PROSODIC DISAMBIGUATION OF ‘or’ CONSTRUCTIONS:
EVIDENCE FROM HEBREW PERCEPTION AND PRODUCTION

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General: Our study examines Hebrew speakers’ use of intonation to disambiguate or questions. Results of production and perception experiments show a systematic contrast in intonation between two readings of or: Choice and Higher-Level-Category (henceforth: HLC; Ariel 2015, Ariel and Mauri in press). Specifically, Choice disjuncts are more often produced in two separate intonation units (henceforth: IU), HLCs in one IU.

Interpreting or: While controversy surrounds the analysis of or’s semantics (Grice 1989, Horn 1972, Chierchia, 2013, Ariel 2015, Ariel and Mauri in press), it is generally agreed that or has several interpretations in natural discourse. Our study focusses on two readings proposed in Ariel (2015) and Ariel and Mauri (in press): Choice and HLC. A Choice reading profiles an unresolved choice between alternatives and in the cases here examined also calls for such a choice to be made (example a). An HLC reading constructs a higher-level category based on the disjuncts (example b). In HLC, the disjuncts are construed as exemplars, which point to a higher-level category, possibly an ad-hoc one. It is the higher-level category that is profiled in these cases, which is why such disjunctions are compatible with a different alternative, provided it too is a member of the higher-level category evoked.

Intonation and or questions: Previous studies suggest that it is not only context that helps speakers disambiguate or. Many report that different interpretations of or are accompanied by distinct intonation patterns (e.g. Halliday 1967; 1970, Bartels 1999, Zimmerman 2000). Evidence supporting this claim comes from English perceptual studies (Pruitt and Roelofsen 2011; 2013). Ariel (2015) found a differential preference for IU structuring for Choice and HLC readings in the Santa Barbara Corpus. We are the first to experimentally examine these patterns in Hebrew, however.

Production Experiment: A dialogue-based production study was conducted in order to detect spontaneous choice of intonation pattern induced by different readings of or. Participants (n=12) were seated in pairs and presented with written dialogues on flashcards, one at a time. After participants familiarized themselves with the dialogue, the experimenter assigned each character in the dialogue to one of the participants, and they were asked to produce the dialogue aloud. Each pair was presented with 16 dialogues, 8 of which included or questions. Half of the questions were biased towards a Choice reading (example a) and half towards an HLC reading (example b). All disjuncts were disyllabic nouns with final stress (i.e. \( \sigma '\sigma \)). The sentence carrying the or question consisted of five syllables preceding the disjunction, with the second and the fifth of those syllables stressed (i.e. \( \sigma '\sigma \sigma \sigma '\)). Preliminary results suggest that Hebrew speakers actively disambiguate or questions by producing a distinct intonation pattern for each of the two readings. Specifically, speakers produce each disjunct in a separate IU in Choice questions, and in contrast, they produce both disjuncts in one IU in HLC questions.

Perception Experiment: A dialogue-based perception study was conducted in order to test speakers’ association of specific intonation patterns with the HLC reading. Participants (n=26) heard 16 or questions and 16 fillers in random order. In the dialogues, the answer to the or question was “Yes” along with a third member of the category constructed by the two disjuncts in the question (suitable members determined by pre-test results), as in example (b). Participants were exposed to two types of stimuli based on intonation pattern: the two disjuncts were part of a single IU in half of the or questions, and were divided into two separate IUs in the other half. Results show that speakers associate a specific intonation pattern with the HLC reading: when disjuncts spanned over two separate IUs, participants rejected the affirmative response to the or question. In contrast, when the disjuncts were included under one IU, speakers accepted the affirmative response, as expected in the case of HLC reading.

Summary and Conclusions: The present study corroborates Mira Ariel’s (2015) findings for Santa Barbara Corpus, and shows that Hebrew speakers use prosodic cues in both perception and production in order to facilitate certain readings of or questions, specifically Choice and HLC. Our findings suggest that Hebrew speakers show a robust preference for alignment between profiled alternatives and intonation units
EXAMPLES: Two readings of or (translated from the Hebrew stimuli used in present experiments)

a. Choice reading
   Ohad: Tomorrow we celebrate my promotion. Could you bring a dessert?
   Naomi: Sure! Would you like me to bring some fruit or a cake?
   Ohad: Cake. Thank you.

b. HLC reading
   Ohad: Tomorrow we celebrate my promotion. Would you like to come?
   Naomi: I’d love to! Would you like me to bring some fruit or a cake?
   Ohad: Yes, cookies. Thank you.

SELECTED REFERENCES:


Ariel, M. and Mauri, C. In press. Why use or?


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1 No bolded phrases in the actual stimuli.