

Linguistic Evidence and Stigmatized Structures: The Case of English Negative Concord

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1 Introduction

Traditional theoretical models assume a grammatical distinction between Negative Concord (NC) and Double Negation (DN) languages (Zeijlstra 2004). In NC, two or more syntactic negations yield a single semantic one (e.g., the ‘I ate nothing’ reading of “I didn’t eat nothing”), and in DN each negation contributes to the semantics (e.g. ‘It is not the case that I ate nothing’). English NC is associated with a heavy social stigma (Horn 2010). As such, traditional forms of usage and acceptability judgment data may obscure speakers’ grammatical knowledge of the construction. This paper contributes controlled experimental data to inform theoretical models of English NC and DN.

A growing body of experimental work demonstrates that DN is possible in prototypical NC languages, including Spanish, Catalan, and French (Espinal & Prieto 2011; Prieto et al. 2013; Déprez et al. 2015; Espinal et al. 2016). In these languages, DN readings are associated with denial contexts (Geurts 1998), as well as marked prosody and gesture. We present data from two experiments that corroborate these findings for “Standard English”, typically assumed in the linguistics literature to be a DN language. The experiments explore the roles of syntax, pragmatic context, and prosody in shaping the production, interpretation, and perception of English sentences with two negatives.

2 The Experiments

2.1 Experiment 1: Production and Comprehension

20 native speakers of American English were recruited from an introductory linguistics class at Penn State. Sentences with two negatives were presented in NC and DN contexts. Participants were asked to imagine themselves in the context, and produce the sentence out loud as though they were in it. Three syntactic structures were used: two negative quantifiers (2Q, ex. 1); *-n’t* plus a negative object (Ob, ex. 2); and a negative subject followed by *-n’t* (Sub, ex. 3):

- (1) 2Q: No one will love nothing on vacation.
- (2) Ob: Mary won’t move nothing from the playroom.
- (3) Sub: No one won’t love the food this Thanksgiving.

Following their productions, participants were asked to answer a True/False verification question about the item. This measure allowed us to select items with the target

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interpretation for a perception task and subsequent prosodic analysis, and it also provided us with a measure of participants' interpretations of the two negatives items in context.

Figure 1 illustrates the verification question results. A General Linear Mixed Effects Regression (GLMER) revealed no significant differences between target like responses in the NC and DN conditions: context served to elicit the target response most of the time.

2.2 Experiment 2: Perception

110 native speakers of American English were recruited via Amazon's Mechanical Turk. Stimuli were the tokens produced by participants in Experiment 1. Participants listened to sound files with no preceding context, then selected a verification statement that corresponded to an interpretation (NC or DN). For example, for (1), they selected either the NC interpretation 'Everyone will be unhappy with their vacation', or the DN interpretation 'Everyone will find something they enjoy on vacation'. After selecting an interpretation, participants rated how confident they were with their response on a scale of 1 to 7.

A GLMER revealed that NC interpretations were significantly more likely in the Object than in the Subject and 2Q conditions ($\beta = 1.71$, $SE = .20$, $p(z) < .001$) (Figure 2). Regardless of speaker intent, participants preferred NC with negative objects. However, speaker intent did impact interpretation: Participants gave more NC responses when the speaker intended NC ($\beta = .40$, $SE = .19$, $p(z) < .05$) (Figure 2). A GLMER for confidence ratings (Figure 3) revealed that participants were more confident when their response aligned with speaker intent ($\beta = .06$, $SE = .02$, $p(z) < .005$), and more confident with their NC responses in the Object condition than in either the Subject or the 2Q conditions ($\beta = .10$, $SE = .02$, $p(z) < .001$).

Results from Experiment 2 guided the prosodic analysis of the elicited data from Experiment 1. Time-normalized f_0 values were extracted using ProsodyPro (Xu 2013), and z-score transformed for comparison across speakers. The resulting f_0 curves were then analyzed statistically using Smoothing Spline (SS) ANOVAs (Gu 2014). Analyses revealed that DN is reliably marked with higher f_0 on the subject in the 2Q condition, and with a lowered f_0 on the negated auxiliary in the Sub condition. This corroborates previous research on prototypical NC languages in which DN is the prosodically marked form.

3 Theoretical Implications

Our results show that, like speakers of prototypical NC languages (Espinal et al. 2016), English speakers reliably exploit both syntactic and pragmatic cues in selecting an NC or a DN interpretation. This evidence supports theories that incorporate both NC and DN in a single grammar (Déprez 2011), and argues against the widely assumed theoretical distinction between DN and NC grammars (Zeijlstra 2004). To successfully capture our specific results, in addition to generating both NC and DN, theories of "Standard English" grammars should predict a bias toward NC interpretations with negative objects, and a bias toward DN interpretations with negative subjects in canonical position. Successful theories should further account for the markedness of DN relative to NC, as evidenced by prosody.

4 Figures

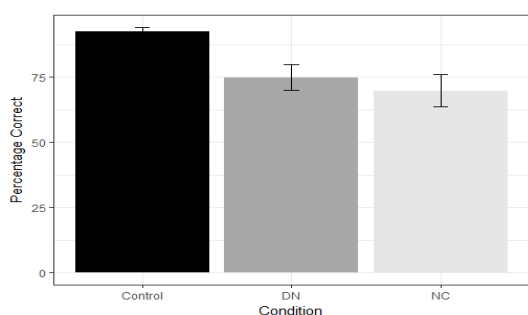


Figure 1. Exp. 1 Verification Responses

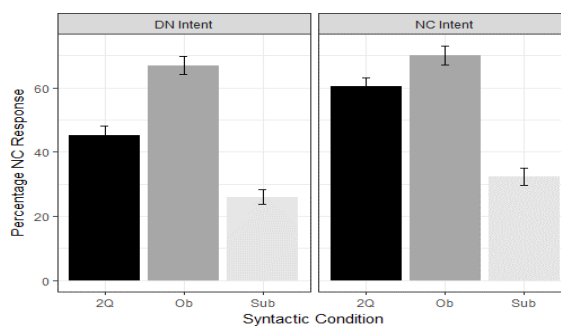


Figure 2. Exp. 2 NC Response by Speaker Intent

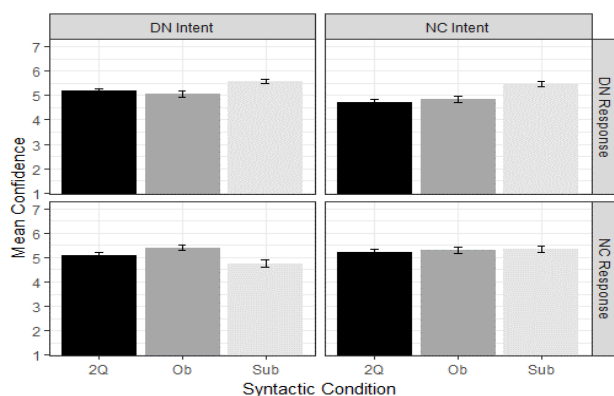


Figure 3. Exp. 2 Mean Confidence by Speaker Intent

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