

Referential Domains and the Real-Time Processing of “Weak Definite” Noun Phrases

Natalie M. Klein<sup>1</sup>, Whitney Gegg-Harrison<sup>1</sup>, Rachel S. Sussman<sup>2</sup>, Greg N. Carlson<sup>3</sup>, Michael K. Tanenhaus<sup>1,3</sup>  
University of Rochester, Brain & Cognitive Sciences<sup>1</sup>, Linguistics<sup>3</sup>; University of Wisconsin, Madison, Psychology<sup>2</sup>  
nklein@bcs.rochester.edu

Definite NPs ostensibly select a uniquely identifiable discourse referent (recently, Roberts 2003). Lending credence to this generalization is the obligatory use of the definite article when the referent is semantically unique (e.g. superlatives, “the tallest mountain”), or when the speaker wishes to make it so (“It’s *the* reason, not *a* reason!”) (Abbott 2004). However, Carlson & Sussman (2005) and Carlson (2007) note a special class of nouns called “weak definites,” where this generalization does not hold. Take the weak definite “the radio.” For the statement, “Bill heard about the riot on the radio, and Mary did too” to be true, it is necessary that Bill and Mary heard about the same riot, but not necessarily via the same radio. The weak definite NP does not seem to refer to a unique discourse entity and contribute a truth-conditional meaning as an indefinite NP might. In a set of visual world studies, we show that this intuition holds in online reference interpretation. We also show that weak definites are not simply indefinites in disguise, since indefinites serve to establish discourse entities where weak definites do not.

In Experiment 1, participants saw a metal board with several magnetic ClipArt objects attached. Each half of the board was painted a different color, to visually invoke distinct referential domains (Brown-Schmidt 2005). Each color domain contained a magnetic person, as a potential agent, and a unique token of the critical object, as well as a distracter object. Participants heard short stories and were asked to use the magnets to enact the narrative. Critical trials included repeated mention of a weak definite NP, or of a semantically matched regular definite NP (e.g. “Rudy read the newspaper/book. This afternoon, Patty read the newspaper/book too.”).

As predicted, when participants enacted the narrative, they were significantly more likely to select a new token of the critical object when the object was a member of the weak definite noun class (thus remaining within the same referential domain as the newly mentioned agent). That is, participants were most likely to have Rudy and Patty read the same book, but different newspapers ( $p < .001$ ). (Figure 1.) During the experiment, participants’ eye-movement data were collected with a head-mounted eye-tracker. Response-contingent analyses show that, when they chose the new token, participants were more likely to look at the old token of the critical noun in the regular definite condition than in the weak definite condition. In other words, controlling for behavioral response, participants made more frequent looks to the old book than the old newspaper when enacting “This afternoon, Patty read the book/newspaper.” (Figure 2.)

Experiment 1 shows that, for a special class of nouns, reference to a unique discourse entity is not necessitated by the use of a definite NP. These data are consistent with the hypothesis that weak definite NPs do not establish a discourse entity, and are therefore not merely indefinites in disguise. Experiment 2 was designed to test this hypothesis explicitly by comparing weak definites to weak indefinites. The experimental setup was identical to that in Experiment 1. In Experiment 2, the stimuli used weak definite nouns, and manipulated whether participants heard each noun with an indefinite or definite article on the first-mention (e.g. “Rudy read *a/the* newspaper. This afternoon, Patty read the newspaper too.”). Participants were more likely to select the old token of newspaper when the first-mention was an indefinite NP.

These studies provide experimental evidence for a special class of weak definite nouns that do not refer uniquely, and show that these weak definites do not necessarily establish entities in the discourse. In this way, they are distinct from both regular definites and from indefinites. Eye-movement data confirm these major referential differences happen as the utterance unfolds.

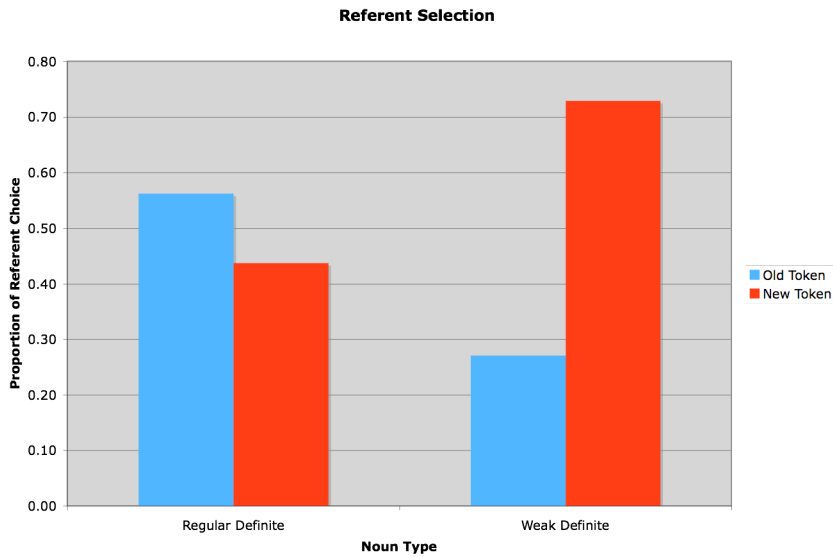


Figure 1:  $p < .001$

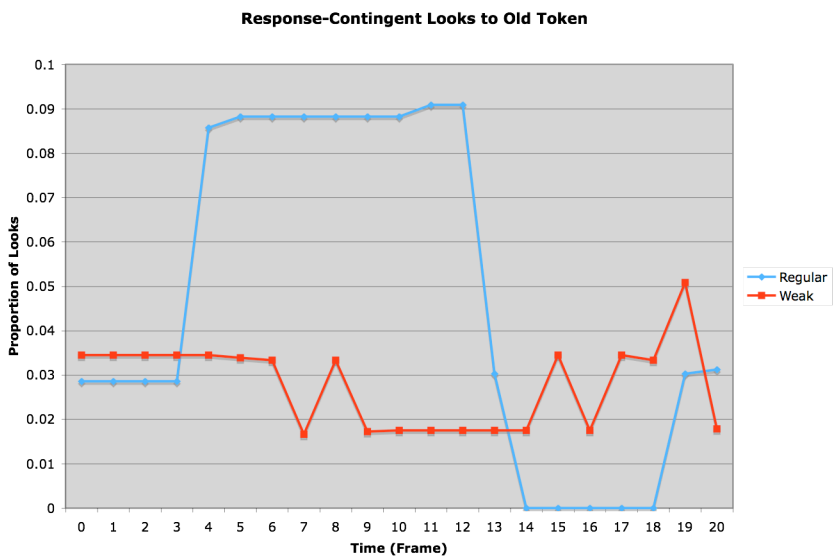


Figure 2: Looks to old token controlling for behavioral response.

References

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