

# The interaction between native LF representations and input distributions in second language acquisition

Karen CLOTHIER<sub>1</sub> and Akira OMAKI<sub>2</sub>

<sub>1</sub>Department of Cognitive Science, Johns Hopkins University

[Kclothi1@jhu.edu](mailto:Kclothi1@jhu.edu)

<sub>2</sub>Department of Linguistics, University of Washington

A large body of word learning research has focused on how learners acquire the meanings of novel nouns with set referents, but much less work has investigated the learning mechanism for anaphoric expressions whose referents vary across contexts. For example, in the sentence *Bill said that John fanned him/himself/self*, *him* can refer to *Bill* but not *John*, and *himself* can refer to *John*, but not *Bill*. Anaphoric expressions can also vary cross-linguistically, e.g. the Japanese long-distance (LD) reflexive, *zibun* (=self, above) (Huang, 2000). The possible interpretations of LD reflexives are a superset of pronouns and local reflexives (e.g. Manzini & Wexler, 1987), raising the question of how learners can acquire the full set of interpretive possibilities for an LD reflexive from more or less ambiguous input. Since the interpretation of anaphoric expressions is constrained by the structure of the syntax and context (c.f. Buring, 2005), this study assumes a learning mechanism capable of using LF representations and tracking the distribution of interpretations they give rise to in the input. In a novel artificial language-learning paradigm, pictures of either transitive (non-local interpretation) or reflexive (local interpretation) events were paired with sentences containing either a novel pronoun, local reflexive or LD reflexive; i.e. the picture served to disambiguate between the two interpretive possibilities for the LD reflexive. The distribution of these interpretive possibilities across instances of the LD reflexive was manipulated in three different conditions: one where 80% of the interpretations were unambiguously local; one where 80% of the interpretations were unambiguously non-local; and one where the local and non-local interpretations were equally probable. Looking across these three conditions, both native English speakers and native Japanese speakers reproduced the distribution of interpretations from their learning input. However, at an individual level, Japanese speakers were able to differentiate the LD reflexive from the local reflexive and pronoun, *but only* when the local interpretation was more prevalent in the input. This finding suggests that information derived from the input distributions interacts with the learners' native language knowledge, and possibly more general processing constraints, to determine learning outcomes.

Buring, D. (2005). *Binding theory*. Cambridge University Press.

Huang, Y. (2000). *Anaphora: A cross-linguistic approach*. Oxford: Oxford University Press.

Manzini, M. R., & Wexler, K. (1987). Parameters, binding theory, and learnability. *Linguistic inquiry*, 413-444.