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

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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.

## References

Alexiadou, A., & Iordăchioaia, G. (2014). The psych causative alternation. *Lingua*, 148(3), 53-79.

Comrie, B. (1981). *Language Universals and Linguistic Typology*. Chicago: University of Chicago Press. Croft, W. (2015). Force dynamics and directed change in event lexicalization and argument realization.

In R. G. d. Almeida; & C. Manouilidou (Eds.), *Cognitive science perspectives on verb representation and processing*, New York: Springer, pp. 103-129.

Guo, Y. (2015). A Cognitive-Functional Approach to Chinese and English Causative Alternation. Beijing: The Science Press.

Haspelmath, M. (1993). More on the typology of inchoative/causative verb alternations. in B. Comrie and M. Polinsky (eds.), *Causatives and Transitivity*, pp. 87–120. Amsterdam: John Benjamins.

Lemmens, M. (1998). *Lexical Perspectives on Transitivity and Ergativity: Causative Constructions in English*. Amsterdam: John Benjamins.

Levin, B. (1993). English Verb Classes and Alternations. Chicago: University of Chicago Press.

Levin, B., Rappaport Hovav, M. (1995). *Unaccusativity: At the Syntax--Lexical Semantics Interface*. Cambridge, Mass: the MIT Press.

Rappaport Hovav, M. (2014). Lexical Content and context: The causative alternation in English revisited. *Lingua*, 141, 8-29.

Talmy, L. (2000a). *Toward a Cognitive Semantics, Vol. I: Concept Structuring Systems*. Cambridge, Mass: The MIT press.

Tamly, L. (2000b) Towards a Cognitive Semantics, Vol II: Toward a Cognitive Semantics: Typology and Process in Concept Structuring. Cambridge, Mass: The MIT press.

Zeng, L. (2009). Ergativity in Mandarin Chinese. Beijing: China Minzu University Press.