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

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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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