

## The influence of prosody on (non-)restrictive relative clause interpretation

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This study investigates the role of prosody in disambiguating between non-restrictive relative clauses (NRRCs) and restrictive relative clauses (RRCs) in spoken language comprehension. While comprehension studies have shown that prosody is used to disambiguate between high and low attachment for RRCs (Schafer et al., 1996) and between relative clause and complement question interpretations (Schafer et al., 2000), research on the use of prosody to disambiguate between NRRCs and RRCs has focused primarily on production. For example, studies by Hirschberg and Avesani (1997) and Watson and Gibson (2004) have shown that speakers produce the prosodic pattern associated with NRRCs more frequently when reading NRRC-biased contexts than RRC-biased contexts. The present study, however, examines the extent to which comprehenders use prosody when developing distinct semantic representations for these relative clause types. This was done by focusing on a difference between NRRCs and RRCs related to the truth conditions associated with these clauses. Specifically, it has been argued that while NRRCs establish the exact size of the set associated with the head noun, RRCs establish the minimal size of the set (Demirdache, 1991). This study investigates whether hearing the distinct prosodic patterns associated with these two relative clause types gives rise to these different interpretations during real-time language comprehension.

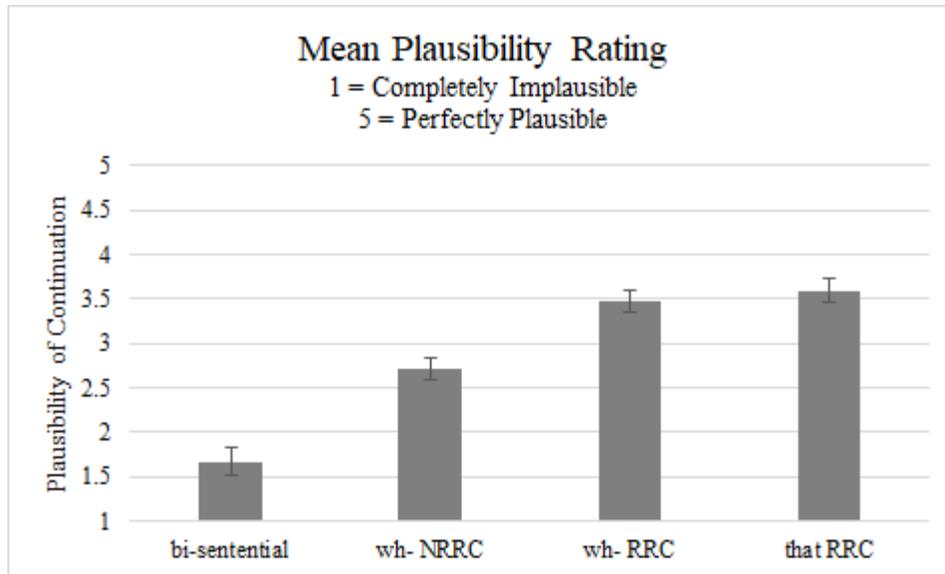
Native speakers of English ( $N=20$ ) listened to context statements containing string-ambiguous *wh*- relative clauses that differed in their prosodic pattern (NRRC, RRC), (1b) and (1c), and rated the plausibility of continuation statements, (2), on a 1 (completely implausible) to 5 (perfectly plausible) Likert scale. The prosodic patterns followed those discussed by Garro & Parker (1982) with respect to pause duration and pitch contour. In order to be considered plausible, continuation statements required a minimal set interpretation of the context statement. A bi-sentential control, (1a), and a *that* RRC control, (1d), were included to serve as unambiguous implausible-biased and plausible-biased contexts, respectively. If prosody is used to disambiguate between NRRC (exact set) and RRC (minimal set) interpretations, the continuations were predicted to be rated as less plausible after *wh*- relative clauses with NRRC prosody (*wh*- NRRC contexts) than after the same relative clauses with RRC prosody (*wh*- RRC contexts).

- (1)
  - a. Tony worked at only 4 restaurants during college. These restaurants were dives.
  - b. Tony worked at only 4 restaurants, which were dives, during college. [NRRC prosody]
  - c. Tony worked at only 4 restaurants which were dives during college. [RRC prosody]
  - d. Tony worked at only 4 restaurants that were dives during college.

- (2) During college, Tony also worked at several classy restaurants.

The results confirmed this prediction. As indicated in the figure, the continuations were rated reliably lower after *wh*- NRRC contexts than after *wh*- RRC contexts and *that* RRC contexts. No differences were found between the *wh*- RRC and *that* RRC contexts. While the continuations were rated lower after bi-sentential contexts compared to *wh*- NRRC contexts, both conditions generally yielded implausible ratings ( $< 3$ ).

In addition to being consistent with the results of Schafer et al. (1996) and Schafer et al. (2000) with respect to showing a disambiguating effect of prosody in spoken language comprehension, these findings serve as a comprehension analog to production studies on NRRCs and RRCs (Hirschberg & Avesani, 1997; Watson & Gibson, 2004). These findings are also in line with the difference in the truth conditions between these relative clause types (Demirdache, 1991). This suggests that the methodology used in this study can be implemented to validate other claims in the formal syntactic literature.



## References

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