Introduction. The language processor draws on levels of discourse, semantic, and syntactic evidence for pronoun coreference (e.g. *her* or *him*). Early research attempted to determine the role of syntactic constraints in the interpretation of referents. Initial accounts posited binding as an initial filter, established by cross modal priming studies where priming was only found for binding accessible candidates (Nicol and Swinney, 1989). Recent research contributes to a substantial and growing literature on the anaphoric processor considering binding inaccessible antecedents. Badecker and Straub (2003) observe that ungrammatical antecedents sharing morphosyntactic features of the reflexives will increase processing difficulty. Similarly, Runner and Sussman (2003) found that subjects frequently violated binding theory, with eye-tracking showing violations at the early points of anaphora resolution. This work assumes a constraint-based model as hypothesized by the literature and attempts to observe the nature of deactivating effects in these hypothesized models by manipulating anaphoric conditions.

The *ziji* reflexive. Native Chinese speakers report *ziji* (*self*) can refer to both local and matrix subjects in an embedded clause, with a preference for local subjects. Li (2009) found that biasing contexts will increase the interpretation of *ziji* to a discourse plausible referent and decrease confidence. Confidence correlated with faster self-paced reading times, suggesting lower competition between referents - establishing a connection between confidence ratings and competition between candidate referents.

Present Research. Chinese allows us to observe anaphoric resolution without ungrammatical confounds. The examples are attached and referenced. Either biasing (3) or neutral (2) discourse contexts were presented, and the interpretation (5) and confidence (6) of *ziji* is collected for the target sentence below:

      (1) TARGET SENTENCE (2 CANDIDATES):

      Zhang san shuo li si xi huan zi ji zuo wan zuo de yi dao liang cai

      "Zhangsan said Lisi likes *ziji*-self's homemade cold dish last night."

All biasing context created a discourse where the long distance antecedent was much more plausible. Similar conditions were constructed for target sentences with three candidate referents as in (4).

The neutral contexts establish a baseline of competition occurring within the constraint-based model for both two and three referent cases. We measured the difference in confidence based on the number of referents r in each sentence. More confidence in biasing interpretation than for $r=2$ as compared to $r=3$ indicates a shared deactivating effect across all inaccessible candidates, which results in lower competition with more referents. More confidence for $r=3$ as compared to $r=2$ suggests constant deactivating effects, where each inaccessible candidate adds constant deactivation. With more referents, this model stacks deactivation, resulting in multiply reduced competition.

Experiment. A survey was conducted to observe offline interpretations of *ziji*. Participants were recruited personally, and all resided in mainland China (n=40). Sentences were evenly distributed and randomized from a Latin square design of biasing/neutral discourses and $r=2,3$ target sentences.

Results & Conclusion. Initial results from the off-line experiment could not suggest significant evidence for any of the proposed hypotheses, as offline interpretations of *ziji* showed unintended readings. This suggests confounded discourses. A reanalysis on the data, filtering out context sentences that did not show the correct bias (162/320 responses) indicates that there is no significant difference between the neutral and biasing contexts in the $r=3$ case. However, for $r=2$, the difference in confidence decreased. This suggests that confidence dissipates between candidates and a constraint-based model imposes shared deactivating effects across discourse inaccessible candidates, confirming the traditional Badecker & Straub (2003) view of an interactive, connectionist constraint-based model.

Examples.

(1) TARGET SENTENCE (2 CANDIDATES):

Zhang san shuo li si xi huan zi ji zuo wan zuo de yi dao liang cai

"Zhangsan said Lisi likes *ziji*-self's homemade prepared cold dish last night."

(2) NEUTRAL CONTEXT (2 CANDIDATES):

张三在跟李四讨论平常请人到家里做客时喜欢做什么菜

Zhang san zai gen li si tao lun ping chang qing ren dao jia li zuo ke shi xi huan zuo shen me cai

"Zhangsan is discussing with Lisi what common dishes to prepare when hosting guests."

(3) BIASING CONTEXT (2 CANDIDATES):

张三昨天请了李四到家里做客为了庆祝最近的升职

Zhang san zuo tian qing le li si dao jia li zuo ke wei le qing zhu zui jin de sheng zhi

"Zhangsan invited Lisi to as a guest to his home to celebrate the recent promotion."

(4) TARGET SENTENCE (3 CANDIDATES):

Zhang san shuo wang wu shuo li si xi huan zi ji zuo wan zuo de yi dao liang cai

"Zhangsan said Wangwu said Lisi likes *ziji*-self's homemade prepared cold dish last night."

(5) INTERPRETATION OF ZIJI:

Qing wen duan wen zui hou yi ju "zi ji" jiang de shi shui?

"In the text, who is '*ziji*' in the last sentence referring to?'

ANSWER CHOICES:

Zhang san, wang wu, li si, zhangsan huo wangwu huo lisi

"Zhangsan, Wangwu, Lisi, Zhangsan or Wangwu or Lisi"

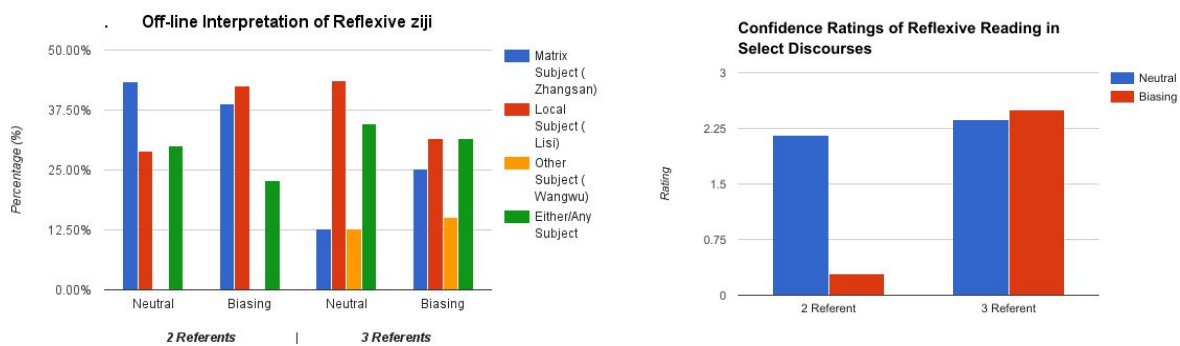(6) CONFIDENCE OF INTERPRETATION:

Qing wen ni dui zhe ge da an you duo zi xin?

"How confident are you with the answer (above)?"

ANSWER CHOICES:

Scale from 1 (least confident) to 7 (most confident).

Figures.

References

Badecker, W., Straub, K., (2002). The processing role of Structural Constraints on the interpretation of pronouns and anaphors. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 28,* 748--769.

Chomsky, N. (1981). *Lectures on government and binding.* Dordrecht, Netherlands: Foris.

Li, D. C. & Kaiser, E. (2009). Overcoming structural preference: Effects of context on the interpretation of the Chinese reflexive ziji. In *Proceedings of Discourse Anaphora and Anaphor Resolution Colloquium 2009*, Goa, India.

Nicol, J., & Swinney, D. (1989). The role of structure in co-reference assignment during sentence comprehension. *Journal of Psycholinguistic Research, 18,* 5-19.

Runner, J. T., Sussman, R. S., & Tanenhaus, M. K. (2003). Assignment of reference to reflexives and pronouns in picture noun phrases: Evidence from eye-movements. *Cognition, 89*, B1-13.

Sturt, P., (2003). The time-course of the application of binding constraints in reference resolution. *Journal of Memory and Language, 48(3)*, 542-562.