as qualification of the specific comment propositions and as explicit markers of the topics' scope. It is hoped that this cognitive-grounding analysis can provide a new perspective to the typological differences between Chinese and English.

A cross-linguistic perspective on ‘nominal’ vs. ‘verbal’ construal in English and German.

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Keywords: nominalization, functional hybridity, construal, corpora, translation studies

The present paper addresses the different types of construal imposed on events by Present-day English verbal gerunds. More specifically, it aims to empirically assess the functional hybridity of the English gerund by examining its translational equivalents in German.

The formal hybridity of verbal gerunds, which have a clausal internal syntax but the external distribution of a noun phrase, has provoked many discussions concerning their categorial status (see De Smet 2010 for an overview). Moreover, recent studies have shown that verbal gerunds display functional hybridity as well, ranging from “conceptually dependent”, clausal uses, such as the subject-controlled gerunds embedded in adverbial slots in (1), to more “conceptually autonomous”, uncontrolled uses in (2), which are reminiscent of regular abstract nouns (Maekelberghe 2017; Fonteyn *et al.* 2015; cf. Langacker 1991: 25).

- (1) a. She never read the Word without *first casting the dice to guide her*. (GECCo, fiction)
b. Then he got a thrashing for *getting in the way*. (GECCo, fiction)
- (2) a. *Meeting the world's energy challenges* will require a sustained global effort over many decades. (GECCo, essay)
b. (...) where lard cans of tomato plants are kept, and a pallet for *sleeping at night*. (GECCo, fiction)

English gerunds, with their combination of nominal and verbal properties, are, in this respect, a typical illustration of the so-called “boundary permeability” of English (Berg 2014), whereby linguistic categories are said to display fuzzy boundaries on both a formal and functional level. The German language on the other hand, with its strong inflectional system, typically has sharp boundaries between linguistic categories (Berg 2014: 489, Hawkins 1986). As such, verbal gerunds can be translated by either fully nominal constructions, such as *-ung* nominalizations or nominalized infinitives (see also Demske 2002, Hartmann 2014), or fully clausal structures, such as non-finite and finite subordinate clauses.

Drawing on data from GECCo, a 1,000,000 words multi-register English-German parallel corpus (Hansen-Schirra *et al.* 2007), the present paper examines factors that play a role in the choice for a particular translation strategy, both language-internal (clausal function; referential and aspectual properties; verb lemma) and language-external (genre). Preliminary results paint a rather complex picture, showing that gerunds can be translated by a wide range of constructions and suggesting that the choice for a more ‘nominal’ or ‘verbal’ construal of a situation is a multi-faceted one.

Examining the English gerund system through the lens of its German counterparts, it is argued, not only presents an innovative way of empirically assessing the noun-verb continuum in English, it also sheds new light on how ‘nominal’ vs. ‘verbal’ construal is operationalized in two closely related yet morphologically very distinct languages.

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A Cognitive Study of Deadjectival Nominalization as Shell Nouns in German Language based on German News Corpus

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Keywords: Deadjectival shell nouns; Original and superlative forms of adjectives; German news corpus; Cognitive Prominence; Figure/Ground Theory; Conceptual Principle;

Shell nouns are considered to be a type of meta-language labels commonly used in English texts, i.e. the fact is that, the belief is that, idea that etc. Such clusters of abstract nouns resembling "shells" are usually accompanied by personal positions as well as evaluation functions, and are relevant to subsequent content with highly generalization. According to Schmidt's grammatical classification of English shell-noun-patterns (2000), namely N-cl and N-be-cl, the corresponding structures i.e. N-cl and N-sein-cl can also be found in German shell nouns. Nevertheless, deadjectival nominalization, which is converted from its adjective such as "gut" – "das Gute" (good - the good thing) and differs from nominal substantives, demonstrates the uniqueness of shell nouns in German language.

In this paper, the following questions will be answered: What does deadjectival nominalization look like in this German news corpus? Is there any striking character about it? What is the cognitive influence on perceiving the news based on cognitive theories?

The study will go through both quantitative and qualitative analysis. With the help of regular expressions, namely `@das $p=ADJA=1 ;' dass` and `@das $p=ADJA=1 sein`, deadjectival nominalization is to be extracted from "Tagesspiegel", a German daily newspaper, which is an online available corpus from 1996 to 2005 on the website www.dwds.de/. With this data, the frequency of N-cl and N-sein-cl as well as the frequency of co-occurrence of each cluster is to be taken into account. And through the qualitative observation from the perspectives of "Cognitive Prominence" and "Figure/Ground Theory", this study tries to make comparison and analysis about the deadjectival shell nouns derived from the original forms and the superlative forms of adjectives. Because of impossibility to account for such linguistic phenomenon based on Talmy's five Principles about time events in "Figure/Ground Theory", I have proposed "Conceptual Principle" to analyze these shell nouns. "Conceptual Principle" means some shell nouns are also considered as concepts that have only personal assessments for the subordinate clause. In other words, the normalized adjectives ("Ground") are served as generalization of an event that is later told ("Figure") as the central meaning of the complex sentence. And according to the semantic prosody to these adjectives, the function of their prominence on perceivers is to be analysed.

So the result reveals that a large number of such shell nouns are derived from superlative adjectives rather than their original forms, such as "das Beste" - "best" (the best thing - best). Furthermore, this kind of shell nouns correspond with "Conceptual Principle", as the location of "Figure" and "Ground" totally different with what Talmy concluded. And in terms of semantic prosody, the majority of positive forms remain essentially 'neutral', but superlatives are relatively averaged in 'positive' and 'negative'.

From this empirical study, it can be seen that superlatives as marked shell nouns play important roles on characterizing the events behind them as well as increasing more prominent focus on them. To sum up, this paper provides not only new perspectives for the study of deadjectival German shell nouns in the news texts to explain the strengthening phenomenon of information but also enriches the principles about "Figure/Ground Theory" developed by Talmy in order to offer novel justification for the further application of "Cognitive Prominence" as well as "Figure/Ground Theory".

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Crossover Effects in English and Chinese

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Keywords: weak crossover, weakest crossover, topicalization, mental space, implicature

It has been known that weakest crossover examples like (2) are more acceptable than weak crossover ones like (1) (Lasnik and Stowell 1991).

- (1) a. * John_i, his_i mother loves t_i.
b. ?? the book_i [which_i [its_i author read t_i]]
c. * Who_i does his_i boss dislike t_i?
(2) a. John_i [NO_i [I believe his_i mother loves e_i]]
b. This book_i, which_i its_i author wrote t_i last week, is a hit
c. Who_i did you stay with t_i [before [his_i wife] had spoken to e_i]

Pan (2016:61) shows that weak crossover effects are also observed in Chinese topicalization like (3a). However, if the context is changed to (3b, c), no weak crossover effect occurs. On the other hand, a relative clause as in (3d) does not make it natural as in English.

- (3) a. * Nà-ge xiǎohái_j, tā_j māma bù xǐhuan t_j.
that-CL kid his mother NEG like
'As for that kid_j, his_j mother doesn't like.'
b. Zhè-ge háizi_j, tā_j fùmǔ tèbié chǒng'ài e_j.
this-CL child his parent strongly love
'As for this child_j, his_j parents strongly love.'
c. Zhè-ge zhǒngtiān rěshìshēngfēi de xiǎohái_j, tā_j fùmǔ cóngxiǎo
this-CL always make trouble DE kid his parent since childhood
jiù bù xǐhuan e_j.
EMPH NEG like
'As for this kid_j who always makes trouble, his_j parents don't like since his childhood.'
d. ? Nà-ge xiǎohái_j, wǒ juéde tā_j māma bù xǐhuan e_j.
that-CL kid I feel his mother NEG like
'As for that kid_j, I think his_j mother doesn't like.'

This presentation will explain English and Chinese crossover effects in terms of Mental Space Theory (Fauconnier 1994, 1997) and argue that no weak crossover effect occurs (i) if the same referents are not presented in the same mental space in English, and (ii) if the Focus Space is not contradictory to its upper space in Chinese. (1) is not natural since there is only one space with two same referents "John_i" + "his mother loves him_i"/ "the book_i" + "its author read it_i"/ "who_i" + "his boss dislike him_i". It becomes natural if the same referents are presented in two mental spaces like (2). In (2a), an upper space contains "John", from which the Belief Space "John's mother loves him" is accessed. In (2b), the Focus Space "this book is a hit" is structured independently of the background space "this book's author wrote it last week". In (2c), the Base Space which contains "who" sets up both the space "his wife spoke to him" and the space "you stayed with him". That is, weak crossover effects are absent if the same elements are not put together in one space. On the other hand, when a topic is presented in Chinese, common sense usually constructs an upper space which makes the same referents shown in different mental spaces. Chinese topicalization is grammatical if the Focus Space is consistent with its upper space. When the topic is family members like in (3), a space built by common sense (implicature) "they love each other" is constructed under the Base Space "that kid". The Focus Space "his mother doesn't like him" is contradictory to its upper space, therefore (3a, d) is ungrammatical. (3b) is acceptable since the Focus Space "his parents strongly love him" is consistent with the upper space. Note that if a context like "the kid always makes trouble" is provided as in (3c), the implicature is contextually cancelable (Grice 1989:44) and the context constructs an upper space, which makes the Focus Space "his mother doesn't like him" compatible with it.

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Causality in Spanish

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Keywords: causality, semantic typology, Spanish, intentionality

Previous work on Spanish caused-motion events (Filipović 2013, Ibarretxe-Antuñano 2012, Ibarretxe-Antuñano et al. 2016) has shown that Spanish speakers categorise these events on the basis of two main components, the degree of intentionality and force-dynamics (e.g. caerse vs. dejar) and the three-dimensionality of the ground (e.g. meter vs. poner). This talk expands this characterisation and explores how causality in general is conceptualized and encoded in Spanish.

Data were collected using the CAL videoclip stimuli, a set of 58 live action videos of interactions among humans, natural forces and inanimate objects. Thirty-two native European Spanish speakers participated in two tasks: a non-verbal categorisation task where participants have to attribute different degrees of responsibility to the actions performed in the clips, and a verbal description task, where participants responded to the question “what happened?”.

Results confirm that intentionality is a key concept in the conceptualization of (any type of) causation events in Spanish. Statistically significant differences are found in the attribution of responsibility between intentional and non-intentional events. Together with intentionality, Spanish speakers care for other semantic components such as volition and guilt. These components are crucial not only the non-verbal categorization of causation events (intentional vs. non-intentional, guilty vs. non-guilty), but also in the oral and gestural encoding of these events in Spanish.

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Causality in Cognition and Language in Taiwanese Southern Min

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Keywords: Causality, semantic typology, Taiwanese Southern Min, Mandarin Chinese

This study presents preliminary data on the representation of causality in cognition and language in Taiwanese Southern Min (TSM). Existing literature on TSM causative constructions only focuses on the syntactic typology of causatives (Cheng et al., 1999; Cheng, 1974; Lin 2006). As the first attempt to explore the causality in TSM from the perspective of semantic typology, two basic causative constructions are identified in the elicitations, including lexicalization (serial verb construction) as in (1) and periphrastic light verb construction as in (2). In (1), the sentence can be interpreted either volitionally or accidentally. In (2), a morpheme *hoo* can appear optionally between the serial verbs to denote intentionality: when *hoo* appears, the causer *tsa-poo-lâng* 'man' can only be interpreted deliberately performing the action and causing the breaking event to happen by hitting.

Type I Lexicalization: serial verb construction

(1)

Hit	ê	tsa-poo-lâng	phah-phuà	tsia-ê	nġg
this	CL	man	hit-break	these	egg

This man broke these eggs.

Type II Periphrastic light verb construction

(2)

Hit	ê	tsa-poo-lâng	ka	tsia-ê	nġg	phah-(hoo)-phuà
this	CL	man	KA	these	egg	hit-(CAUSE)-break

This man (deliberately) broke these eggs.

To explore speakers' preference for the conceptualization of causal chains, the research design comprises a relative responsibility assignment and a discourse task using a series of video clips. In the relative responsibility assignment task, the participants are trained to assign the responsibility to causer, causee or neither in the video clips to explore the pattern of the assignment. In the discourse task, they are required to provide descriptions of each clip. The empirical observations show that TSM speakers pay more attention to intentionality while those with more frequent L2-Mandarin use attribute certain extent of responsibility to unintentional causee or external factors such as environment and context. The results show the preferences for the responsibility assignment in causal chains and advance the understanding of the way language interfaces with nonlinguistic cognition in the representation of causality. In addition, this study contributes itself to a large-scale crosslinguistic comparison of semantic typology of causative constructions.

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Iconicity in usage: A cross-linguistic study of causative event descriptions

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Keywords: causation, iconicity, typology and universals, morphosyntactic integration, Role and Reference Grammar

Based on the results of a production experiment with speakers of six genealogically independent languages, English, Japanese, Korean, Kupsapiny (Nilotic, Nilo-Saharan; Uganda), Sidaama (Cushitic, Afro-Asiatic; Ethiopia), and Yucatec Maya (Mayan; Mexico and Belize), this study addresses the issue of how language use reflects the hypothesized iconicity between the directness of causation in an event and the morphosyntactic integration of the construction used to describe it (Silverstein 1976, Givón 1980, Haiman 1983): the more direct the causal relation, the tighter the morphosyntactic integration of the construction used to describe it.

In the literature on the linguistic representation of causality, counterexamples to the iconicity principle have been reported. For example, Escamilla (2012) claims that more complex constructions are not necessarily used for a less direct causative relation. Thus, it is worth investigating whether iconicity manifests itself across languages in covariation between usage frequency of constructions of varying compactness and the directness of the causal chains they describe.

We collected descriptions of video clips depicting causal chains (varied along multiple dimensions of directness) from speakers of the six languages, and investigated how the construction types produced by each speaker differed depending on the directness of causation. We took a multi-factorial approach to the directness of causation in terms of any properties of events that might affect the choice of different kinds of constructions in describing causal relations (Bohnemeyer et al. 2010). The factors that we examined as those of the directness of causation are: (i) causal chain mediation types (the presence of an intermediate causee), (ii) the type of the causer (human vs. natural force), (iii) the type of the affectee (human vs. object), (iv) the use of an instrument, and (v) the causer's intention to cause the resulting sub-event to occur. We employed the Layered Structure of the Clause model of Role and Reference Grammar (Van Valin 2005) to measure the tightness of the morphosyntactic integration of constructions.

Our major findings based on the analysis of the data using a Spearman's rank correlation test are as follows. First, events with a causer and an affectee but without any intermediate causee are more likely to be expressed with morphosyntactically tighter constructions than events with a causer and an affectee as well as an intermediate causee. Second, when no intermediate causee participates in events involving causality, events with an object affectee tend to appear in morphosyntactically tighter constructions than those with a human affectee (Hopper & Thompson 1980). Third, when no causee intervenes between the causer and the affectee, morphosyntactically more compact constructions are more commonly used for events where the causer's action is volitional than those where the causer's action is accidental, though there is some crosslinguistic variation in the effect of causer intentionality.

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Causatives of the world, unite! How efficiency can explain cross-linguistic generalizations

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Keywords: causatives, efficiency, frequency, iconicity, typology, corpora, artificial language learning

There is a widespread view in typological literature that forms and functions of causative constructions in languages of the world are correlated (e.g. Haiman 1983, Comrie 1989, Dixon 2000). In particular, it is argued that events that are more conceptually integrated are expressed by more cohesive or compact causative forms (e.g. lexical causatives), as in (1a), than events that are less conceptually integrated and which are often expressed by less cohesive forms (e.g. periphrastic causatives), as in (1b):

- (1) a. Harry Potter raised the goblet to his lips.
b. Harry Potter caused the goblet to rise to his lips.

This correlation has been regarded as an instance of iconicity (Haiman 1983). In my talk, I will argue that it can be best explained by efficiency as the tendency to minimize cost-to-benefit ratio in language communication. This ratio is minimized when more frequent causative meanings are expressed by shorter forms and less frequent ones are expressed by longer forms (cf. Haspelmath 2008).

In order to support my proposal, I will present evidence from several different sources:

- a sample of 59 typologically and genetically diverse languages;
- frequencies of different causation types from spoken corpora of English, Lao and Russian;
- an artificial language learning experiment.

The typological data demonstrate a) that conceptual integration is not the only distinction that is correlated with formal integration, or compactness, cross-linguistically (cf. Dixon 2000), and b) that the conceptual integration itself is more correlated with formal length than with grammatical autonomy or linguistic distance, as iconicity theory would predict, or with productivity, as argued by Shibatani and Pardeshi (2002). The corpus data clearly show that the functions that are expressed by the more compact forms are also the more frequent ones in each of the three languages. Finally, the artificial language learning experiment demonstrates that language users have a bias towards choosing shorter causative forms to express more frequent causative situations, and longer forms to express less frequent ones, independently of the degree of conceptual integration.

All this evidence converges, indicating that efficiency is the best and the most parsimonious explanation of the cross-linguistic variation of causatives. In order to show that this account is not teleological (cf. Bybee 1999), I will provide a pragmatic model at the level of the speaker and the hearer in Keller's (1994) fashion, which involves mechanisms that are similar to Levinson's (2000) I- and M-implicatures, and the 'invisible hand' processes. I will argue that this model can account for the emergence and conventionalization of efficient form-function pairings in expression of causation and in other conceptual domains.

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Predictability and informativeness in iconicity of complexity: A Gricean perspective

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Keywords: causatives; iconicity; predictability; informativeness; implicature

This paper argues that iconicity of complexity is motivated not only by a semiotic ecology of predictability, as argued by Haspelmath (2008a,b), but also by a semiotic ecology of informativeness. Moreover, predictability-driven iconicity and informativeness-driven iconicity can be unified under a single theoretical umbrella: Grice's (1989) theory of generalized conversational implicatures. The paper's domain of inquiry are causatives. Its empirical core are recent experimental studies (Bellingham et al 2017, ms.; Bohnemeyer et al 2010; Kawachi et al 2018) that have confirmed the preferential association of conceptually simple causal chains (binary, physical, agentive, causation dynamics) with morphosyntactically simple expressions (lexical or morphological) and of more complex chains (non-binary, nonphysical, non-agentive, and/or involving enabling dynamics) with structurally more complex expressions (morphological, periphrastic, clause-combining), complementing similar findings from corpus studies (Haspelmath 2008a: 22-23; Levshina 2015, 2016, 2017). A frequency/predictability-based Gricean account of this distribution was first proposed by McCawley (1978): simple, high-frequency expressions trigger implicatures to stereotypicality based on the second Quantity maxim (Atlas & Levinson 1981), illustrated by Sally stepping on the car's brakes in (1), while complex, low-frequency expressions trigger implicatures to atypicality based on the Manner maxims, e.g., Sally stepping into the road in front of the car in (2). Zipf's Law of Abbreviation (Zipf 1935, 1945) submits to this analysis more generally (Levinson 2000: 112-113).

(1) *Sally stopped the car*

(2) *Sally caused the car to stop*

The theoretical contribution of the present paper is to argue that iconicity of complexity also springs from a second, independent source: when a more complex expression is more informative than a simpler alternative, the use of the more complex expression is preferentially restricted to information-richer meanings, based on the first Quantity maxim. The entailment relations in (3) illustrate informativeness asymmetries, and the corresponding scalar implicatures in (4) illustrate the preferential distributions over simple/complex scenarios (using \therefore for 'entails', $+>$ for 'implicates'):

- | | | |
|-----|---|--|
| (3) | a. <i>Floyd has more than two cats</i> | \therefore <i>Floyd has two cats</i> |
| | b. <i>Sally and Floyd bought a piano</i> | \therefore <i>Sally bought a piano</i> |
| | c. <i>Floyd broke the vase</i> | \therefore <i>The vase broke</i> |
| | d. <i>Sally made Floyd break the vase</i> | \therefore <i>Floyd broke the vase</i> |
| (4) | a. <i>Floyd has two cats</i> | $+>$ <i>Floyd has exactly two cats</i> |
| | b. <i>Sally bought a piano</i> | $+>$ <i>Sally bought a piano by herself</i> |
| | c. <i>The vase broke</i> | $+>$ <i>The vase broke by itself (no agent involved)</i> |
| | d. <i>Floyd broke the vase</i> | $+>$ <i>Floyd broke the vase on his own account</i> |

Examples (4a-b) are standard examples of scalar implicatures; (4c-d) illustrate the parallel behavior of causatives. Informativeness and predictability thus conspire to create the default mapping of direct causation to simple expressions and of indirect causation to complex expressions, contrary to Haspelmath's (2008a) purely predictability-based proposal. Future research will have to attempt to tease the contributions of the two principles apart empirically. That both Manner and Quantity maxims serve to ensure iconicity in natural language utterances was clearly seen by Grice (1989: 358).

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Effects of verb frequency and L1 transfer in L2 processing of English dative constructions

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Constructionist approaches maintain that an argument structure construction integrates or *fuses* with a verb to contribute to an overall sentence meaning^[1]. While previous studies have shown that first language (L1) and second language (L2) speakers draw upon information from both verbs and constructions to derive a sentence meaning^{[2][3]}, few studies have examined the process of fusion between a verb and a construction in real-time sentence processing. This study investigated how L2 learners integrate verb and constructional meanings in the online processing of English dative constructions. We tested effects of two potentially influencing factors in this integration process – verb frequency and similarities of constructions between learners' L1 and L2. To examine the role of verb frequency, we included either highly frequent verbs (e.g., *give*) or less frequent verbs (e.g., *offer*) in the target constructions. To assess the role of L1 transfer, we presented learners with two types of dative constructions: double object datives (DODs, e.g., *Tom gave Mary a book.*) and prepositional datives (PDs, e.g., *Tom gave a book to Mary.*). These two constructions exhibit different degrees of similarities to their correspondences in Korean, the native language of the learners in this study. The dative construction in Korean is best translated into the English PDs, yet it seldom allows for a double object complement as in the English DODs.

Methods. 13 advanced Korean-speaking L2 learners of English and 7 English L1 speakers (data collection ongoing) completed a self-paced reading task. Materials for the task included 24 English sentences in four conditions by crossing dative construction types (PD vs. DOD) and verb frequency (high-frequency (HF) vs. low-frequency (LF)) (see Table). Task items were presented on a computer screen in a non-cumulative, word-by-word fashion. Each trial began with a series of dashes indicating the position of target words in the middle of the screen, prompting participants to press the spacebar to reveal each word within a sentence. After reading each sentence, participants were asked to respond to a comprehension question by clicking one of the choices on the screen.

Prediction. If verb frequency affects the fusion process, readers will spend longer times for fusion when the sentence includes a low-frequency than a high-frequency verb. If L1 transfer plays a role, L2 readers will spend longer times for fusion in the DODs, which diverge from the Korean dative constructions, than in the PDs, whereas English L1 speakers will show little reading time difference between the two construction types.

Results. Participants' reading times on the critical and spill-over regions (V+1, V+2, V+3, & V+4) were compared across the groups and conditions (see Figure). Linear mixed-effects regression was fitted to residual reading times (log-transformed) in each region, including group (L1, L2), verb frequency (high, low), and construction (DOD, PD) as fixed effects, and participant and item as random effects. Results showed significant effects only in the V+3 region: a main effect of group ($b=-0.22, p=.002$), an interaction between group and construction ($b=-0.12, p=.040$), and an interaction between group and verb frequency ($b=0.13, p=.029$). Separate analyses conducted within each group in this region revealed that, while the L1 group showed only a main effect of verb frequency ($b=-0.10, p=.030$) with longer reading times in the LF than the HF condition, the L2 group showed only a main effect of construction ($b=-0.10, p=.007$) with longer reading times in the DODs than in the PDs. These findings indicate that L2 learners' fusion is affected by constructional similarities between L1 and L2, rather than verb frequency, whereas L1 speakers' fusion is not influenced by the construction types but instead is affected by verb frequency.

Table. Example stimulus for the self-paced reading task

Condition	Region						
	S	V	V+1	V+2	V+3	V+4	V+5
a		<u>gave</u>	the laptop to his girlfriend				
b	The	<u>offered</u>	the laptop to his girlfriend	because	hers	was	broken.
c	businessman	<u>gave</u>	his girlfriend the laptop				
d		<u>offered</u>	his girlfriend the laptop				

Note. Condition a: PD & HF; b: PD & LF; c: DOD & HF; d: DOD & LF

References: [1] Goldberg, A. E. (1995); [2] Bencini, G. M. L., & Goldberg, A. E. (2000); [3] Gries, S. T., & Wulff, S. (2005).

Variation in constructional productivity: The case of English modal constructions

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Constructional productivity is important in usage-based construction grammar, as differences in productivity may be distinguishing features among otherwise functionally overlapping constructions. Moreover, productivity can be a locus of constructional variation. Arguably, being able to measure and thus compare constructional productivity should be extremely helpful in addressing constructional variation.

Productivity is defined as the potential for high type frequency of a schema: the higher the type frequency, the more productive the schema (Bybee 1985: 132–134; Croft & Cruse 2004: 295–300). If applied to constructional slots, high type frequency, as Shibuya (2015) points out, is reflected in the lexical richness of the constructional slot in question. Consequently, measures of lexical richness applied in the analysis of the lexical diversity of texts can also be used to gauge the productivity of a constructional slot. Drawing on Shibuya's (2015) work on constructional productivity, Jensen (2016) suggests that lexical richness-based measures of constructional productivity can also be applied in the study of variation in constructional productivity across language varieties.

This opens up a venue for learning more, at least in a usage-based construction-grammatical perspective, about an otherwise much addressed phenomenon – namely, modal constructions of English. Investigating the productivity of the main verb position in modal constructions in English could be an important contribution to the ongoing constructionist research into synchronic and diachronic variation in construction-lexeme interaction in the V-position in English modal constructions (e.g. Hilpert 2016).

In the present study, we address, drawing on corpus data, variation across user- and use-based varieties in the productivity of primary modal constructions, such as [MAY V], [CAN V], [MUST V] and [SHALL V], as well as semi-modal constructions, such as [HAVE to V] and [GOT to V], via the application of lexical richness measures to the V-slot. The study shows that modal constructions in English are by no means monolithic in terms of productivity. For instance, [MUST V] and [HAVE to V] both display variation in richness in the V-position across the nine registers of the Open American National Corpus. The latter displays the highest degree of richness in the Letters register, while the former is the richest in the Fiction register. This suggests that the two modal constructions, while overlapping semantically in that both can be used deontically to express either strong obligation or epistemically to express logical necessity, differ in terms of how productive they are across use-based varieties.

Likewise, for instance, [SHALL V] displays variation in productivity across the AmE 2006 and BrE 2006 corpora, which suggests that modal verb constructions may also display variation in productivity across lectal, or user-based, varieties (in this case American and British English).

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Not only contrastive but also mirative? Additive negation constructions in English

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Keywords: construction grammar, corpus linguistics, exclusive particles, negation

Negation and exclusive particles (e.g. *only*, *just*) are classic topics in linguistics (e.g. Horn 1989; König 1991) but their combinations (e.g. *not only*, *not just*), which I will call additive negations, have received only sporadic attention. In one of the few studies to pay attention to these constructions, Horn (2000: 148–153) notes that there are semantic and syntactic differences between *not only* and *not just*. Semantically, *not only* presupposes that the element in its scope is true, while *not just* does not:

- (1) She isn't {just/#only} an ASSISTANT professor—she's a FULL professor. (Horn 2000: 149)

Syntactically, *not only* is possible before the finite verb or even the whole clause, contrary to other similar constructions. In these marked configurations, it is obligatorily combined with an affirmative continuation, rendering the constructions a case of contrastive negation (cf. McCawley 1991):

- (2) a. He doesn't {only/just/merely/simplely} like her (—he loves her).
b. He not {only/*just/*merely/*simply} likes her, he loves her.
c. Not {only/*just/*merely/*simply} does he like her, he loves her.
d. He {doesn't only like/*not only likes} her.
e. *Not only [does he like her]. (Horn 2000: 151)

Such observations hint at the existence of an intricate constructional network (Goldberg 1995; 2006), but its full details have not been studied until now. This is the starting point for the present study, which is a comprehensive corpus study of additive negations. I will focus on the four central cases: [*not only*], [*not just*], [*not merely*] and [*not simply*]. The data for the study comes from the British National Corpus and the methodological approach is quantitative corpus linguistics. The aim is to characterize the formal and functional properties of the constructions and to map out this part of the English construction.

Previous accounts of additive negations have characterised their meanings in terms of scalarity, foregrounding/backgrounding as well as surprise (Horn 2000: 148–157; Quirk et al. 1985: 941). The linguistic encoding of surprise has recently been discussed under the notion of mirativity (DeLancey 1997). One goal of this presentation is to see whether and to what extent additive negation participates in the expression of mirative meanings.

On the formal level, I focus on the constructional environments of additive negation, especially on the syntactic position of the negation (e.g. fronted or not) and on whether it is part of a contrastive construction together with a corresponding affirmative, as in (2a,b,c) above. Preliminary analysis suggests that the constructions differ in terms of their attraction to contrastive environments. This is evidence of some larger additive contrastive constructions (in particular [*not only X but also Y*]) being constructionalised further than others. On the functional level, I characterise the similarities and differences between the four additive negation constructions based on an analysis of their usage patterns.

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Speaking of speaking: Construction-coerced change of semantic roles for verbs of speaking in Puyuma (Austronesian)

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Keywords: semantic typology; construction grammar; frame semantics; reciprocals; Austronesian

In his semantic typology of action verbs, Dixon (2011) distinguishes two types of languages. In type A, dubbed the “nature-of-argument” type, different verbs in the same conceptual domain show different requirements on the nature of participants involved in the action expressed by those verbs. By contrast, in type B, or the “nature-of-action” type, the difference lies in the nature of the action irrespective of the nature of the participants involved. He illustrates these two types with verbs of speaking in English and Jarawara (Arawan). English belongs to type A because “[m]any verbs of speaking...have a fixed correspondence between semantic role and syntactic function” (p.211). For instance, the verb *report* requires the Message (i.e. what is talked about) to be encoded by its direct object and the Addressee by an oblique whereas the semantic-syntactic correspondence has to be reversed when it comes to the verb *inform*. On the other hand, Jarawara has two verbs of speaking, *-hijara-* and *-kamina-*, the difference of which “is not in the configuration of arguments involved, but in the type of action; *-hijara-* refers to a casual act of speaking, whereas *-kamina-* refers to something more deliberate, a story-telling” (p.212). This division of labor qualifies Jarawara as a type B language.

However, Dixon’s typology is concerned with the relationship across verbs, but not so much about the relationship of the same verb across constructions. In this study, we present an interesting case study of construction-coerced change of semantic roles concerning a reciprocally marked verb of speaking in Puyuma (Austronesian). Three constructions involving the verb *ma.za-zayar* ‘talk to each other’ are examined, where reciprocity is coded by the prefix *ma-* in conjunction with the *Ca*-reduplication of the root. In the inclusory construction (see Lichtenberk 2000), the plural pronominal clitic *=mi* ‘1PL.EXCL’ denotes a superset of the Speaker-cum-Addressee while the adnominal marker *tu=i=* introduces a subset of the Addressee. Importantly, the Speaker is interpreted as singular in spite of the use of a plural pronominal clitic. With everything else held equal, when *tu=i=* is replaced by another adnominal marker *kani=*, the same NP it marks encodes the Message instead and the same pronominal clitic has to refer to a plural Speaker. However, if the verb in the same sentence is additionally marked by *ki-*, which elsewhere in the language is a lexical prefix meaning “to get; to obtain” when collocating with a nominal root and marks passive voice when attached to a verbal root (Elizabeth & Teng 2009), the NP prefaced by *kani=* becomes the Addressee instead.

These constructions illustrate that semantic roles as well as participant numbers are not just locally determined by adnominal markers or pronominal clitics; instead they are coerced globally from the constructions they are part of. Moreover, we argue that reciprocal verbs without *ki-* encode symmetrical reciprocal activity, “where both parties have equal responsibility for initiating or maintaining the event” (Evans et al. 2011:11), whereas those with *ki-* profile one party as the primary initiator of mutual action, thus somewhat altering the nature of reciprocal activity. The Puyuma case shows that Dixon’s type A and B can both be observed across constructions in the same language even when the same verb of speaking is involved.

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As simple as that? A corpus-based contrastive analysis of the [ADJ as NP] and related constructions in English, French and German

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Keywords: constructions, corpora, English, French, German, idioms

In this talk, we argue that a contrastive constructionist approach to the idioms studied here provides a more consistent account of their semantic structures and the links between general comparison and the expression of a high degree than preconstructional approaches.

In their introduction to the Oxford Handbook of Construction Grammar, Hoffmann & Trousdale (2013: 3) state that as a reaction to approaches focusing on a ‘core-system’ of language, “Constructionist Grammar approaches provide a uniform analysis of more idiosyncratic ‘peripheral,’ as well as ‘core,’ linguistic features.” But soon after that (ibid: 4), the authors remark that “the question as to what counts as a construction is far from clear”. And since this inclusive approach characteristic of construction grammars arguably started with idioms, they seem like a good domain to discuss the notion of cross-linguistic constructions. Taking up the idea of a need for a distinction between what speakers know about their language and what they have to figure out, we want to examine, in a constructionist cross-linguistic approach, the [ADJ as NP] pattern and related patterns in English, French and German (pace Croft 2001, Kay 2013); our aim is not to reach universal typological generalizations, but to compare similar patterns in specific languages, in an approach similar to that advocated by Boas (2010).

First, phrases like *as black as coal* or *as clear as crystal* belong to the English language as familiar idioms, and as such, they are duly described in phraseological dictionaries. But they also have close counterparts in French (*malin comme un singe* = *as clever as a monkey...*) and in German (*arm wie eine Kirchenmaus* = *as poor as a church mouse...*), also described in phraseological dictionaries. The same goes for Russian (*здоров как бык* = *as healthy as a bull...*) or in other, unrelated, languages such as Mandarin Chinese (安(ān)如(rú)磐(pán)石(shí) = *as stable as a rock...*) or Japanese (こおりのようにつめたい: *kouri no you ni tsumetai* = *as cold as ice*).

Even with the inverted syntax in Japanese, the similarities are striking, and they can hardly be the result of a coincidence. There seems to be a family of constructions, or schematic idioms, of the type [ADJ as NP] across various languages, that enable to intensify the value of the adjective by complementing it with a noun phrase.

This is why we decided to investigate in corpora a phenomenon that is much broader and systematic than what is accounted for in idiom lexicons. Such a corpus study has already been conducted on English in the BNC (Desagulier 2015), but since the size of the corpus might be critical, we decided to use a larger corpus, the COCA (560 million words). For French, we used Frantext (251 million words), and for German, the DeReKo in two versions, a non-annotated version (approx. 8.628 billion words) and an annotated one (approx. 1.23 billion words).

The first observations of these corpora showed that along with quantitative observations, a qualitative approach was necessary. In English alone, as far as frequency is concerned, the [as ADJ as NP] and [ADJ as NP] behave markedly differently, and they also compete against [ADJ like NP] (*crazy like a fox*, *heavy like a rock*), which again behaves differently. These differences, largely ignored until now, must be accounted for. We have different patterns, not just one idiosyncratic pattern, but the similarities of form and function enable us to argue for the existence of a cross-linguistic family of constructions.

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Exploring recent changes to the Dutch way-construction using a web-based corpus

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Keywords: Dutch, way-construction, Construction Grammar, corpus linguistics, web-based corpora

Though its English counterpart has been the subject of many studies in a constructionist framework (see e.g. Israel 1996, among many others), the Dutch way-construction (found in sentences such as *Wij banen ons een weg door de menigte* 'We make our way through the crowd') has received comparatively little attention. The most frequent verb in the construction is *banen* (equivalent to *make one's way* in English), a highly specific verb occurring only in this construction. Kramer (2002) shows that the verbs in the early stages of the construction besides *banen* were limited to force-dynamic verbs such as *openen* 'open'. The construction has since undergone considerable host-class expansion, with various verbs encoding the manner or means of motion now being used. Verhagen (2003: 38) hypothesises that, unlike in the English construction, verbs denoting an activity not causally related to motion (the 'incidental activity' reading, in Perek's (2018) terminology) cannot occur in the Dutch construction. In this paper, I use data from the web-based NLCOW14A corpus (Schäfer 2015; Schäfer & Bildhauer 2012) to show that the incidental activity reading of the Dutch way-construction is now very productive, contrary to Verhagen's claim. I hypothesise that this recent development is a result of increased contact with and exposure to English due to the Internet era. This hypothesis is supported by three pieces of evidence. Firstly, the overwhelming majority of these verbs are attested in the Internet era, when Dutch speakers' exposure to English language media increased. Secondly, the verb *maken* 'make' has sharply increased in frequency in the construction; data from the *De Gids* corpus show that it was not attested at all before 1950, and it was attested only once in the SoNaR corpus (1954-2011). The more typical equivalent to *make one's way* is the verb *banen*, not *maken*. Finally, many of these incidental activity verbs are of English origin; these include *quizzzen* 'quiz', *pokeren* 'play poker', *headbangen* 'headbang'. This shows that contact can play a role in constructionalization, i.e. the creation of form_{new}-meaning_{new} pairings, and that analysing these developments through a Diasystematic Construction Grammar (see e.g. Höder 2012) lens yields considerable promise.

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Cognitive Linguistics and the Study of Indigenous Languages

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There has been a long tradition within the nearly four-decades-old cognitive linguistics (CL) movement of analyses that champion linguistic diversity, constructional specificity, and meaning as the starting point in any analysis of language. Much of this research has been based on data from unfamiliar and minority languages, a significant number of which have focused exclusively on languages spoken by those regarded as Indigenous peoples. Because most Indigenous languages are oral, and the speech communities have been small and highly interactive, these studies have been able to bring fresh data to the cognitive/functional/typological table—and, possibly, even served as an initial and continuing inspiration to the entire movement in the first place, as I will detail here.

However, the alarm bells of language endangerment—especially of small Indigenous languages—have been ringing more and more loudly in both scientific and popular media for the past 20-30 years. There is a natural fit between linguistic description, documentation, and analysis informed by a CL approach and the linguistic and pedagogical training so needed by speakers and learners of endangered languages. Cognitive linguists have much to offer language documentation, sustainability, and L2 pedagogy efforts since some of the core tenets of the field are based on analysis and promotion of actual usage, the ubiquity of metaphor and metonymy in lexicalization and constructionalization, and the primacy of situated and embodied interaction. Emphasizing the role that context, cognition, construal, convention, culture, communication, and language change all play in the framing and interpretation of linguistic expressions is something that cognitive linguists know how to do very well. It's also something that a new generation of CL practitioners need to commit themselves to as the first generation of cognitive linguists begins to fade from the scene and, with them, the memory of how the field came to be in the first place.

Cross-Linguistic Differences in Taking Another's Perspective: The Case of Adjectives Production

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Keywords: empathy, adjective, speech production, experimental study, cultural values

The present study deals with language production, with a focus on dimensional adjectives such as *tall/short*, *large/small*, and *good/bad*. In particular, it focuses on the cognitive function of empathy (i.e., taking another's viewpoint) and assumes that it would play an important role in expressing an adjective. The experiments conducted in the current work not only demonstrated this assumption but also revealed cross-linguistic differences in preferred objects or targets for empathy: Japanese speakers were apt to rate an object from the perspective of the object to be cared for, like a child or a small animal, while English speakers tended to take the perspective of an adult or a large animal, which was regarded as similar to themselves in some sense.

In the field of psycholinguistics, the experimental research on language production is much less common than that of speech (sentence) comprehension, let alone the production of adjectives. The minor investigation field of adjective comprehension (e.g., Sedivy et al., 1999 and Sedivy 2003) has nevertheless scarcely examined the relation of perspective or empathy (which is a popular theme in cognitive linguistics, e.g., Verhagen, 2005) to the meaning-making process of using adjectives. Moreover, the speech production of adjectives can be influenced by cultural differences: for this reason, this study relies on references to cultural psychological studies (e.g., Markus & Kitayama, 1991) to predict the result of experiments.

Owing to limitations of space I shall put forth only one experiment, although the other studies have basically shared almost the same result. Its methodology included a size evaluation task (SET) to test the following hypotheses: (i) when asked to make a rating judgment on a situation where a character is involved, regardless of cultural values, one would strive to take the character's perspective; (ii) the extent of doing so, however, would vary depending on culture or language and would be stronger in East Asian languages like Japanese; (iii) East Asians, including Japanese, would show a tendency to take the viewpoint of something viewed as smaller or weaker in a society.

The participants were 63 English (gender: 31 females, 32 males; age: $M = 32.51$, $SD = 9.21$) and 69 Japanese (gender: 32 females, 37 males; age: $M = 40.23$, $SD = 10.15$) speakers. The stimuli for the experiments were adapted from cartoon images. All images included a beach ball (with ten different sizes) as the object of a judgment. The experimental condition contained a different character (e.g., a little child, a tall man, or a small or large animal) being able to conceptualize the ball, so that participants might have tried to recognize the character's perception to make their own assessment in a joint way. Control items were produced, where no additional character was involved. Each situation was randomly presented twice and the participants were asked to answer the question: "Would you say that this ball is large in size?"

As a result of the statistical analysis (generalized linear regression model), (I) regardless of language, the ball was viewed as larger in size when a smaller character (person or animal) was looking at it, while it was viewed as smaller when the character looking at it was bigger; (II) there were significant differences between languages concerning the extent of that difference ($p < .05$); (III) Japanese participants were more strongly influenced by contexts that included a little child or a small animal than English speakers were ($p < .05$).

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How Do People Understand Linguistic Empathy? The Case of Japanese Giving Verbs

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Keywords: Cognitive Grammar, language processing, linguistic empathy, salience, situation model

This study aims to reveal how people understand *linguistic empathy* (i.e., empathy encoded in language) using two of the Japanese giving verbs, *age-ru* (which I use instead of *ya-ru*) and *kure-ru*. Kuno (1987) describes the difference between *ya-ru* and *kure-ru* in terms of *empathy*, the degree to which a speaker takes the perspective of a participant in a sentence: these verbs differ in that speakers adopt the subject's (giver's) perspective when using *ya-ru* while the dative object's (recipient's) perspective when using *kure-ru*. However, little is known regarding how people understand linguistic empathy. This study hypothesizes that people actually adopt the perspective of a participant in a sentence when they understand it, based on the *situation model*, where people are supposed to understand language by simulating its content in their mind (Zwaan 2004).

To test this simulation view, an experiment was conducted using a sentence-image matching task in which participants were asked to see pictures after reading sentences and decide as fast and accurately as possible if the pictured events matched the described events. All the sentences contained either *age-ru* or *kure-ru*, and all the pictures were drawn from the perspectives of either subjects or dative objects.

The prediction was that participants would be faster at responding to the pictures drawn from the subject's perspective and dative object's perspective when reading *age-ru* and *kure-ru* sentences, respectively. However, the results were contrary to this prediction: the participants were faster at responding to the pictures drawn from the dative object's perspective when reading *age-ru* sentences, and the subject's perspective when reading *kure-ru* sentences.

These results can be explained by the concept of *salience* in Cognitive Grammar, which prescribes that participants are more salient when they receive empathy (Langacker 1991). Therefore, subjects in *age-ru* sentences and dative objects in *kure-ru* sentences are more salient than those in *kure-ru* sentences and *age-ru* sentences, respectively. In the pictures from the subject's perspective, dative objects are drawn more extensively and thus visually more salient than subjects. Similarly, in the pictures from the dative object's perspective, subjects are visually more salient. Therefore, when the salient participant in a sentence was also the salient in the picture, the participants were faster to verify the picture. This is why the results were contrary to the prediction. Consequently, people understand empathy by conferring salience on the participant with whom the speaker empathizes.

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Smelling in English: From perception to description

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Keywords:

Olfaction, Perception, Codability, Description, English

Our sense of smell has long been characterized as the primitive, under-developed, and weakest of our five senses. Even Darwin considered it to offer only an “extremely slight service, if any” and its sole purpose is in triggering vivid memories that were once forgotten (1889:17–18). As such, smell has been comparatively under-researched. Linguists have shown the English olfactory lexicon to be impoverished (Winter, Perlman & Majid 2018), and that we very generally prefer source-based descriptions (Majid & Burenhult 2014), but from a cognitive linguistics perspective, much the discussion for the English language has ended there, despite an increase in recent research with minority languages that challenges the Eurocentric view of a ‘lower’ sense of smell in humans (see, for example, Majid et al. 2017; Floyd, San Roque & Majid 2018). It is yet unknown how speakers of languages without dedicated olfactory lexicon, such as English, compensate for this within the olfactory domain. For instance, we need to look at the olfactory equivalents of hue, saturation and brightness that we have for colour. Are all of the different salient dimensions of odour perception as equally impoverished as each other? Or, are particular dimensions, qualities, or properties more readily codable? This paper will address this question by reporting the results of two tasks by using a selection of 40 scents. The first task is an adaptation of the Successive Pile Sorting Task (see Boster 1994 for the original task; see Malt et al. 2011 for an example of an adaptation targeted towards linguistics). There 38 native English-speaking participants aged between 18 and 57 who judged each of the scents by placing them in sequentially smaller categories, based on their degree similarity. The results were analysed putting them into Multi-Dimensional Scaling solution – a technique that produced a two-dimensional olfactory ‘colour-wheel’. Distinct and salient qualities in perception are evidenced by a greater distance on the ‘smell-wheel’, compared to the similarities, which are demonstrated by adjacency. For example, Orange Blossom appears near Green Fig, as both are fresh scents, but both are distant from Dark Oud and Patchouli, quite heavy and woody scents. The second task is a description-based task employing the same stimuli where participants were asked to give verbal descriptions of each scent to reveal how participants are appealing to particular qualities and properties in their responses, and how they are doing so. By using these two tasks, we can explore how variation in the strategies of verbal expression correlate with the key perceptible differences in the conceptual space, such as pleasantness, familiarity, intensity, or freshness, when there is not a readily available lexicon to draw on.

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Network Analysis as a Means of Assessing Translatability of Emotion Words

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Keywords: culture, concepts, corpus linguistics, equivalence, alignment

Emotion words, as labels for emotion concepts, communicate culturally held understandings about experiences, values, and goals. Cross-cultural differences in emotion concepts are well-established (e.g., Russell, 1991), and indeed this domain shows poor semantic alignment across languages (Thompson et al, 2018). Purportedly ‘untranslatable’ emotion words are particularly salient examples of this phenomenon: Tagalog speakers have a word, “gigil”, for “when something is so cute that you want to squeeze it”; second language learners of Dutch have a difficult time appreciating the nuances of “gezelligheid”; and Italian does not have an easy translation for English “excitement”. But are these words actually untranslatable, or does translatability perhaps exist on a continuum? Previous work has employed a variety of methods for comparing word meaning across languages (Ogarkova, 2016), including feature rating, free association, and metaphor analysis. However, most of these methods are focused on describing the nature of differences in meaning, or comparing entire semantic fields, rather than measuring the (dis)similarity of individual words.

In this project, we use free association data from the Small World of Words study (De Deyne et al, 2008) to construct semantic networks for ‘untranslatable’ Dutch words (e.g., “gezellig”) and their possible English translations. Network analyses of free association data have been used to model lexical knowledge and semantic growth, but have not yet been used to compare meaning across languages. Moreover, by using closely-related languages, we are able generate networks that are maximally comparable (Majid et al, 2015). We populated semantic spaces for Dutch and English target words using semantic relations as well as back translation protocols. We then characterized these semantic spaces in terms of their network metrics. For each Dutch to English comparison, we selected networks with equivalent metrics and evaluated the similarity of target words’ behavior within their respective networks using these same metrics (e.g., degree, betweenness centrality, clustering coefficient). Using this data-driven approach, we found no (single) English word matches for Dutch targets.

Semantic networks can also be constructed based on distributional semantic models (DSMs; e.g., Utsumi, 2015). To contextualize our results from the free association networks, we present DSM networks based on lexical neighborhood data from Continuous Bag-of-Words (CBOW) models trained for Dutch and English, which have been shown to accurately predict behavioral data in both languages (Mandera et al, 2017). These DSM networks allow us to compare words based on both paradigmatic and syntagmatic relationships they maintain within their respective languages, thereby providing insight into aspects of word meaning that may be ignored by other methods. Taken together, our results illustrate a novel means of understanding word meaning and assessing translatability. In our discussion, we evaluate our network analyses against other existing measures of cross-linguistic word similarity, including data from forthcoming property generation, feature rating, and scenario elicitation studies.

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Conceptualization of negative social emotions in French.

A Behavioral Profile Approach to *honte*, *honteux*, *culpabilité* and *coupable*.

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Keywords: Behavioral Profile Approach, conceptualization, corpus linguistics, French, social emotion.

The aim of this study is to quantifiably identify the structuring of the concept SHAME in French, based on the Behavioral Profile Approach (Geeraerts *et al.* 1994 *inter alios*). In cross-linguistics research and social psychology, previous studies have shown significant differences in the conceptualization of SHAME between different speech communities (Krawczak 2018 *inter alios*). Results have also shown that SHAME may involve differentiating factors such as negative self-evaluation, the person responsible for the actions, intensity, and duration (Tangney *et al.* 1996 *inter alios*). However, this same research has identified fundamental and underlying socio-emotional dimensions that structure the emotion universally, notably in terms of the cause of the emotion or the presence / absence of an audience. This study seeks to confirm such results for French but also seeks to extend the analysis to account for the possible effects of constructional meaning on the linguistic evidence for the above findings. Corpus data in previous research has generally sought to control for constructional variation but arguably, the abstract semantics associated with various constructional profilings may help better understand the conceptualization believed to be indexed by the lexical semantics.

As the actual key words for the concept SHAME in French, we chose two adjectives, and two nouns, namely *honteux* 'ashamed', *coupable* 'guilty', *honte* 'shame', and *culpabilité* 'guilt'. This choice is based on frequency, making the assumption that more frequent items are more representative of a given culture (Krawczak 2018). Constructional variation associated with the lexeme *honteux* means it can both attributively and predicatively describe events or actions that cause shame. We do not control for this variation, instead the difference of referent (experiencer or cause) are taken into consideration in the annotation. The sample data are taken from the compiled personal online journals in 2018 and 2019. As the first step of Behavioral Profile Approach, the corpus data are submitted to manual annotation by the author and a second annotator, with usage features, namely Cause of emotion (bodily cause, inadequacy, misfortune, failure etc.), Type of audience (known, unknown, general public, absence), Intensity of emotion, Duration of emotion, Intension, Responsible for the cause (self, alter close to self, alter in the same group etc.), Gravity of the cause, Reference of emotion (first, second, and third person, behavior, state of affairs), Temporality, and Construction. The factors of Gravity of cause and Intensity subjectively measured with the use of a Likert scale. For both of the two types of factors, Kappa statistics is used to assure inter-coder agreement.

The manual analysis of the uses produces a large set of metadata - the behavioral profile. At this stage, multivariate quantitative methods, such as multiple correspondence analysis, will be applied to the annotated data, in order to identify multidimensional association between explanatory variables. Multinomial regression analysis and random decision forests will then be used to confirm the descriptive accuracy of the multidimensional patterns observed in the sample. The statistical methods applied to the qualitative approach will provide quantified multidimensional profiles of the concept SHAME in French. We expect the results will confirm the underlying structural dimensions of the emotion as well as reveal various characteristics unique to French. Most importantly, we hope to demonstrate that constructional effects need to be integrated into the corpus data of keyword-based research on conceptual structure.

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Checking the adequacy of second-order vector space models of meaning

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Keywords: distributional semantics, English, sense disambiguation, vector space models

Research question – In the Nephological Semantics research project of which the present study is a part, automatic semantic analysis takes the form of second order vector space models (Heylen, Speelman, & Geeraerts, 2012; Heylen, Wielfaert, Speelman, & Geeraerts, 2015). While type-level models collapse the variation of each lexical item into a unique vector, token-level (or second-order) models build on the type-level vectors to represent individual tokens, and thus model semantic variation within each type.

The question then arises: how adequate are such models for discriminating senses, compared to a manual, concordance-based lexical analysis?

Relevance – The question addressed in this study is important for the methodology of Cognitive Linguistics, both from a fundamental and a practical point of view. From a fundamental perspective, the investigation is a contribution to the long-standing debate about converging evidence in Cognitive Linguistics: what are the limits and complementarity of various data types (in the case at hand, alternative corpus-based approaches) in semantics?

Practically speaking, corpora constitute an immensely valuable source of language material for usage-based linguistic analyses. In the case of semantics, large-scale annotation is still an expensive, time- and energy-consuming enterprise that relies mainly on manual work. Thus, checking the reliability of automatic sense disambiguation techniques is highly relevant for any attempt to scale up corpus-based semantic analyses of large corpora.

Method and materials – The case study presented here involves the item *church* in the Brown corpus. As the vector space models may vary along different parameters (association measures used for weighting, span of context words, etc.), the study considers a wide range of alternative models. These are based on (weighted) frequency matrices based on the co-occurrence frequency of the token's context words with other types (i.e. merging the type-level vectors of the context words to represent a token). The resulting matrices are then rendered, through multidimensional scaling, as 2D-scatterplots. In this visualization, each point represents an occurrence, while its position relative to the other points, the similarity to the other occurrences.

These models are assessed by visual inspection, and by means of the diagnostics described in Speelman & Heylen (2016), against two disambiguated versions of the data: on the one hand, one based on the Semcor semantically tagged section of the Brown corpus, on the other hand, a manual concordance-based version that takes into account specifically cognitive linguistic features of semantic structure (such as multidimensionality and overlapping of senses).

Results and discussion – The case study shows that the adequacy of the token level vector space models depends largely on the granularity of the semantic analysis. Broad distinctions like that between an institutional and a material reading of *church* can be approximated, but finer metonymical, facet-like distinctions (like that between the church building as architectural object or as place of worship) rely on specific lexical cues that are not sufficiently picked up and weighted by the present models.

Further steps in the research may therefore involve the questions, first, through which techniques such cues could be detected in the corpus, and second, whether the models could be improved by enriching them with externally available information, like lexical associations or other experimental data.

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Addressing the address function: A corpus study of the Russian new vocative

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Keywords: Corpus; New vocative; Morphologization in progress; Morphology-phonology-phonetics interface; Russian

The vocative is an enigmatic case since it is used for calling upon the addressee instead of marking the syntactic relations between participants in a sentence (Daniel and Spencer 2008). The present paper investigates the so-called new vocative in Russian, a category that provides a unique opportunity to study the evolution and function of the vocative. On the basis of extensive corpus data, it is argued that the Russian new vocative involves complex interactions of phonetics, phonology and morphology, and that these interactions are most adequately represented in a non-modular framework such as cognitive linguistics.

In an earlier historical stage of Russian, like other Slavic languages, the vocative case was used to mark vocative meaning (e.g. *bože*, for the vocative case of *bog* 'God', Nessel 2015). However, while the "old" vocative case is now limited to a handful of archaic words, a number of researchers have identified a new type of vocative morphology in present-day Russian, which involves shortened forms like *mam* from *mama* 'mom-NOM.SG' (Daniel and Spencer 2008, Parrott 2010, Andersen 2012 and references therein). The new vocative is quite frequent; the Russian National Corpus (www.ruscorpora.ru, accessed on September 6, 2018) has attestations in 8,236 documents, of which the vast majority is of the new type under scrutiny in the present paper.

Although most researchers have studied the Russian new vocative from a morphological perspective, a number of claims have been made about the phonetics of vocative forms. For instance, it is claimed that new vocatives display voiced obstruents in word-final position, despite the fact that Russian has final devoicing (Daniel and Spencer 2008). However, such phonetic exceptions have received limited attention among phoneticians, and a rigorous phonetic investigation is therefore necessary. Moreover, little investigated is the interaction of morphology and prosody in the context of the new vocative: in what way does morphological marking (e.g. morphological alternation) interact with prosodic marking (e.g. intonation)?

To tackle these issues, we analyze the Multimodal Russian Corpus (MURCO, Grishina 2010), which contains video data produced by multiple speakers in various contexts including public speech, private speech and movie speech. An acoustic analysis was conducted measuring inter alia (i) fundamental frequency (F0) contours (intonation), and (ii) voicing proportion during the final consonants (for words ending with stops or fricatives, such as *Ser'ož* 'Sergey! (a male name)'). In addition to the new vocative itself, the nominative case with a vocative function (e.g. *mama!* vis-à-vis *mam!*) was also considered, since the nominative case, which is a default case in Russian, can also occur in the same context. Preliminary results demonstrate: (i) The new vocative is marked not only by morphology, but also by prosody such as the use of distinctive intonation; (ii) no sustained vocal fold vibration was observed during the word-final obstruent at least for some fricatives.

While the Russian new vocative is an interesting category in its own right, it is of particular interest to cognitive linguistics, because it demonstrates the advantages of a non-modular model, where phonetics, phonology and morphology are tightly integrated instead of relegated to different modules. We show that a cognitive approach with radial category networks and schemas incorporating phonetic, phonological and morphological information (e.g. Nessel 2008) provides an insightful approach to the new vocative in Russian.

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Grammatical profiling of Czech nouns: what do cases tell us about nouns' meanings

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Keywords: animacy; case semantics; Czech nominal morphology; cluster analysis; grammatical profiles

Nouns in Czech are inflected for case and number and are categorized by gender and inflectional class. While some cases have limited and well-defined functions (e.g. the nominative as a subject case), others are more complex (e.g. the instrumental expresses commitatives, instruments, locations, and agents in passive constructions). In this paper, we analyze the relationship of case and meaning from a novel perspective of grammatical profiling. Grammatical profiles, relative frequency distributions of all inflected forms of lemmas in a corpus, were introduced by Janda & Lyashevskaya (2011) as a subtype of the behavioral profile method (e.g. Gries & Divjak 2009) and provide an opportunity to study variation in form and its relation to meaning on a relatively large scale.

By employing the grammatical profile method, we show to what extent patterns of use of grammatical features are interpretable through word meaning and how stable this relationship is across different corpora. We extracted grammatical profiles of all nouns in four different corpora of Czech (written and spoken Czech, movie subtitles, translations of the proceedings of the European Parliament). After filtering out low frequency lemmas ($ipm < 7$), we analyzed a set of 821 noun lemmas that appear in all four corpora. The distributions in each corpus were analyzed using hierarchical clustering to identify lemmas with similar profiles. Obtained clusters were studied with respect to the relative frequency of individual cases and the meanings of cluster members.

The results show that there are potentially meaningful groupings in the data. We identified four clusters that are, with one exception, found in all four corpora. The clusters suggest that the analyzed distributional patterns may be interpreted as an interplay between word meaning and more abstract syntactic patterns. For instance, one of the clusters is characterized by a high proportion of nominative uses and contains almost exclusively human referents, confirming the expectation that animacy will be a strong predictor of noun behavior. A different cluster has a high proportion of genitives and contains nouns that express quantity (e.g. units of measure), a consequence of the fact that most Czech numerals govern the genitive case (e.g. *pět litrů* 'five liter.pl.gen'). The results also show similarities and differences between corpora, such as the differences in relative frequencies of the nominative, genitive, and instrumental case in the "human" cluster. The results of the analysis thus show that it is possible to "go from form to meaning via statistics" (Kuznetsova 2015) and that the distribution of relatively abstract grammatical categories which oftentimes have multiple functions is to an extent driven by meaning, as much in potentially abstract written texts as in spontaneous spoken data.

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A corpus-based discourse analysis of the linking adverbial *besides*

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Keywords: *besides*, linking adverbial, conjunctive adverbial, discourse analysis, corpus

This study examines the phraseology of the linking adverbial *besides* to unravel why, unlike similar-meaning transitions such as *in addition*, it sounds unnatural in some contexts, as in "*She likes football. Besides, she likes tennis and basketball*" (*Oxford Advanced Learner's Dictionary*). A total of 205 instances from (1) two written English corpora of academic English (the Michigan Corpus of Upper-level Student Papers and the British Academic Written English corpus), (2) academic sections of the British National Corpus and the Corpus of Contemporary American English, and (3) examples from 35 English teaching coursebooks or others materials were analyzed. Each instance was examined to identify the discourse environment in which *besides* is used to bind the sentences together, which might explain the pragmalinguistic features of the sequences of sentences joined by *besides*. In line with Yeung (2009) and Hannay, Caro, and Mackenzie (2014), the findings suggested that *besides* co-occurs frequently with pragmalinguistic features typical of argumentations. While most reference materials define the usage of *besides* as a linking adverbial in relation to the nature of the element that follows it, no consistent pattern was discerned across those elements. On the contrary, the use of *besides* was found to be regulated by the nature of what precedes it. In 93.6% of the data, *besides* was shown to be used to make an addition to the preceding clause—either the proposition to be supported or the immediately preceding statement to which the *besides*-clause lends support—that expresses "negativity." In most cases, negation was acquired by means of an explicit negative word (e.g., "not," "no," or "never"), a negative affix (e.g., "in-," "un-," or "dis-"), words with negative implication such as semi-negatives and the focus particle "only," or the degree adverbial "too" with a negative signification in the context. Negative assertions were also made in the form of a rhetorical question, the subjunctive mood, or the comparative construction. When negativity in the preceding clause is not expressed overtly, the *besides*-clause was shown to act as a rhetorical cue for treating previously stated arguments as premises for an inference of a *de facto* proposition, which takes a negative form without fail. Pedagogical implications are discussed in the light of the findings.

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On the rise of truncated causal adjuncts in English

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Keywords: corpus linguistics, frequency, input structure, because X, causal relation

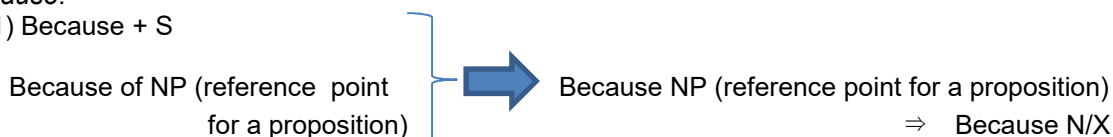
Because X is a recent development in informal registers like conversations and blogs. *Because* is now used to introduce not only nouns but also adjectives and other parts of speech (Schnoebelen 2014, Kanetani 2015). However, this is not the only innovative formation attested in web corpora like GloWbE and NOW. *In case X* appears to follow suit. It is interesting that the same kind of innovative formation does not seem obtainable with other causal adjuncts like *as a result of*, *in spite of*, *by virtue of*, *owing to*, or *on account of*.

If frequency of use is the driving force for the omission of *of* and is the key factor for the innovation, the new structure observed with *because X* should be analogically attested with *as a result X* or *in spite X*, since these causal adjuncts (*as a result of*, *in spite of*) are used more frequently than the adjunct phrase *in case of*. In this presentation, I would like to delve into the reason for the rise of these new constructions.

As Kehler (2002) observed, cause-effect is a coherence relation that should be maintained between propositions. In line with this coherence restriction, many complements of *because of* are noun phrases with different modifications that correspond to some propositional contents. However, there are also simple noun phrases employed in the complement position, like proper names or pronouns. In these cases, noun phrases work as conceptual reference points (Langacker 1993) for the contextually recoverable propositional contents.

In the formation of *because X*, we have two input structures: *because S* and *because of NP*. This NP can be conceptually expanded to a proposition. The new structure resulting from the unification of the two structures—namely, *because NP*—is feasible since NP is conceptually equivalent to S, as in (1). Importantly, NP is a reference point designating a proposition. Now that the preposition *of* is missing, the category restriction on the complement (NP) is lost, and any element can fill this slot as long as it can work as a reference point for the contextually relevant proposition. These can include adjectives, verbs, polarity expressions (yes/no), and adverbs, in addition to nouns, in the complement of *because*.

(1) Because + S



In case X also has two input structures: *in case S* and *in case of NP*. The new construction *in case X* is generated through the unification of these two structures, as in the case of *because X*, though the new structure is still developing into a construction.

As for other causal adjuncts, I picked the five phrases listed in the first paragraph and checked the usages of their truncated versions in GloWbE and NOW. I used the search strings *in spite [n*](noun)*, *in spite [j*](adjective)*, *in spite [v*](verb)*, and *in spite [r*](adverb)* for the phrase *in spite of*. I did the same survey with the other phrases, and all of them have truncated versions attested in these web corpora, but their complements are basically restricted to NP and gerunds (there are sporadic exceptions, but those are also grammatically deviant in many other respects). So, they do not seem to go beyond the border of a simple truncation of prepositions.

From the observations presented above, we can claim that although frequency of use is an important factor in the emergence of new structures (Hopper & Traugott 2003), other factors may control how far the change can proceed, and underlying input structures are also crucial for analogical extensions, at least in some cases.

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On hyperbolic scenarios, hyperbolic load, and the potential communicative impact of hyperbolic uses of language

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Keywords: hyperbole, strengthening, mitigation, emotional impact, degree of likelihood

This proposal starts off from the claim that hyperbole is not simply a rhetorical or communicative phenomenon. It should also be addressed from the point of view of cognitive modeling. Within this context, it has been proposed that hyperbole involves an upscaling cognitive operation carried out on a scalar concept (Ruiz de Mendoza & Peña 2005, Peña & Ruiz de Mendoza 2017). In cognitive and communicative terms, the situation in which the speaker upscales a magnitude out of proportion calls for a collaborative hearer getting involved in bringing the magnitude down to a less extreme value compatible with a real-world situation. This adjustment task results in the special meaning impact of hyperbolic expressions. Hyperbole, like metaphor, has also been regarded as a cross-domain mapping, where an upscaled conceptual representation is used to set up an imaginary source domain that helps us reason about the target domain capturing a real-world situation (Ruiz de Mendoza 2014: 190). For instance, in *John can smell pizza from a mile away*, the imaginary source domain contains a fictitious scenario with a person that has an extraordinary sense of smell. This domain lends its structure to the target domain, the real-world situation in which a person can smell pizza from a long distance. The hearer's attention is drawn to John's unique sense of smell and prompts an emotional reaction of astonishment. Finally, Peña & Ruiz de Mendoza (2017) have distinguished between constructional and inferential hyperbole. The former is a highly-conventional, cognitively entrenched, form-meaning pairing invariably describing a (virtually) impossible state of affairs based on a disproportionately magnified scalar concept. It rests on identifiable syntactic units like 'a billion times.' The latter, by contrast, derives from contextual incongruity (e.g. *I was quaking from head to foot, and could have hung my hat on my eyes, they stuck out so far*). On the basis of an analysis of 300 hyperbolic examples taken from the COCA we go beyond this typology and claim that both constructional and inferential hyperbole result from incongruity. Thus, the difference between constructional and inferential hyperbole simply lies in the source of such discrepancy, whether mainly triggered by specific syntactic patterns (and to a lesser extent by context) or exclusively by contextual factors. The degree of inconsistency is another issue that needs to be addressed. Whether hyperbole is constructional or inferential is immaterial to assess its degree of incongruity. The higher its degree of incongruity, the greater the hyperbolic import of an expression. We also observe that the higher the degree of probability of the imaginary scenario of an utterance, the lower its degree of hyperbolic impact. Moreover, the higher the hyperbolic import of an expression, the greater its emotional impact. In sum, we put forward three dimensions along which hyperbolic expressions should be considered: the likelihood of the hyperbolic scenario, the degree of hyperbolic load of the linguistic expression, and the degree of its emotional impact on the hearer. These dimensions relate as portrayed in the following table:

Likelihood of hyperbolic scenario	Degree of hyperbolic load of the expression	Degree of emotional impact on the hearer
Impossible/unconceivable	high	high
Hardly conceivable but likely	moderate	moderate
Conceivable but far-fetched	low	low

As part of a development of the previous accounts in terms of cognitive modeling, we discuss examples drawn from our corpus along the lines of this three-fold characterization of hyperbole.

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Onomatopoeia as Signs of Naturalness: Semiotics on the Language and Environment Nexus

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Keywords: Onomatopoeia, Nature, Environment, Signs, Discourse, Poetic Structure, Semiotics

“Nature interpretation” is an activity largely practiced in the field of environmental education and its goal is commonly understood as “bridging between humans and non-humans”. The present paper examines nature interpretation as a discourse of environmentalism and reveals how it enacts “natural” space-time with the use of onomatopoeia and diminutives and its ritualized discursive structure namely based on the Jakobsonian semiotic insight on poetic languages (Jakobson, 1960). In other words, the paper recognizes “nature” as a social fact and reveals what type of nature is discursively textualized through forms and other linguistic elements of discourse. The narrative data analyzed in the paper was collected in the eco-institute located in Yamanashi prefecture, Japan, in 2006 (Asai, 2015).

First, the paper investigates how nature interpretation consists of highly stylized discourse through multi-layered poetic structures in three aspects: (1) the nature interpreter's linguistic description of animals using onomatopoeia and other diminutives, (2) mimicry or impersonation of animals with the use of emphatic bodily movements, and (3) the entire discourse structure constructed in a series of segments throughout the nature interpretation program. Second, the paper examines the process in which nature interpretation poetically or iconically mediates the deictic center of the communicative event (i.e., “here-and-now”) and its context outside the immediate surrounds of communication (i.e., “there-and-then”). This allows nature interpretation to achieve at least three tasks: (1) to metaphorically evoke the notion and sense of “mother nature”, (2) to vividly enact a ‘direct / physical / bodily’ experience with nature, and (3) to ritualize the entire interaction structured around the forest and the participants’ experience through nature interpretation. For such analysis, the paper employs an overview of Du Bois’ arguments regarding the relationship between quotation in language use and shamanistic interaction, which schematizes the correlation between “linguistic and behavioural features” and “the categories of speech” with the notion of context dependency (Du Bois, 1986).

Based on this analysis, the paper demonstrates that nature interpretation presupposes the dichotomy of humans and non-humans (culture and nature), and in turn ideologically mediates, i.e., epitomizes the “bridge”, between such contrastively conceptualized spheres by creating ritualized space-time. In other words, it points out that nature emerges as a particular type of concept and is experienced through a particular form of discourse. It also indicates that the association of and the use of onomatopoeias with nature is not ‘natural’, but ‘naturalizing’; that is to say such association is ideological in the environmental discourse. They are ‘naturalizing’ in the sense that they appear as motivated, non-arbitrary, thus ‘natural’ signs. Finally, the paper suggests that while this environmental ritual effectively creates direct experience with nature by evoking the sense of a lost, pre-modern mythical paradise of nature for the participants here-and-now, this intentionally ritualized and “naturalized” use of language, is a distinct sign of post-modern environmentalism, as manifested in the persona of the nature interpreter and her/his speech acting.

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A factor analysis of metaphor functions in psychotherapy

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Keywords: metaphor, psychotherapy, survey research, factor analysis, applied cognitive linguistics

Psychotherapy (or psychological counseling) is a major context of application for cognitivist metaphor theories. Metaphors are thought to perform at least five key therapeutic functions: i) helping clients express emotions and attitudes, ii) helping therapists and clients explain difficult concepts, iii) introducing new frames of reference, iv) alleviating client resistance, and v) building a collaborative relationship between therapist and client (Lyddon, Clay, & Sparks, 2001). There is much discourse analytic research on how these functions are enacted in psychotherapy talk, but they tend to assume that i) the functions are indeed perceived as such by therapists and clients, and ii) metaphorical language is superior to non-metaphorical language in performing them. This paper reports results from a survey study (N=150) to critically interrogate these assumptions. Participants read two constructed therapy dialogues, counterbalanced for presentation sequence and controlled for all other differences, where therapist and client discuss an issue using metaphorical and literal language respectively. Each dialogue is followed by a 15-item questionnaire to rate how well the presumed functions were performed (e.g. *the therapist and client can work effectively together*, *the therapist is able to explain difficult concepts*). A Confirmatory Factor Analysis (CFA) reveals that the espoused five-factor model does not provide a satisfactory fit for the survey results (model χ^2 $p < 0.001$, CFI=0.894, SRMR=0.066, RMSEA=0.104). A subsequent Exploratory Factor Analysis (EFA) with orthogonal varimax rotation suggests that, instead of the five distinct functions proposed in the literature, participants discerned three functions (model χ^2 $p = 0.043$, TLI=0.944, RMSEA=0.0748) reflecting a more holistic and comprehensive view of what metaphors can do. A second EFA conducted on literal responses yielded only two factors, lending support to the view that literal language is less functionally nuanced. Within-subjects metaphor vs. literal ratings of the items under the emergent three-factor structure were then compared. Metaphor ratings were significantly higher in all three factors ($p < 0.01$), suggesting that metaphorical language is indeed perceived as more effective than literal language when discussing various aspects of clients' issues. Theoretical and practical implications of the findings will be elaborated.

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Culture and context in translating perception metaphors: Using eye-tracking methodology in English-Estonian empirical research

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Keywords: metaphor, perception metaphor, metaphor translation, culture, eye-tracking

The topic of metaphor translation has attracted attention in linguistics, cognitive linguistics, psycholinguistics and translation studies, and it has been widely researched (Van den Broeck 1981, Newmark 1981, Glucksberg 2003, Kövecses 2003, Philip 2003, Schäffner 2004, Li 2011, Sandford 2016, etc.). However, less attention has been paid to the topic of perception metaphor translation, and therefore is an appropriate ground for further development. In translating perception metaphors from one language into another it is crucial to understand the intersection between linguistics, translation and culture, as each of these elements play an important role in any understanding of how the others behave and what their ties with each other are. On top of the cultural aspects, modern metaphor theory emphasises the usefulness of context (Glucksberg 2003, Kolaoudouz 2015, Kövecses 2003, Philip 2003: 315-317, Wyler 1992: 143–149, De Knop 2014: 74).

A cognitive empirical research with 20 participants on translating English perception metaphors was carried out. The subjects were provided with sentences that contained perception metaphors (colour, sound, touch, taste and smell included). Data was extracted using eye-tracking technology. Eye fixation duration and attention shifts were monitored. All participants were also asked to provide post-test feedback of the experiment.

We conjectured that translators will dwell longer over the processing complexities involved in translating a metaphor than a non-metaphorical concept. It was assumed that metaphors may require increased cognitive processing in a translation situation. We also expected that universal metaphors were translated more easily than culturally specific metaphors.

The data gathered enables us to suggest that metaphors involve longer fixation time, presumably indicating a greater cognitive processing load in a translation task. The study revealed that perception metaphors can become a translation problem due to the linguistic and cultural differences between languages. The participants emphasised that context is important in both comprehension as well as while translating.

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Conceptual metaphors in poetry interpretation: A psycholinguistic approach

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Keywords: cognitive linguistics, figurative language comprehension, conceptual metaphor theory, metaphors in poetry

Research in psycholinguistics has shown that pre-existing conceptual metaphors influence many aspect of how people produce and understand metaphorical language (e.g. Lakoff & Johnson 1980; Gibbs 1994, 2017; Kövecses 2010; Jacobs & Kinder 2017). This conceptual metaphor view was first defined and empirically investigated by George Lakoff and Mark Johnson in their 1980 book *Metaphors We Live By*. Since then, an enormous body of empirical evidence from cognitive linguistics, and related disciplines has emerged, detailing how conceptual metaphors underlie significant aspects of both linguistic and non-linguistic facets of life. However, the question of whether metaphor is indeed always understood through the recruitment of conceptual metaphors is currently heavily debated (e.g. Keysar et. al 2000, Steen 2017).

The present study explores whether people possibly access conceptual metaphor during poetry interpretation. The hypothesis was tested in a psycholinguistic experiment that was conducted at Lancaster University. In the first part of the experiment, 37 participants were asked to read fourteen two-line stanzas of poetry presented to them on a computer screen. The aim was to find out whether participants rate words that relate to a conceptual metaphor which, according to the researcher, underlies the meaning of the selected poetic stanzas higher than words which do not relate to the postulated conceptual metaphor. If participants rate the mapping-related words as high, I propose that people unconsciously draw on knowledge that they have about concrete concepts (such as journeys) when they encounter abstract, metaphorical concepts (such as love) in the poems. If this is not the case, the participants' ratings of the task items might have been influenced by other factors, such as random choices or lexical/semantic similarities between the words in the poems and the target words. This, in turn, might be an indication that associative relatedness might not (exclusively) depend on conceptual mappings as described in conceptual metaphor theory.

The results of the study aim to offer empirical evidence for the assumption that readers access conceptual metaphor during poetry interpretation. At the same time, they also aim to highlight the many other factors (linguistic, personal, social etc.) which shape the understanding of figurative language in poetic narratives. Eventually, the implications of this work will be discussed for psycholinguistic theories of figurative language comprehension.

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Exploring some metonymy-related figures of thought in the light of cognitive modeling

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Keywords: merism, hypallage, contrast, strengthening, domain expansion

If compared to metaphor, metonymy has been largely overlooked within Cognitive Linguistics. However, researchers adhering to the cognitive linguistic paradigm have given metonymy its due place in the last thirty years, as attested by the abundant recent literature on this figure of thought (Barcelona 2011, 2015; Brdar 2009, 2017; Dirven & Pörings 2002; Fauconnier & Turner 1999; Panther & Radden 1999; Panther and Thornburg 2003, 2010, 2014; Panther, Thornburg & Barcelona 2009; Radden & Kövecses 1999; Ruiz de Mendoza 2014). Various topics related to metonymy have been addressed, namely its definition and demarcation problems with respect to metaphor, its classification, and its interaction with other figures of thought, especially metaphor, synecdoche, synesthesia, and to a lesser extent hypallage or merism. This proposal fills this gap by focusing on hypallage and merism. We study them in terms of cognitive modeling. According to Anderson (2010), a cognitive operation is a mental mechanism meant to construct a semantic representation from linguistic input to make it meaningful in context. We draw from Ruiz de Mendoza and Galera's (2014) distinction between formal and content cognitive operations. The former are a prerequisite for the construction of the latter and consist in the structural manipulation of concepts. The latter contribute to the process of making inferences in discourse. Merism, which was traditionally seen as the combination of two contrasting expressions that are salient parts of a broader domain (e.g. *day and night* to mean 'all the time', as in *Electricians have been working day and night to restore electricity supplies to the area*), has been defined in terms of the formal operation of substitution and of the content cognitive operations of contrast and domain expansion (Ruiz de Mendoza 2017). We go beyond this traditional account and offer a more comprehensive notion of merism to include cases which are not based on the cognitive operation of contrast. This new subcategory is further subdivided into prototypical cases (e.g. *bread and butter*, to make reference to 'livelihood', as in *He's got to write short stories, which are his bread and butter, in order to pay the fees for the private sanitariums where Zelda's being cared for*), cases where more than two expressions are involved (e.g. *eat, drink, and be merry* stand for 'make the most of life', as in *Don't worry about that till you are 50. For now, eat, drink, and be merry!*), and finally expressions in which the cognitive operation of strengthening plays a key role (e.g. *always and forever*, to mean 'always', as in *I'm so, so sorry. I love you now and always and forever*. Both adverbs, 'always' and 'forever', grant access to the whole domain "all the time". On closer inspection, however, it is evident that they capture very similar notions and one reinforces – strengthens – the other). As regards hypallage, it has been studied as involving the formal operation of substitution and the content operation of domain expansion (Ruiz de Mendoza 2017). Hypallage, defined as a transferred epithet, is exemplified by expressions like 'happy meal'. In fact, meals cannot be attributed happiness. They can arouse feelings of joy in the people enjoying the meal. The effect (happiness) is mentioned to make reference to the cause, the meal, as stipulated by the high-level metonymy EFFECT FOR CAUSE. Here we provide a more detailed analysis of hypallage and argue that the content operation of domain expansion does not always apply to all cases, as shown by examples like *disabled access*. This expression does not exploit the EFFECT FOR CAUSE metonymy but is an example of hypallage since the access cannot be characterized in terms of disability. It is people that use that access that can be attributed this feature. In this proposal, we analyze 200 examples of merism and 200 hundred cases of hypallage taken from COCA and some dictionaries (*Cambridge Dictionary, Wordreference, and MacMillan Dictionary*) and categorize them into different groups in terms of the cognitive operations they involve in order to provide a fine-grained study of these two figures of thought related to metonymy.

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The Social Construction of Public “Apologies”

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Key Words: Discourse, Pragmatics, Speech Acts, Apology, Public Apologies

Increasing demands for social justice have led to calls for public government apologies. Recent research has investigated the linguistic resources used in such apologies and ostensible apologies, or non-apologies (e.g. Battistella 2016, Kampf 2009; Mok & Tokunaga 2009). In the current “age of apology” (Cunningham, 1999), Japan has issued numerous apologies for actions during WWII, while the U.S. has not apologized for the horrific atomic bombing of Hiroshima and Nagasaki. In 2016, U.S. President Obama and Secretary of State Kerry each visited Hiroshima, but prior statements made clear that they would not “apologize.”

Our discourse analysis shows how these men walked a fine line, including supportive moves of apologies, such as strong adjectives expressing personal reactions to the visit to the Hiroshima memorial (e.g. *gut-wrenching, terrible moment, mourn*) and acknowledging human suffering. Obama highlighted shared humanity and called for an end to atomic stockpiling and all acts of war,. In line with the focus on human suffering, they both also focus on semantic patients, rhetorically minimizing agency and responsibility via agentless constructions (*death fell from the sky, the bomb fell, innocents killed*) and the delegation of agency to inanimates (*the plane that dropped the atomic bomb*). Thus their mixed expressions of regret include components that may be associated with either apologies or commiseration. Interestingly, the American public, as seen online postings, had varied reactions as to these speeches constituted apologies or not. In addition, these speeches are particularly interesting because both men were trying to navigate two cultures that have very different approaches to the performance and significance of apology, in addition to responding to the needs of both countries.

We thus argue that apologies are not simply combinations of linguistic formulae such as head acts and conventionalized supportive moves, but social constructions. That is, what counts as an apology for some may not be considered an apology by others, even as speakers of the same language. Judgment of one or more utterances as constituting an apology also involves the assumptions one brings to the situation, and even one’s political ideology. For example, in the absence of profession of guilt, whether one interprets Kerry’s and Obama’s speech as apologies depends on whether one thinks they makes the U.S. look weak or not. Finally, we make connections to the *metoo movement detailing instances of sexual harassment by (often prominent) individuals and calling for personal public apologies, where there has been considerable public commentary on the quality of such “apologies” as counting as real or not. We conclude with a discussion of the apologies under consideration in the light of the Politeness1 and 2 distinction (e.g. Terkourafi 2011).

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FRAMES, METAPHORS AND MORALITY: MULTIMODAL DISCOURSE ANALYSIS OF THE WHALING CONFLICT

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Keywords: Frame, Conceptual Metaphor, Morality, Whaling Conflict, Multimodal metaphors

Although there have been numerous attempts across a wide range of fields to explore the nature of social conflicts, it is only relatively recent that cognitive linguistics models have been adopted to make further contributions in this area (David & Daniel 2016). This paper attempts to advance this line of study by introducing a possible cognitive linguistics framework for analyzing multimodal discourse in the whaling conflict. It analyzes pro-whaling and anti-whaling discourse found in online source after 2015 and official statements published in English, Japanese, and Faroese.

The present research draws upon Fillmore's (1982) notions of frame semantics, Lakoff and Johnson's (1980) theory of conceptual metaphors, Lakoff's (2002) theory on conceptual models of morality and Forceville's (2006, 2008) view of visual and multimodal metaphor.

The authors argue that the pro-whaling party primarily sees whaling through the frames of Hunting and Gathering. Aspects of this view are manifested through conceptual metaphor use, such as OCEAN IS FIELD, WHALERS ARE FARMERS, and WHALES ARE CROPS. The underpinning morality in this view is based on notions of food provision, family support, and intimate contact with nature. Under this view, any attacks on whalers by anti-whaling activists are considered unreasonable and unfair. Images that accompany the texts in this light correspond to the conceptual metaphors GOOD IS BRIGHT, MORALITY IS PURITY.

In contrast, the anti-whaling party primarily views whaling through the frame of Killing or Murdering. Aspects of this view are revealed in terms of such conceptual metaphors as WHALERS ARE MURDERERS, WHALES ARE HUMANS, and WHALING IS CRIME. Under this view, whaling is unjustified and thus, immoral. Here pro-whaling actions are viewed as evil that has to be confronted. Therefore, this side of the conflict calls for actions against the evil and sometimes performs hostile acts against the fishermen. Images that appear in the discourse correspond to the following conceptual metaphors: EVIL IS DARK, IMPORTANT IS BIG, IMMORALITY IS IMPURITY.

Despite profound differences in the conceptualizations of whaling, both parties act based on a certain mental framework and perceive their behaviors as morally justified. This paper demonstrates that a cognitive linguistics approach to analyzing a social conflict can be useful in providing a clear picture of how a particular party views their reality, their position within it, and their morality. Furthermore, the paper attempts to view a complex social issue from a holistic perspective through the analysis of four interrelated and interdependent domains, frames, conceptual metaphors, visual and multimodal metaphors, and morality, that manifested in the discourses of each party.

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The evolution of metaphors over time: a longitudinal analysis of metaphor usage by Belgian politicians over the period 1980-2017

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Keywords: Conceptual metaphors, political discourse, federalism, longitudinal study

Building on an interdisciplinary approach bringing together political science and linguistics, this paper investigates how and why metaphors are used by Belgian politicians. In particular, the article focuses on the usage of metaphors to describe the evolution of federalism in the country over time. As argued by Ritchie (2013), ‘examining metaphors that appear in political discourse provides insights into the way speakers understand their situation, and how they seek to accomplish their ends’. This research undertakes a systematic analysis of the use of metaphors by Belgian politicians during television debates from the 1980’s until now. We rely on an original longitudinal corpus of 127 (part of) television debates covering 40 years from both public broadcasters in Belgium: the Dutch-speaking VRT and the French-speaking RTBF. The selected television debates relate to the progressive – albeit not without political tensions – transformation of Belgium’s political system. Our corpus is thus a solid indicator of this political transformation and therefore provides a fertile ground for the analysis of metaphors. To do so, we will conduct a corpus analysis by applying the MIPVU procedure (Steen et al., 2010) in order to identify potential *metaphorical contexts*. In line with Steen’s three- dimensional model (2008), we will subsequently analyse the identified metaphors by making a distinction between three different layers of metaphor, respectively at the linguistic, conceptual and communicative levels. Building on previous studies (Perrez & Reuchamps 2014, 2015), this analysis makes it possible to *determine which (deliberate) metaphors have been used by the political elite* to describe the establishment and evolution of the federal system, and more specifically, to assess to what extent this metaphor usage evolved over time and across the linguistic border.

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The function of theme / rheme in the French Presidential New Year Speech

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Keywords: theme/rheme, French Presidential New Year Speech, discursive objective

Abstract

Following the terminology of the Prague school of linguists, the Theme is the element which serves as the point of departure of the message; it is that which locates and orients the clause within its context. The remainder of the message, the part in which the Theme is developed, is called in Prague school terminology the Rheme. (Halliday, 2004:64) Theme + Rheme is speaker-oriented, meanwhile, speaker-selected. It is the speaker who assigns both structures, mapping one on to the other to give a composite texture to the discourse and thereby relate it to its environment. (Halliday, 2004:93) The function of theme/rheme provides us an analysis tool to study the development of texts. As theme occupies often the initial position of sentence, we can analyze the choice of Theme elements and Thematic structures both at syntactic and textual level.

The presidential wishes, pronounced by the President of the French Republic on the occasion of New Year's Eve, has been a key event in French politics since the beginning of the Fifth Republic. In his speech, the President takes stock of the economic, political and social situation of the past year, shares his overall vision of France and the world and his wishes for the year to come. With a large audience and a wide range of influences, the study of the New Year Speech is of great significance. Therefore, we took as corpus the French Presidential New Year Speech (2012-2017) to firstly conduct a study of the function of the themes, referring to Halliday's (1967) theme/ rheme theory. It then seems legitimate to ask how the use of the themes will arrive at the realization of the textual function on the one hand, to gain an insight into the texture of the speeches and understand how the writer made clear to us the nature of his underlying concerns on the other hand by analyzing the thematic structure clause by clause.

A number of phenomena have been observed as a result of the study. The high frequency of the temporal functional themes is easily identified. And the causal functional themes also have a high frequency in the French texts. In the final analysis, the choice of themes goes hand in hand with achieving a discursive objective, reflecting the speaker's points of view.

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Interaction of Metaphor and Political Frames in the Language Critique Activity “Unwort des Jahres” (the Non-Word of the Year)

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Keywords: metaphor, frame, media discourse, language critique, German

Previous research has demonstrated that conceptual metaphors are omnipresent in various and sundry contexts from the interaction of many linguistic, cultural, historical, anthropological, social and political forces. Some linguists have endeavored to establish the connections between metaphorical language and cognition as social practices (Zinken 2007, Goatly 2007). Gibbs (2017: 124) indicated that “within this approach, the analysis of discourse not only uncovers important mental modals and representations, but also reveals how metaphor, among other linguistic devices, creates and reproduces dominant social schemas.”

The German Language Critique Activity “Unwort des Jahres” (the Non-Word of the Year) was originally launched in 1991, which aims primarily to encourage ordinary people to use language critically and consciously. Under this guideline, the term is chosen from suggestions sent in by the public. Additionally, the term may be one that violates human rights or democracy, or may arouse discrimination against specific social groups or may be euphemistic or misleading. After serious reflections, a core panel which is composed of four linguists from different universities and one journalist will select one Non-Word from all the suggestions for the previous year and announce it annually in January. A wealth of metaphorical usages could be found in the Non-Words, for example, the Non-Word of 2013 “Sozialtourismus” (social tourism) refers to foreigners in Germany allegedly leeching on the welfare system.

The main concern of the paper was to study how metaphorical and political frames interact. Particular attention is paid to the chosen “Non-words of the Year” since 1991. Using an integrated qualitative discourse analysis (e.g. Spitzmüller/Warnke 2011, Larcher 2015), we analyzed all the 27 Non-Words and 54 related media texts. We started by depicting the literal and non-literal meanings of the Non-Words. Then we ascertained how these metaphorical meanings were discursively used in related texts and how emotions were stirred up within the frames.

The paper provides broad empirical evidence for what Gibbs (2017: 124) pointed out. And this study delves deeper into the question of how metaphor and frames interact. We firstly argue that the metaphors in the Non-Words occur in specific political backgrounds and these frame-based constraints could partly limit lexical choices in metaphorical language (Sullivan 2013). We secondly show that metaphors in political frames have implicit or explicit emotional components which could conversely affect the dynamic frame construction and reconstruction.

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A Multimodality Analysis of The Taiwanese History Textbook From 1985 To 2018: The Developing Representation of Colonial Japan

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Keywords: Multimodality, Multimodality Analysis, Taiwanese history, textbooks

Inspired by Kress and Bezemer's work on multimodality analysis on textbooks, this study employs multimodality analysis to inspect Taiwanese history textbook as a discourse (Bezemer & Kress, 2008; Kress et al., 2009). From a chronological perspective, I aim to observe how the socio-political context may influence different modal resources (writing, typography, image, and layout) used to construct meaning. This study attempts to bring an East-Asian setting to the existing literature on multimodality analysis on textbooks. From the perspective of previous studies on Taiwanese textbook, this study attempts to bring in the new method of multimodality analysis.

The analysis findings suggest that modal resources contribute to the narrative. Similar to the findings of previous text content-focused studies, there is a narrative shift from a China-centric discourse to a diverse, nuanced and ambivalent discourse (Liu, Hung, & Vicker, 2013; Yao, 2018). In the process of the narrative shift, Taiwan evolves from a peripheral area to a local identity with its own history, while the representation of Japan shifts from an invader to a colonizer attached with ambivalent feelings.

Furthermore, from merely the illustration or exemplification of the main text, the images shifted to play a more complex role with greater importance. The shifted presentation of image and layout also show the diversity and ambiguity as observed in the narrative discourse, concerning the complex identity issues of Taiwan and ambivalent feelings towards the colonial era.

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A Comparative Study of Two Approaches to Metaphor Identification in Video Ads

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Keywords: Multimodality, Metaphor, Video Ads

Identifying metaphor with a reliable and replicable procedure is a methodological issue in Multimodal Metaphor Theory (Forceville, 2016; Pérez-Sobrino, 2017). This issue is particularly challenging when it comes to metaphor in video advertisements, where the manifestation of metaphor can be flexibly created by multi-sensory elements within a short timespan. Attempts to address this issue have been made from divergent approaches. Understanding the differences between these approaches is important for developing applicative methodology and laying the ground for further related analyses.

There are two major current approaches. One is to identify metaphor based on thorough interpretation of the multimodal data, considering the brand information and culture background. Principles and possibilities proposed from Pictorial and Multimodal Metaphor Theory by Forceville (2016) lay the foundation for this approach. The other approach is to identify a metaphor with a procedure that is adapted from the methodology developed from linguistic studies (Pan & Tay, accepted; Šorm & Steen, 2018). This approach highlights the role of incongruity in metaphor recognition. Creative Metaphor Identification Procedure in Video Ads (CMIPVA) (Pan & Tay, accepted) is such a procedure that particularly deals with video ads. This procedure advances the idea that metaphor should be recognised prior to analysing the mapping features and reasons for selections. This paper will discuss the extent to which results from these two major approaches differ, and how the differences contribute to the investigation of metaphor in video Ads.

This study compares the results of metaphor identification by applying both the framework of Forceville (2016) and CMIPVA into two Chinese video ads (one for a tangible product, the other for an intangible product). Results show that CMIPVA generates more metaphors, including the central metaphor that includes the product, which grasps the majority of attention when the other approach was applied. Results also show that thorough interpretation considering the culture and brand background does not influence the identification of metaphor's two terms, but stimulates insights into the relation between the chosen metaphor and the product, which implies that these two approaches are complementary regarding metaphor analyses in video ads. Implications of sustainable practice for stakeholders are discussed further.

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Multimodal and verbal Finnish internet memes

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Keywords: multimodality, computer-mediated communication, internet memes, language change and grammaticalization, memetics

Internet memes have become a new medium for daily computer-mediated communication. This new multimodal means of communication has changed how we use language both online and offline. Furthermore, they expand the domain of multimodality in cognitive grammar to the study of the interaction between text and images or videos. Previous research defines an internet meme as an image, video or phrase spread and remixed via internet (Castano 2013; Shifman 2014). Dancygier and Vandelanotte (2017) approach internet memes as multimodal constructions, which contain text and image, and have their own constructional properties. However, they mention that there exists a multitude of different multi- and monomodal meme genres that should be studied further. The variety of internet memes and genres has been acknowledged in previous studies, but it has gained little attention in the analysis. My study is the first to my knowledge to adopt an empirical data-driven approach to the linguistic study of internet memes. The data-driven approach allows revealing and analyzing the great diversity of internet memes. My paper examines the following research questions:

1. What is an “internet meme” from a cognitive linguistics perspective?
2. What characterizes popular Finnish internet memes?
3. How Finnish internet memes differ from English internet memes?

My multidisciplinary research combines methodology from cognitive linguistics and memetics, the study of memes. The concept of “meme” as a unit of cultural evolution is older than the internet, and it has been studied in various fields (Blackmore 1999). As memetics is focused on human cognition and learning, it especially well fits the scope of cognitive linguistics. My data is gathered from the social media site Facebook, which is used by over 2 billion people monthly. The data consist of a corpus of around 200 Finnish internet memes in the context of one Facebook post.

My data shows that Finnish internet memes are heterogenous. Verbal internet memes can be categorized into online-specific non-standard syntactic constructs, intentionally misspelled lexical constructs and loan translations from English. Multimodal internet memes include image macros (see Shifman 2014), web-based chain letters, visual aphorisms and creative multimodal combinations specific to certain Facebook subcommunities. For example, *sori vihreestä* ‘sorry for the greens’ is a multimodal internet meme used in a Finnish group for unhealthy vegan food (see Figure 1). The members question stereotypes associated with vegans, so playfully apologizing for vegetables in the food pictures has become a community specific internet meme,

Based on the data, I define an internet meme as “a verbal or multimodal construction conventionalized and spread mainly via the internet.”

Figure 1. An example of the *sori vihreestä* ‘sorry for the greens’ internet meme. ‘Leftovers dinner for a busy day. Sorry for the greens but they were leftovers, too.’



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The MEAN constructions in Japanese Sign Language: from causality to inferred evidentiality

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Keywords: causal; inference; evidentiality; subjectification; Japanese Sign Language

In this paper, we examine the Japanese Sign Language (JSL) sign MEAN, which appears in asking and answering the reason and marks inferred information. We discuss this within a proposed view of JSL as an evidential-prominent language (Takashima et al. 2018; Aikhenvald 2004; van der Auwera and Ammann 2005). We will claim that MEAN shows a change from more objective construal to more mental or subjective construal (Langacker 2008), that is, it is grammaticizing from a causal to a marker of inferential evidentiality. Although MEAN is conventionally used in the deaf signing community and has been analyzed as an epistemic modality marker in JSL (cf. Matsuoka et al. 2016), we find that MEAN usually marks causal clauses in interactive situations in which the signer seeks the reason for some observed scene, to fictive-interactive questions reported only by the signer, to purely mental questions in which the signer “asks” herself for the reason.

MEAN₁ functions as a question marker in both objectively construed, actual interactional questions, and in rhetorical or fictive-interactive question (Jarque & Pascual 2018) clauses; **MEAN₁** is accompanied with mouthing *riyuu* ‘reason’. In example (1) SUDDEN DISAPPEAR **MEAN₁** expresses a fictive-interactive question: “Why did the puppy disappear? Oh, it’s because ...”.

The sentence-final **MEAN₂** in (1), GUIDE-DOG TEACH PURPOSE GIVE **MEAN₂** provides the answer, much like a *because* clause in English. This mental or subjective construal of **MEAN₂** is also shown in (2). Here, **MEAN₂** marks an inference. The signer reports that she had observed a wet umbrella in her friend’s hand, and the question “why does she have an umbrella” arose in the signer’s mind but was not signed. She inferred that it is because it is raining outside. Her evidential inference is expressed with **MEAN₂** and pointing at the (now fictive) umbrella. We claim that **MEAN₂** functions not as an epistemic modal, a prediction with some degree of certainty, but as an inferential evidential marker (Shaffer & Janzen 2016). We conclude that MEAN is grammaticizing from a causal into an inferential evidential.

Examples

(1) NEXT-DOOR PUPPY EXIST KNOW / SUDDEN DISAPPEAR

MEAN₁_{mouthing(riyuu/‘reason’)}/chin-up/head-shaking/eye-squint/brow-furrow []_{mouth-opening(aa)} []_{nod} PT3

GUIDE-DOG TEACH PURPOSE ₁GIVE_a **MEAN₂**_{mouthing(imi/‘mean’)}

I knew there was a puppy next door but it suddenly disappeared. Why? Oh, the reason is that the puppy was a guide dog and they gave it back (to the guide dog training center).

(2) [A friend of the signer came to an indoor café with a wet umbrella in her hand. The signer pointing at the umbrella and says:]

PT3_(umbrella) RAIN **MEAN₂**_{mouthing(imi/‘mean’)} brow-raise/PT3_(umbrella)

Is it raining outside (which I inferred from your umbrella)?

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Linking conversational moves through pointing actions in signed language interaction

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Keywords: interaction, signed language, pointing, indexicality, conversation

Interlocutors participating in conversation collaborate with each other to coordinate their actions and talk. Research on spoken language conversations has shown that speakers can use interactionally-driven bodily gestures to regulate their interaction, in addition to speech. These gestures, which minimally take the form of the fingers(s) or palm(s) being oriented towards an interlocutor, are used for a variety of discourse functions. Four main functions relate to the delivery of information, citing previous contributions, seeking responses, and managing turns (see Bavelas et al., 1992, 1994; and also Mondada, 2007). Such interactive gestures therefore enable speakers to index aspects of the discourse itself and contribute to the coordination of the emerging conversation.

In the current study, pointing actions which serve interactive functions are examined in signed language conversations. Studies of pointing in signed languages have largely focused on referential functions, as signers frequently point to reference themselves and others, as well as visible and invisible referents (Liddell, 2003; Engberg-Pedersen, 2003; Johnston, 2013; Cormier Schembri, & Woll, 2013). However, the potential interactive functions of pointing actions have received less focus. To address this research gap, all finger-pointing actions observed in a corpus of more than three hours of Norwegian Sign Language multiparty conversations (between two and five participants) were identified. All tokens of pointing actions serving interactive functions were then re-visited. Preliminary work on these tokens suggests that many function similarly to what has been described for spoken language conversations (e.g., for turn management and seeking responses). However, other types of functions were also observed (e.g., giving feedback).

Of interest to the current analysis is how signers use these different types of interactional pointing actions to relate previous discourse to upcoming conversational moves. One example in the data involves a signer pointing to his interlocutor (who is currently signing) and her signing space. Once he gets his interlocutor's attention, he repeats this pointing action and in doing so he self-selects for a turn while relating his upcoming comment to what his interlocutor had just been saying.

A micro-analysis of these types of pointing actions reveal not only their role in turn-taking, but also how they are used to physically index previous discourse, and how other concurrent indexical actions such as eye-gaze may be crucial for successful management of these intentions. These particular interactional points function to bind sequences of conversational moves to each other, sometimes across participants, and guide their trajectory. Such functions of pointing have not been previously discussed in the signed language literature, but it is argued here that they further underscore the highly indexical nature of face to face signed language interaction. In particular, the ability of signers to point at the signing space and each other form a rich potential for regulating interactional goals.

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On the role of eye gaze in depicting and enacting: A case study of Flemish Sign Language narratives

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Studies within signed language linguistics have highlighted different linguistic functions of eye gaze. When using depicting signs, for example, signers tend to gaze at their own hands, i.e. at the projected referent. During enactment, on the other hand, signers' gaze behavior often reflects the gaze of the referent in the discourse (e.g. Cuxac 2000 for LSF). Important to note, however, is that these studies do not report on a systematic analysis of gaze behavior. Moreover, eye gaze is shown to be an important mechanism to seek for positive evidence of understanding (e.g. Baker 1977) and as such to keep track of common ground (Clark and Brennan 1991). As both depicting signs and enactment are less conventionalized and less entrenched (Johnston & Schembri 2010), this coordination of understanding might be more important and as such discourse regulating functions might overrule linguistic functions of eye gaze. The current study aims to contribute to a better understanding of the role of eye gaze in signed discourse by providing a first fine-grained analysis of eye gaze in 10 narratives of "Frog, where are you?" (Mayer 1969) taken from the Flemish Sign Language corpus (Van Herreweghe et al. 2015). Results show that signers tend to alternate their gaze between the projected referent and the interlocutor when depicting a certain action or event. Signers thus incorporate both linguistic and discourse regulating functions of eye gaze when depicting an event space. When enacting, signers tend to imitate the referent's gaze and the use of eye gaze in the process of updating their common ground seems to be less common. Further qualitative analysis will gain more insights in the achievement of common ground during/after periods of enactment.

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Cross-linguistic perspectives on gesture: Recurrency as a basis for comparison

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According to a review by Kita in 2009, cross-linguistic gesture research could be categorized into studies investigating (i) conventionalized form-meaning relations, (ii) linguistic organizational properties, (iii) underlying conceptual structures, and (iv) pragmatic idiosyncrasies (Kita, 2009). ICLC 2019 coincides with the ten-year anniversary of that review, and given the conference's special focus on cross-linguistic perspectives, provides the occasion to discuss important developments in comparative gesture studies.

Bearing the categories proposed by Kita in mind, this panel will address the notion of *recurrency* in gesture (Ladewig, 2014; Müller, 2017). We will be arguing that recurrency invites new perspectives on the units of comparison for cross-linguistic gesture studies and suggests different ways to view relations between gesture and cognition.

As a background, the notion of recurrency was formally introduced to gesture studies by Ladewig (2014) as 'the building of a formational core that correlates with a semantic core', with a focus on how the 'stable form-meaning unit recurs in different contexts of use over different speakers in a particular speech community' (pp.1559-1560). With this starting point, papers in the panel will be addressing three inter-related aims:

1. To further identify stable form-meaning units (i.e. recurrent gestures) and describe the factors that lead either to wide-spread similarity or language-specific variation
2. To better characterise the processes of gradual building through which the stability of such units emerge, including physiological, linguistic and cognitive processes
3. To explore how recurrency may relate to broader embodied, social and cultural contexts

Through these aims, we hope to show how recurrency can cut across previous categories established for comparative studies of gesture. The studies presented on this panel build on previous research by proposing different and sometimes broader explanatory units required to observe and understand cross-linguistic variations in gesture. The panel will be moderated by Cornelia Müller and include the following presentations:

1. **Open hand oblique in female politicians' speech** (*Keiko Tsuchiya*)
2. **Exploring bodily, collaborative, and coupled contexts for recurrent gestures associated with negation: Insights from communicative events in Chinese** (*Simon Harrison*)
3. **A cross-linguistic approach to the formal features of recurrent gestures: shrugging in spoken and signed languages** (Dominique Boutet, Aliyah Morgenstern)
4. **Gesturing to indicate time in L2 speakers of English** (*Renia Lopez-Ozieblo*)
5. **Our interpretive potential as source of gestural regularity across languages, cultures and forms of militancy** (*Jean-Rémi Lapaire*)
6. **Recurrent gestures and multimodal patterns in pre-school children** (*Lena Hotze*)
7. **Discussion** (*Sotaro Kita*)

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Open hand oblique in female Japanese politicians' speech

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Keywords: open hand oblique, political discourse, epistemics, recurrent gestures, being critical

Orators or politicians have been well-aware of the significant effect caused by hand gestures in political speeches and debates since the Roman era (Quintilianus cited in Kendon, 2004). How Japanese female MPs (members of parliament) assert their epistemic rights in parliamentary debates is discussed in this panel, applying a multimodal corpus analysis and a discourse analytic approach to investigate the multimodally embedded practices with *recurrent* hand gestures (Müller, 2017). One video recording of the parliamentary debate (6 hour long in total) involving eight female interpellators was chosen for the analysis, which discussed the so-called women empowerment law. Among them, five female MPs were focused in this study, considering the lengths of their interpellation sessions and their political careers: the minister of women empowerment (MS, hereafter), the vice minister of health, labour and welfare (VM) and three MPs in opposition parties (OPs). This is a continuous study of Tsuchiya (2018), which analysed one of the OPs' interpellation session and identified a distinctive discursive pattern in the question-answer sequence; OP sought the government's *action* or *opinion* in her question, which was followed by MS or VM's answering with *round about talks* or *evading with justification*, on the basis of Harris (2001) and Clayman (2001). Results from the current study added further descriptions of the OPs' activity of accounting in the question sessions. In the process of giving an account for their proposals, OPs asserted their primary epistemic rights, simultaneously indexing themselves as a *knower*, by using the sentence-final particles *yo* or *yone*, which indicate the knowledge territory of the speaker (Katagiri, 2007). At the same time, they emphasised an anaphora with the use of *open hand oblique* (OHO), which is a *referential gesture* (Monzoni & Laury, 2015) with a negative evaluation of the object (Kendon, 2004). In Kendon's study in Camapania, the object a speaker referred to with OHO was often a person. However, in my data of the Japanese political discourse, OPs directed the recipient and the audience's attention to the topics of OPs' arguments with the demonstrative pronouns *this* and *that* and the embodied action of OHO to indirectly criticise MS's lack of knowledge or responsibility. The recurrent practice of OPs' criticising with OHO was observed in the three OPs. As seen in the use of precision grip in Obama's speech to reflect his quality of "being sharp" (Lempert, 2011), OPs' use of OHO indexes their attitude of "being critical", which could be a convention of "form-meaning association" (Kita, 2009, p. 146) although further research with a larger data set is necessary.

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Exploring bodily, collaborative, and coupled contexts for recurrent gestures associated with negation: Insights from communicative events in Chinese

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Keywords: Recurrent gestures, Chinese interaction, Negation, Embodied cognition

Recurrent gestures associated with negation are well documented in several European languages (cf. Ladewig, 2014). However, the role of these gestures in extended sequences of interaction has yet to be explored. There has also been little work on gestures associated with negation in Chinese language and few comparative studies of recurrent gesture cross-linguistically.

The current paper aims to fill these research gaps by examining the role of gestures associated with negation in a collection of communicative events in Chinese interaction. These events were extracted from the author's 20-hour video corpus of naturally-occurring spoken interaction involving a key participant in her everyday social and professional interactions. The events were identified qualitatively on the basis that a) they involved an extended interaction over at least several turns with a rich variety of multimodal negations, and b) they showcased pragmatic norms of negation that are stylistically and culturally salient in China (e.g. Ma, 1996). The two specific events selected for this study involve offering/declining a wedding gift (2m20s) and rejecting compensation for a favour (27m57s).

The method of analysis adopted cognitive-linguistic approaches to identify and describe the kinesic features and linguistic organisation of recurrent gestural forms associated with negation (Bressemer, Ladewig, & Müller 2013; Harrison, 2018). Elements of a conversation-analytic approach were integrated to the transcripts to examine the sequential, multi-active, and object-oriented nature of the interaction (Hua, Wei, & Yuan, 2000).

The presentation will first introduce the gestures associated with negation that recur over the course of both events, showing how they are similar to the forms documented for other languages (i.e. variants of the Open Hand Prone family; Kendon, 2004). The analysis will then turn to aspects of the broader kinesic and interactive contexts of these gestures, including various full-bodied and collaborative actions (e.g. wrestling, slapping), turn structures (e.g. adjacency pairs with preferred and dispreferred responses), different uses of verbal resources (e.g. whining, shouting), and changes of affect made relevant in the discourse (e.g. flushing).

The findings are discussed in relation to the linguistic, multimodal and embodied nature of negation (cf. Beaupoil-Hourdel, 2015), the cultural specificity of negation pragmatics, and to embodied cognition (e.g. Gallagher, 2017). The paper illustrates how the analytical unit of recurrent gestures can be broadened from the level of a multimodal construction grammar (Bressemer & Müller, 2017) to the level of an interactive ecology.

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A cross-linguistic approach to the formal features of recurrent gestures: shrugging in 5 languages

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Keywords: cross-linguistic; recurrent gestures; shrugs

The role of recurrent gestures in the human “interaction engine” (Levinson, 2006) have a diachronic and a synchronic component: 1) they are the result of the gradual sedimentation of our shared sensory-motor system; 2) they are a constructive locus to explore the pragmatic functions of gestuality (Ladewig 2014, Müller 2017). The recurrence of specific gestures within a community and across communities is a perfect illustration of their semiotic productivity. The stabilization of their formal features is necessary for each recurrent gesture to remain distinctive.

The aim of this paper is to uncover the formal components of the conventionalization of recurrent gestures, provided by the kinesiological bases that structure symbolic gestures. We thus illustrate how the joint limits of at least one of the segments (head, shoulder, arm, forearm, hand or fingers) and conformational constraints between segments, are key to the stabilization of gestures’ form either as postures or as gestural trajectories.

We focused on a specific composite gesture, the shrug, in order to conduct a cross-linguistic kinesiological description. The analyses were conducted on a collection of prototypical shrugs captured in context in English, French, Russian, German and French sign language. This collection includes German, French and Russian adult data from the *Polimod project* (Cienki & Irishkhanova 2018), longitudinal and cross-sectional family data in English, French, French sign language from the *CoLaJE project* (Morgenstern & Parisse, 2012), as well as public debates found online in English, German and French.

In order to identify the formal and functional invariant features of this composite gesture, we annotated all the extracts using a kinesiological coding system based on formal features and on the function of the gestures in context (Boutet 2001; Boutet & Morgenstern 2016).

Our results indicated that they are associations between the uses of specific formal components and specific functions across languages. In the framework of comparable situations however, there are typological differences in the use of the various segments (hand, arm, fore-arm, hand, shoulder, head), in their combination and their amplitude.

The very extensive composition of the shrug, which comprises the open fingers, hands, arms, lifted shoulders and the tilting of the head, is supported by an association between form and meaning. Thus, throughout young children’s gestural development over time, shrugs are first used to refer to absence with the hands (palm up and extension of the forearm), then affective stance (“I don’t care” with the forearms, shoulder lift) and then epistemic stance (with head tilts). On a formal and structural level, a core feature of the shrug can be located at the articulation of the arm. It consists of the joint movement of an extension (towards the rear) and of an abduction (towards the top and the side). It circulates along the upper limb in both directions. As the flow of the gesture ascends to the shoulders, it is transferred into a shoulder lift. As it descends to the palms, it is transferred into an exterior rotation of the forearms (opening gesture) and into an extension that ends in a supination and a palm up configuration.

This study of a recurrent gesture illustrates how the conformational constraints between segments can restrict and structure the formal/physiological expansion of recurrent gestures by enclosing them in a stabilized frame. Human physiology and the productivity of its constraints are a key factor in the conventionalization of gestures and thus in the dynamic process that transforms sensori-motor experience into symbolic communicative representation via continual human interaction.

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Gesturing to indicate time in L2 speakers of English

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This talk will present results from a comparative pilot study analysing gestures in the narrations of ten speakers of English as a second language (C1 level and above) from five different mother tongues (Farsi, Cantonese, Romanian, Italian and Spanish). In particular, we focus on recurrent gestures used with temporal discourse markers such as ‘after’, ‘before’, ‘and then’, ‘again’, etc. We investigated the information provided by the gesture and its form to identify if a ‘stable form-meaning unit recurs in different contexts of use over different speakers in a particular speech community’ (Ladewig, 2014, pp. 1559-1560).

Our study explores how the speech and the gesture together first position the action at a specific point in space and then indicate a transition in time (reflected in the changes of the gestures in space). In particular, with the marker ‘and then’ we found that most of our participants seldom indicated a thematic discontinuity (Bestgen (1998) had proposed that ‘and’ signals continuity while ‘then’ signals ‘discontinuity’). However, in those individuals who did gesture we often observed a cyclical gesture “bridging” the transition between two events, as also noted by Cooperrider and Núñez (2009).

This bridging gesture might be part of the cyclical family of recurrent gestures (Ladewig, 2011) where the TIME-IS-MOTION-THROUGH-SPACE metaphor is represented through these gestures that link the present with the past (as also suggested by Calbris, 2011). Understanding how TIME is mapped onto SPACE (Lakoff & Johnson, 1980) through the study of gesture has led to an increased understanding of how we conceptualize time (Borodotsky, 2018; Casasanto & Jasmin, 2012; Núñez & Cooperrider, 2013; Pagán Cánovas & Valenzuela, 2017; Walker & Cooperrider, 2016). Many of these studies have shown that in English speakers time is conceptualized in the sagittal (back to front) and lateral (left to right) axis, with a significant preference for the lateral axis in spontaneous speech (Casasanto & Jasmin, 2012). Our study found a range of bridging cyclical gestures, performed in a combination of axes (including the vertical axis), confirming the ability of speakers to mix temporal metaphors in gestures, even if this is less frequent in speech (Walker & Cooperrider, 2016).

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Recurrent gestures and multimodal patterns in kindergarten children

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The use of gestures and verbal elements in early infantile communication has been well investigated from a language acquisition perspective (e.g., Morgenstern 2014). However, in the majority of cases, children under the age of four are studied. In addition, Behrens (2008) has pointed out this research gap by emphasizing that there is only very little information about children's naturalistic linguistic interaction and production during kindergarten years.

It is remarkable because from the age of four onwards children increasingly develop an adult-like gesture-speech system with different gesture types in coordination with a variety of utterances. This paper takes up Behrens's observations and seeks to close this gap by focussing on kindergartners in everyday interactions. Following Bressems' and Müller's results (2017) that recurrent gestures already come with conventionalized and entrenched gestural patterns, we will show that children use these gestures in connection with speech and form a basic repertoire of multimodal patterns, which means recurrent combinations of words and gestures that get more dynamic the older a child becomes.

It is based on 10 hours of video data in which 41 German speaking kindergarten children in two different day care centers were filmed in different situations of everyday interactions. Taking a linguistic perspective on the study of gestures (Ladewig 2014; Müller 2013) all instances of word-gesture units were identified and analyzed with respect to their form, meaning, and function. The annotation is based on the Methods of Gesture Analysis as well as on the Linguistic Annotation System for Gestures, which offer a form-based method to systematically reconstruct the meaning of gestures and their potential for recurrent forms (Bressems et al. 2013: 1100; see also Müller 2010).

It will be shown that kindergarten children use multimodal patterns linked to recurrent gestures, e.g. palm down, in specific language contexts. Furthermore, we will demonstrate the importance of the recurrent type in kindergartners everyday multimodal communication. Therefore, the explorative study offers a starting point for empirical and qualitative observations of gesture-word productions between 4 and 6. It aims at giving insights into how multimodal patterns emerge and shift over time and thus could provide an indication of a transitional phase from a childlike to adult gesture-speech system.

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