**Locality or recency: A story of two Chinese reflexives**
Jun Lyu (USC), Fenqi Wang (UKansas), Dawei Lu (Renmin Univ) & Yiyuan Chen (SISU)
junlyu@usc.edu

**Introduction** It has traditionally been assumed that reflexives observe Condition A (Chomsky, 1981, 1986) as they tend to be bound “locally” (Nicol & Swinney, 1989; Sturt, 2003). However, experimental studies showed that the locality effect is actually a recency effect (Frazier et al., 1996; Omaki, 2010; Omaki et al., 2019), meaning that parsers prefer a linearly closer but non-local antecedent to minimize parsing effort. But there are insufficient structural cues in these studies to inform the parser of an upcoming local antecedent. In this study, we capitalized on the Chinese prenominal relative clauses (RCs) and pre-RC classifiers as structural cues (Wu, 2009) to investigate the factors of locality and recency on the processing of two types of reflexives—a bare reflexive ziji (‘self’) and a morphologically complex taziji (‘he/she-self’). Despite being a long-distance reflexive, studies suggest that ziji shows a strong tendency to be bound “locally” (e.g., Gao, 2005; Qian, 2016), even more so than taziji in Dillon et al. (2016). Thus, this study queries whether the processing of ziji and taziji is equally constrained by locality and/or recency.

**Methodology** Two self-paced reading experiments are reported. Experiment stimuli are shown in (1) and (2) for each experiment, respectively. **Exp. 1** was a baseline experiment where we aimed to ensure that, regardless of the morphological complexity or the status of anaphoricity, both ziji and taziji tend to be bound by a local/recent antecedent as previous studies only considered reflexives in subject (He & Kaiser, 2016; Wang, 2017) and direct object (Dillon et al., 2016; Qian, 2016) positions. Factors Reflexive Type (bare vs. complex) and Antecedent Distance (recent vs. distant) were manipulated. In **Exp. 2**, we replaced the second factor in Exp. 1 with Structural Relation (local vs. recent). The reflexive is situated in a prenominal RC so that one potential antecedent precedes the reflexive while the other follows it. The pre-RC classifier is semantically congruent with the RC head noun and should lead the parser to predict an upcoming NP. Twenty-four sets of stimuli and 24 fillers were presented to the Chinese native speakers in a Latin Square design on the experiment platform Ibex Farm (Drummond, 2013). Each experiment had 24 participants.

(1) a. Local/Recent plausible antecedent

|电台|表示|那名|记者|已经|公布了|$\{\text{自己的/他自己的}\}$采访目的。|
Radio say that-CL journalist already revealed \{ziji/taziji\}-GEN interview purpose
“The radio station said that the journalist had already revealed his purpose of the interview.”

b. Distant plausible antecedent

|记者|表示|那家|电台|已经|公布了|$\{\text{自己的/他自己的}\}$采访目的。|
Journalist say that-CL radio already revealed \{ziji/taziji\}-GEN interview purpose
“The journalist said that the radio station had already revealed his purpose of the interview.”

(2) a. Local plausible antecedent

|电台|让|那名|记者|已经|公布了|$\{\text{自己的/他自己的}\}$采访目的。|
RC Radio ask that-CL already revealed \{ziji/taziji\}-GEN interview purpose DE journalist compensate loss
“The radio station asked that journalist who had already revealed his interview purpose to make a compensation.”

b. Recent plausible antecedent

|记者|让|那名|记者|已经|公布了|$\{\text{自己的/他自己的}\}$采访目的。|
Journalist ask that-CL already revealed \{ziji/taziji\}-GEN interview purpose DE radio compensate loss
“The journalist asked that radio station which had already revealed his interview purpose to make a compensation.”

**Predictions** In Exp. 1, we expect both types of reflexives to show a tendency to be bound by local/recent antecedents given Condition A. In Exp. 2, these hypotheses can be made: (i) if the processing of ziji and taziji is only constrained by recency, we expect longer reaction time (RT) on region 6 (i.e. reflexives) in **Local conditions** (2a) compared to **Recent conditions** (2b). No difference is expected on the second target region 10, the head noun, as the hypothetical parser only considers the most recent antecedent; (ii) if locality is the only factor influencing the processing of reflexives, no effect is expected on region 6, but the head
noun in Recent conditions (2b) (i.e. “journalist”) should elicit longer RTs compared to its inanimate counterpart (i.e. “radio station”) in Local conditions (2a) due to semantic incompatibility; (iii) it is also possible that ziji and taziji might behave differently with regard to the above two hypotheses.

**Results** Mixed-effect linear models were fitted. In Exp. 1, at the target region 7 (i.e. reflexive), only a marginally significant interaction was found ($p=.063$). This is largely driven by the locality/recency effect in the complex reflexive condition although post-hoc pairwise comparison did not find any significant effect ($p>.05$). For the second spillover region 9, a marginally significant main effect of Antecedent Distance was found ($p<.1$), suggesting closer antecedents were preferred for both types of reflexives.

In Exp. 2, at the first target region 6 (i.e. reflexives), a numerical trend was observed between Recent and Local conditions with taziji where the Local condition elicited longer RTs compared to the Recent condition (525ms vs. 495ms), but this is not the case with ziji (482ms vs. 497ms). We hypothesize that, with taziji, the parser was surprised by a semantically incompatible earlier antecedent whereas ziji ignored it.

At the second target region 10 (i.e. head nouns), there was a significant interaction of Reflexive Type and Structural Relation. This was driven by the fact that locality only impacted ziji such that locally incongruent antecedents lead longer RTs in ziji conditions (524ms vs. 478ms, $p<.1$). However, within taziji conditions, no significant difference was found. These results suggest that ziji is constrained by locality but taziji is not.

**Discussion** The current study yields two major insights. First, as shown in Exp. 1, the locality/recency effect was found when the reflexives are in the (non-argument) genitive position. Second, in Exp. 2, we found evidence that (i) taziji is greedy for a recent antecedent, as shown by the weak surprisal effect induced by taziji in the Local conditions at region 6 where it mismatched the recent antecedent semantically; (ii) ziji disregards the local semantic incongruence and is only constrained by the local antecedent, a result consistent with Dillon et al. (2016). Overall, the results suggest that ziji is strictly constrained by the Binding Principle during online processing whereas taziji is presumably guided by recency.

**Selected References**