

Voice Constraints, Prominence Shifts, and Event Structure: An Empirical Study on Potential-for-Change Verbs in Mandarin Chinese and German

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Predicates denoting caused changes of state can be broadly classified into two categories based on result realization. While the result is necessarily realized for Change of State (CoS) verbs (e.g. *break*, *eat*), Potential for Change (PfC) verbs (e.g. *wipe*, *wash*) allow for a no-change reading, where an action is performed but no normative change obtains at all [1, p. 345], a phenomenon also known as the “Incompleteness Effect” [2]. However, Beavers & Lee [3] have identified a grammatical constraint on this reading in Korean: the zero-result interpretation is available in the active voice but blocked in the passive, a restriction we term the Voice Constraint.

This study investigates this Voice Constraint in Mandarin Chinese and German, proposing a theoretical account based on the interaction between Prominence Structure and Event Structure. Specifically, we adopt the view that the entity serving as the structural anchor for the event acts as its Attentional Centre (a-centre) [4]. In the active voice, the agent is the a-centre, highlighting Proto-Agent features, e.g. volition [4, p. 41]. In this configuration, the event is structurally anchored to the agent’s volition, licensing a sublexical modality where the result need not obtain in the actual world [3, 5]. In contrast, passivization triggers a dynamic shift in prominence [6]. The patient becomes the a-centre, highlighting Proto-Patient features, crucially, undergoing a caused change of state [7]. Based on this, we hypothesize a general Voice Constraint: Driven by a prominence shift, passive voice is expected to resist zero result readings, as it structurally enforces patient affectedness over agentivity.

To test this hypothesis, we conducted parallel Context-Sentence Acceptability Judgment Tasks with 7-point Likert Scale in Mandarin Chinese ($N = 40$) and German (data collection ongoing, interim $N = 29$). The design employed a mixed factorial structure manipulating VERB TYPE (PfC vs. CoS), CONTEXT (change vs. no change) and VOICE. The VOICE factor levels differed to reflect cross-linguistically grammatical distinctions: For Mandarin Chinese, we tested a two-way contrast (active vs. *bèi*-passive), whereas we tested a three-way contrast for German (active vs. processual *werden*-passive vs. stative *sein*-passive). All items use a “witness-report” structure to establish an epistemic anchor, see (1). Data were fitted with Cumulative Link Mixed Models (CLMM).

Results from the Mandarin Chinese experiment confirm a Voice Constraint: In the active voice, a significant CONTEXT \times VERB TYPE interaction ($p < .001$) indicates that PfC verbs uniquely allow no-change readings, i.e. lexical sensitivity. Conversely, this interaction is not significant in the *bèi*-passive ($p = .294$), demonstrating that passive PfC sentences pattern uniformly with the unacceptable CoS baseline, see Figure 1. Furthermore, Hierarchical Cluster Analysis of the Mandarin Chinese data visually confirms this structural uniformity, showing that the *bèi*-passive substantially collapses the distinction between PfC and CoS verbs, see Figure 2.

For German, preliminary data reveals an emerging acceptability hierarchy for PfC verbs in no-change contexts: active ($M = 5.56$) $>$ *werden*-passive ($M = 4.56$) $>$ *sein*-passive ($M = 3.06$). While the German *sein*-passive yields the lowest average acceptability, as it explicitly instantiates a consequent state, e.g. cf. [8], its high variance points to potential internal differentiation within the PfC category, e.g. pure manner vs. defeasible causatives [5]. Future analysis on the full German dataset will employ cluster analysis to test whether German preserves this fine-grained lexical sensitivity.

In sum, this study provides empirical evidence that prominence directly constrains truth-conditional semantics. The “Incompleteness Effect” is not merely lexical but relies on the Agent-as-Anchor mechanism, which is dismantled under prominence shifts.

(1) Item example in condition: CONTEXT (no change) x VERB (PfC) x SENTENCE (*bèi*-passive)
(Mandarin Chinese as an example)

[Context] 张三在停车场，看见一个陌生男人正拿着砖头用力敲李四的车。那个男人随后跑掉了。张三走近一看，**车窗玻璃完好无损**。之后，张三遇到李四，对李四说：

*In the car park, Zhangsan witnessed an unfamiliar man and hitting Lisi's car with a brick. The man then fled away. Zhangsan approached and observed that **the car windows remained intact**. Afterwards, he met Lisi and said to him:*

[Sentence] “你的车被砸了。”
“Your car was smashed.”

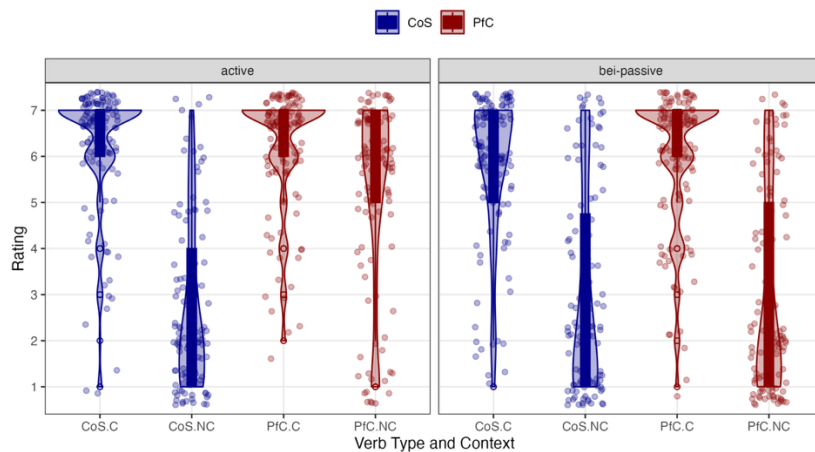


Figure 1: Acceptability rating distribution in Mandarin Chinese experiment
(CoS = Change-of-State verb, PfC = Potential for Change verb, C = Change Context, NC = No-Change Context)

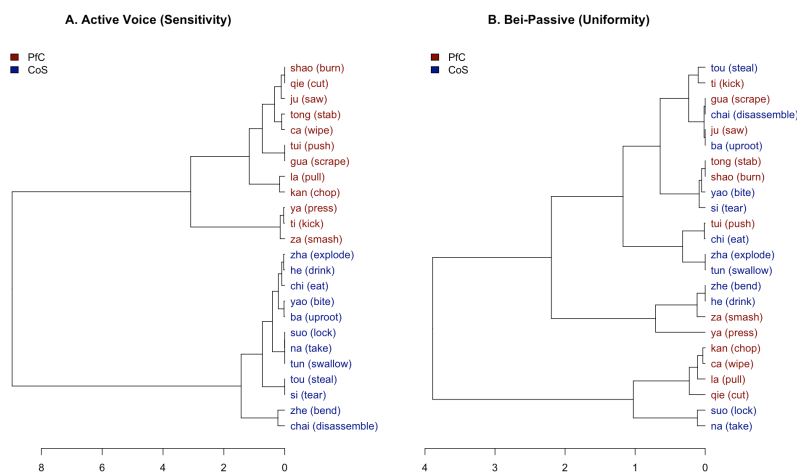


Figure 2: Hierarchical Cluster Analysis of Mandarin Chinese PfC and CoS verbs across voice conditions

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