The L2 Acquisition and Processing of 'Bleached' Adversity in Chinese Passives

The persistent non-convergence on passives in L2 Chinese has aroused much interest from researchers, but has yet to receive satisfactory conclusions. This experimental study investigated the L2 off-line knowledge and on-line processing at the syntax-semantics interface of the Chinese passive by examining whether adult English native speakers are sensitive to violations of its adversity constraint.

English and Chinese employ different strategies to form passives. In English, they are typically formed with the combination of an auxiliary verb *be* and a passive participle. In Chinese, an individual passive marker *bei* is used to mark passive constructions. Whilst historically used as a lexical verb, *bei* is in the process of being grammaticalised and has become a semi-lexical verb (Liu, 2012). *Bei* passives often denote an unfortunate event, and this adversity has undergone semantic bleaching, manifested as a strong but not absolute semantic constraint.

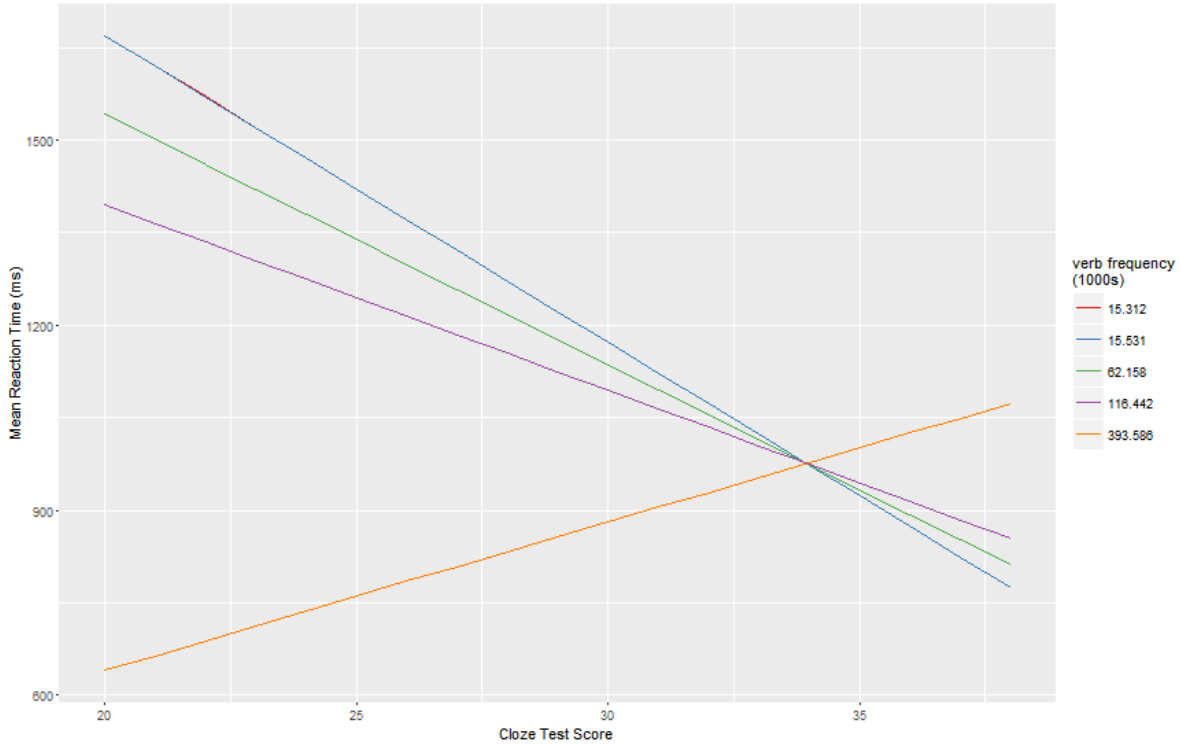
The aim of this study is two-fold: to probe (a) the extent to which L2 judgements and processing resemble target patterns of off-line judgements and real-time reading comprehension, and (b) the extent to which proficiency, input and working memory affect L2 processing. A Self-Paced Reading task and an untimed Acceptability Judgement task were administered to 75 native English speakers with Intermediate to Advanced Chinese proficiency as well as 33 native Chinese speakers. The results of traditional methods such as t-tests and ANOVAs found non-convergence in both off-line judgements and on-line processing in the Intermediate learner group. Like the Native Chinese group, the Advanced group slow down significantly ($p = 0.046$) at the post-critical region, suggesting their on-line sensitivity to adversity differences between example (1A) and (1B). However, fossilisation was found in the Advanced group regarding off-line judgements, showing no improvement as their L2 proficiency increases. A Linear Mixed-Effects Model (Cunnings, 2012) reveals a more nuanced picture of the knotted relationship between internal and external variables which determine L2 processing speed. Chinese proficiency ($p < 0.001$), grammaticality ($p < 0.01$) and word frequency ($p < 0.001$) significantly predict reading time at the critical region. Moreover, there is a significant interaction ($p < 0.001$) between word frequency and proficiency, as shown in the interaction graph below, which indicates that rises in L2 proficiency significantly reduce reading time, but this is only true with less common words. That is, this effect diminishes as a verb occurs more often in the input, and it can eventually be overridden by adversity violations in *bei* passives. The findings show that L2 processing could be restricted by capacity limits (Hopp, 2010). The increase in convergence on real-time comprehension in the Advanced learners also suggests L2 learners initially over-rely on the declarative system but gradually develop procedural skills, which leads to target-like real-time sensitivity (Ullman, 2001).

Keywords: **L2 Chinese, passive, syntax-semantics interface, L2 processing, mixed-effects**

Test example of the Self-Paced Reading task:
The critical region is highlighted, where the verb *bang* (help) and *ma* (scold) are contrasted for adversity. *(English translation not provided in the stimuli)*

(1A) Experimental *non-adverse *bei*-constructions
*gangcai zhe-ge haizi bei laoshi **bang-le**, mama feichang gaoxing.
just now this-CL child BEI teacher help-PERF mother very happy
Intended reading: "This child was helped by the teacher just now, the mother is very happy."
(1B) Control adverse *bei*-constructions
gangcai zhe-ge haizi bei laoshi **ma-le**, mama feichang nanguo.
just now this-CL child BEI teacher scold-PERF mother very sad
"This child was scolded by the teacher just now, the mother is very sad."

Interaction Effect of Verb Frequency and Proficiency on Reading Time (Experimental *non-adverse *bei*-constructions)



Note: The above lines represent verbs (at the critical region) with different occurrences in the corpus. The min-value (15,312) and lower-quartile (15,531) represent similar frequencies and overlap.

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