

## Referent availability in the comprehension and production of weak definites

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Weak definites are definite descriptions such as *the psychologist* in (1). They differ from regular definites in that they trigger sloppy readings and take narrow scope under quantification. Additionally, they differ from definite and indefinite descriptions in that they express enriched meaning (Aguilar-Guevara & Zwarts, 2010; Carlson et al. 2006). We investigated the discourse referential properties of weak definites in comprehension and production.

(1) Kate went to the psychologist.

The few empirical studies that have tested the anaphoric potential of weak definites claim that these expressions are more likely to be mentioned again with a full NP than a pronoun (Scholten & Aguilar-Guevara, 2010). Furthermore, Aguilar-Guevara (2014) found that weak definites prefer kind-level (*alternative psychologist*) over individual-level adjectives (*famous psychologist*). However, we know surprisingly little about whether weak definites do in fact introduce discourse referents (cf. Aguilar-Guevara & Zwarts, 2010; Schwarz, 2009).

In Expt1, a visual world eye tracking study, participants listened to stories like the one in (2). Stories consisted of a context sentence, a sentence introducing two human referents, and a target sentence that included an ambiguous pronoun (*he*). The subject of the second sentence was always a proper name. The object NP always appeared inside a goal PP. During story presentation, four pictures appeared onscreen: the subject (*Frank*), the critical object (*psychologist*), and two unrelated object distractors.

(2) Die Angststörungen waren in letzter Zeit immer schlimmer geworden.

*The anxiety disorder was getting worse and worse.*

(a) Frank ging zu einem Psychologen.

*Frank went (a) to a psychologist*

(b) Frank ging zum Psychologen.

*Frank went to <sub>the<sub>weak</sub></sub> psychologist.*

Als ein Bild herunterfiel, streckte er vergebens die Hand zum Auffangen aus.

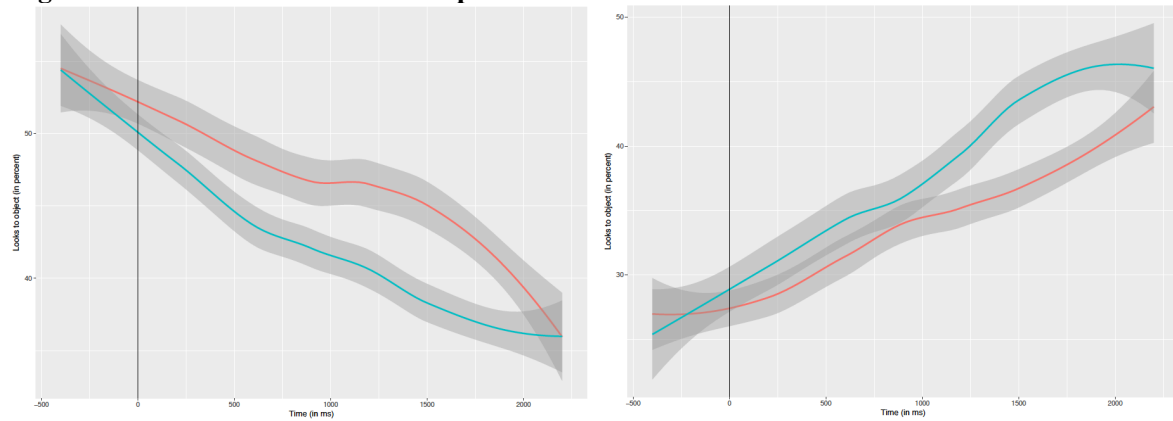
*When a picture fell off the wall, he unsuccessfully reached out to catch it.*

Mean fixation times time-locked to pronoun onset showed that participants looked more to the object picture in the indefinite (2a) than the weak definite condition (2b). Generalized mixed-effects models on vectors with looks to the object picture vs. looks to all pictures revealed a marginal effect of condition (weak or indefinite) from 500 – 800 ms post pronoun onset,  $b = -0.07$ ,  $SE = 0.04$ ,  $z = -1.91$ ,  $p = .056$ , and a reliable effect of condition from 800 to 1100 ms,  $b = -0.111$ ,  $SE = 0.050$ ,  $z = -2.23$ ,  $p = .026$ .

In Expt2, we used the same materials as in Expt1, but removed the final sentence. Participants read the story fragments and provided one additional sentence. Weak definites were mentioned again less often than indefinites (44% vs. 52% of continuations), which resulted in a statistical trend,  $b = -0.25$ ,  $SE = 0.15$ ,  $z = -1.62$ ,  $p = .106$ . Interestingly, weak definites were not re-mentioned more often with a full NP than an indefinite (see Table 1).

Our results support the view that weak definites introduce discourse referents with low prominence: They are poorer competitors to subject referents than regular definites in comprehension. However, our data from production indicate that weak definites are almost as good as antecedents of anaphoric expressions as indefinites. Our results, then, support a distinction between the prominence level for anaphoric resolution (backward function, Expt1) and the potential for referential chains (forward function, Expt2).

**Figure 1: Mean fixation times in Experiment 1**



Notes: Left side = Looks (in %) to picture of object noun (*psychologist*); Right side = looks (in %) to picture of subject noun (*Frank*); Red line = indefinite condition; Blue line = weak condition; Vertical black line (marked 0) = onset of ambiguous personal pronoun.

**Table 1: Anaphoric potential for indefinite noun phrases vs. weak definites in Experiment 2**

	Number of mentions	Percentage of mentions	DP type pronoun	DP type definite NP	Number of sentences
<b>indefinite</b>	194	52%	72% (139)	28% (55)	374
<b>weak</b>	163	44%	67% (108)	33% (55)	371
<b>total</b>	357	48%	69% (247)	31% (110)	745

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