

**Nieuwland, M. S., Otten, M., & Van Berkum, J. J. A. (2007). Who are you talking about? Tracking discourse-level referential processing with event-related brain potentials. *Journal of Cognitive Neuroscience*, 19(2), 228-236. doi:10.1162/jocn.2007.19.2.228.**

In this event-related brain potentials (ERPs) study, we explored the possibility to selectively track referential ambiguity during spoken discourse comprehension. Earlier ERP research has shown that referentially ambiguous nouns (e.g., “the girl” in a two-girl context) elicit a frontal, sustained negative shift relative to unambiguous control words. In the current study, we examined whether this ERP effect reflects “deep” situation model ambiguity or “superficial” textbase ambiguity. We contrasted these different interpretations by investigating whether a discourse-level semantic manipulation that prevents referential ambiguity also averts the elicitation of a referentially induced ERP effect. We compared ERPs elicited by nouns that were referentially nonambiguous but were associated with two discourse entities (e.g., “the girl” with two girls introduced in the context, but one of which has died or left the scene), with referentially ambiguous and nonambiguous control words. Although temporally referentially ambiguous nouns elicited a frontal negative shift compared to control words, the “double bound” but referentially nonambiguous nouns did not. These results suggest that it is possible to selectively track referential ambiguity with ERPs at the level that is most relevant to discourse comprehension, the situation model.

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