

LOCALITY BIAS IN PROCESSING CHINESE REFLEXIVES *ZIJI* AND *TA-ZIJI*: EVIDENCE FROM SELF-PACED READING

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Existing work has shown that processing Chinese reflexives is subject to locality bias (i.e., local antecedents are accessed more rapidly than long-distance antecedents), suggesting that local search may be a default parsing strategy in antecedent retrieval [1]. Few studies, however, have directly compared locality biases between *ziji* and *ta-ziji*, and results are mixed [2-5]. In particular, when occurring in the subject position of an object-modifying relative clause (RC), *ta-ziji*, but not *ziji*, was found to show anti-locality bias [2&3]. Such evidence was argued to reflect an emphatic interpretation of *ta-ziji* [2], hinting that reflexives in different positions (subject vs. object) may vary in their sensitivity to the locality constraint [3]. We note that these results are likely to be confounded by the semantic bias of the embedded verb and the number feature of candidate antecedents. Thus, the current study aimed to, with proper control of potential confounding factors, revisit the questions of (i) whether Chinese comprehenders show anti-locality bias when processing reflexives in the RC-internal subject position, and (ii) whether *ziji* and *ta-ziji* exhibit distinct parsing profiles in online sentence comprehension.

Using self-paced reading (N=150), we manipulated *Reflexive Type* (*ziji* vs. *ta-ziji*) and *Binding Type* (Local binding vs. Long-distance binding), yielding four conditions (see (1)). Sixteen sets of experimental items were created, all of which contained a context, a critical clause, and a continuation. In the critical clause, each occupational noun phrase (NP) was followed by a proper name of stereotypical gender to ensure both NPs are singular. Embedded verbs were neutral verbs with an equal bias toward either antecedent selected from a norming test (N=48). Comprehension questions were targeting different parts of trial sentences. To analyze the reading times (RTs) data, we fit linear mixed models with fixed factors and log-transformed RTs of the previous region as predictors.

At the reflexive region, we observed a main effect of *Reflexive Type* ($\beta=0.054$, $t=4.618$, $p<.001$): *ta-ziji* elicited significantly longer RTs compared to *ziji*, likely due to *ta-ziji*'s multi-morphemic form and relatively low frequency. Crucially, at the head noun region, we found a main effect of *Binding Type* ($\beta=0.058$, $t=3.669$, $p<.001$): for both *ziji* and *ta-ziji*, a semantically appropriate antecedent was significantly easier to process when occurring in the local domain than when outside the local domain. These patterns contrast with [2&3], indicating that, with a rigorous experimental design, Chinese reflexives in the RC-subject position do exhibit a locality bias and that the emphatic reading of *ta-ziji* is not preferred with written stimuli. Our results further support the local search hypothesis [1] that the parser strategically restricts the initial antecedent retrieval to the local syntactic domain.

(1) Critical clause (segments indicated by slashes; context and continuation are only shown in translation):

..., *lingban/Jiang Gang/ cheng/ [zhuchu/ Fengge/ bumanyi/[_{RC}(*ta-*)ziji/ jinwan/ jianzhi]de/ niupai]*,... (**Local binding**)
..., *zhuchu/ Fengge/ [lingban/ Jiang Gang*],... (**LD binding**)

'After the restaurant closed, / waiter/ Jiang Gang/ said/ [chef/ Brother Feng/ was not satisfied with/ [RC the steak/ that (*ta-*)ziji/ pan-fried/ tonight]]/ because the customers' reviews were mixed.'

References: [1] Dillon et al. 2014. *Frontiers*. [2] Wang. 2017a. *Journal of Psychological Science*. [3] Wang. 2017b. *Journal of SJTU*. [4] Lyu et al. 2022. *Chinese Teaching in the World*. [5] Dillon et al. 2016. *Frontiers*.