Animacy Preference Effects in Processing Head-final Chinese Relative Clauses
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Previous corpus studies (e.g. in English: Roland, Dick & Elman, 2007; in German/Dutch: Mak et al., 2002; in Chinese: Pu, 2007) have shown a correlation between head noun and its animacy coding within a relative clause (RC). That is, subject-gapped RCs typically occur with animate head NPs, whereas object-gapped RCs almost exclusively occur with inanimate head NPs. Such a distributional pattern has been used to demonstrate the processing disadvantage in object-gapped RCs that contain animate heads in head-initial English (Gennari & MacDonald, 2007) and German (Mak et al., 2002, 2006). Since it remains controversial in head-final Chinese whether object-gapped RCs are more difficult than subject-gapped RCs (cf. e.g., Hsiao & Gibson, 2003; Lin & Bever, 2005), the current study aims to shed light on this issue by taking into account the largely overlooked animacy factor.

Examination of the animacy distribution of Head- and Embedded-NPs of RCs in Chinese Treebank 5.0 Corpus not only replicated the pattern mentioned above, but also suggested RCs with two NPs of different animacy occur more frequently. Thus animacy preference constraints are derived from the obtained animacy pattern, namely, 1) RC-subject tends to be animate, 2) RC-object tends to be inanimate, and 3) the animacy distance between the head and embedded NP is preferably maximal. Three self-paced reading experiments are designed to test whether RCs that satisfy animacy constraints will be easier to process than those that do not.

Experiment 1 (N=40 subjects) and 2 (N=36 subjects) focused on one type of RCs (SS- and SO- RCs respectively), and manipulated animacy of the RC-internal NP (animate vs. inanimate) and animacy distance between the head- and the embedded- NP (different vs. identical). The results show that indeed it is SS RCs with animate Head and inanimate RC-object and SO RCs with inanimate Head and animate RC-subject that were processed faster. Experiment 3 (N=40 subjects) compared SS and SO RCs that always have two NPs differing in animacy distance, with the crucial manipulation of RC type (subject- vs. object-gapped) and animacy of the RC-subject (animate vs. inanimate). The results show that SS RCs with animate RC-subject in maximal animacy distance were easiest to process, and SO RCs with inanimate RC-object in identical animacy distance were slowest, supporting the posited animacy preference constraints. Furthermore, subject-gapped RCs were processed faster than object-gapped RCs in both the head noun region and the regions after the head noun (F1's >4, p's<0.05), suggesting that once the animacy confound is controlled, the purported universal processing advantage in subject-gapped RCs is also found in head-final Chinese.

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