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

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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' 'emotionalattitudinal' 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.

## References

- Hilpert, M. (2013). Constructional change in English: Developments in allomorphy, word formation, and syntax. Cambridge: Cambridge University Press.
- Hipert, M. (2016). Change in modal meanings: Another look at the shifting collocates of *may*. *Constructions and Frames* 8 (1): 66-85.
- Turney, P. D. & Pantel, P. (2010). From frequency to meaning: Vector space models of semantics. *Journal of Articial Intelligence Research* 37: 141-188.