Breaking Defaults: Grammar vs. Discourse

Marisa Nagano, Long Island University, Brooklyn

This study investigates whether a particular interpretive "default"—for a subject pronoun to retrieve a recent subject NP as antecedent—has its roots in pragmatics, grammar, or both. Traditionally, **defeasability** has been given as a binary criterion to distinguish a phenomenon as pragmatic rather than grammatical—defeasible patterns are pragmatic, indefeasible ones are grammatical (e.g., Levinson, 2000). However, processing data may reveal a **gradient rather than a binary distinction**—a default interpretations may be overridden by discourse context, but that this process is more difficult in certain linguistic environments than others. To investigate this, we examine what happens when **discourse context encourages a reader to "break" the default** interpretation for a subject pronoun to retrieve a local subject antecedent (e.g., Fukumura & van Gompel, 2015) by manipulating sentences such that a given pronoun is in a position to be bound, as in (1a) and (1b), or not as in (1c).

(1a) Ellen quietly reflects that *she* chose some great snacks.
(1b) Each girl quietly reflects that *she* chose some great snacks.
(1c) Ellen quietly reflects. *She* chose some great snacks.

Following Principles of Binding Theory (Reuland, 2011), we argue that the pronouns in (1a) and (1b) are preferentially processed at the grammatical (logical syntax) level (although discourse-pragmatic coreference is theoretically available), whereas (1c) is always processed at the discourse level. As such, the same preference for a local subject antecedent comes from different sources: (grammatical) variable binding for (1a) and (1b), and a discourse heuristic such as a generalized conversational implicature (GCI) for (1c) (following Levinson, 2000). We therefore predict that **it will be easier to "break" the default interpretation** for (1c) than (1a) and (1b), since the former merely involves defeating an implicature on the discourse-pragmatic level, while the latter involves a shift from interpretation generated by a *grammatical* default to the *discourse-pragmatic* level where coreference with another entity can be achieved.

Participants (N = 22, data collection still in progress) **read mini-stories** consisting of 4-5 sentences, presented one sentence at a time with a self-paced key press. An example appears in Table 1. Sentence 2 manipulated *context*, with three conditions: Other Bias (biasing someone other than the most recent subject as antecedent), Subject Bias (biasing the local subject), and Neutral to either interpretation. Sentence 3 manipulated sentence *structure*, with a pronoun (a) bound under a referential subject (BoundC), (b) under QP subject (Bound Q) or (c) not in a position to be bound (Free). At the end of each mini-story, participants answered a question designed to elicit pronominal interpretation, with three choices: *Ellen*, *Cassie*, or *Both of them*. Each participant saw 18 test items and 36 filler items that either involved a gender mismatch disambiguating the pronoun, or a question about something else in the story.

While data collection is still in progress, **preliminary results** suggest that the "Other Bias" (OB) context elicits an increased rate of non-subject interpretations compared to other context types for all three sentence structures (Figure 1). However, processing patterns differ in a way that conforms to our hypothesis. When the OB data is not separated by ultimate interpretation choice (as in Figure 2), both bound and free structures show elevated response times during the question (rtq), with a linear mixed-effects model with Context and Sentence Structure showing only a significant effect of OB context and no other effects ($t = 2.08$, $p = .04$). However, when the OB data is split into trials in which participants did (1) and did not (0) choose a subject interpretation (as in Figure 3), we see that response times are increased (vs. Neutral context) for the **two bound conditions** when participants choose the non-subject interpretation—that is, when the "break" the

default (BoundC: t = 3.08, p = .003; BoundQ: t = 1.89, p = .06); in trials in which participants follow the default, they show no such increase in response times. The data for the **non-bound "Free"** condition is the reverse—participants were slower when they went *against* the discourse context and chose the subject antecedent in OB (t = 2.20, p = .03), but showed no difference from the Neutral when they broke the default and chose the non-subject.

While results remain tentative pending further data collection, trends so far suggest that although pronouns in all three sentence types show the **same default interpretation** (note all have near-ceiling subject preference in Neutral), for bound pronouns in (1a) and (1b), this preference arises at a grammatical level, and is therefore harder to "break," while for the non-bound pronoun in (1c), this preference holds at the discourse level, and is **easier to "defeat."**

Table 1. Example Item. Sentence 2 manipulates Context; Sentence 3 manipulates Sentence Type

Sentence 1	*Ellen and Cassie are throwing a party.*	
Sentence 2	Neutral	*The food's all spread out on the table.*
	Other Bias (OB)	*Cassie's in charge of ordering food.*
	Subject Bias (SB)	*Ellen's in charge of ordering food.*
Sentence 3	Bound Referential (BoundC)	*Ellen quietly reflects that **she** chose some great snacks.*
	Bound QP (BoundQ)	*Each girl quietly reflects that **she** chose some great snacks.*
	Free	*Ellen quietly reflects. **She** chose some great snacks.*
Sentence 4	*It is going to be an amazing party.*	
Question	*Who chose some great snacks?*	

Figure 1. Proportion of local subject antecedent interpretations by Context and Sentence Type

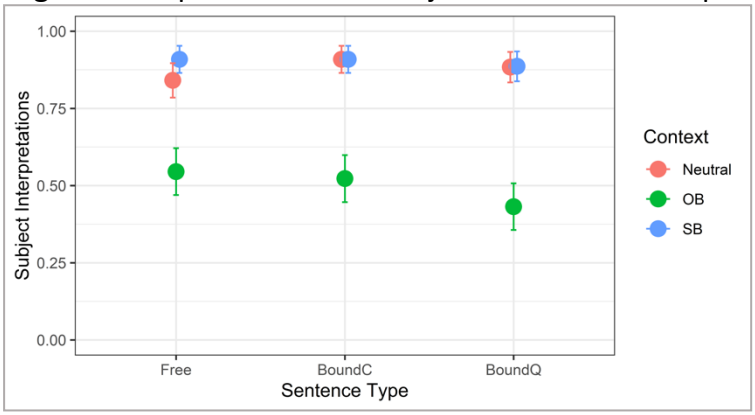

Figure 2 (left) & 3 (right). *Response time for question collapsed over interpretation (left) & Response time for the Other Bias (OB) depending on whether participants chose a local subject antecedent (1) or not (0) (right)*