Structural priming from nonnative-accented speech

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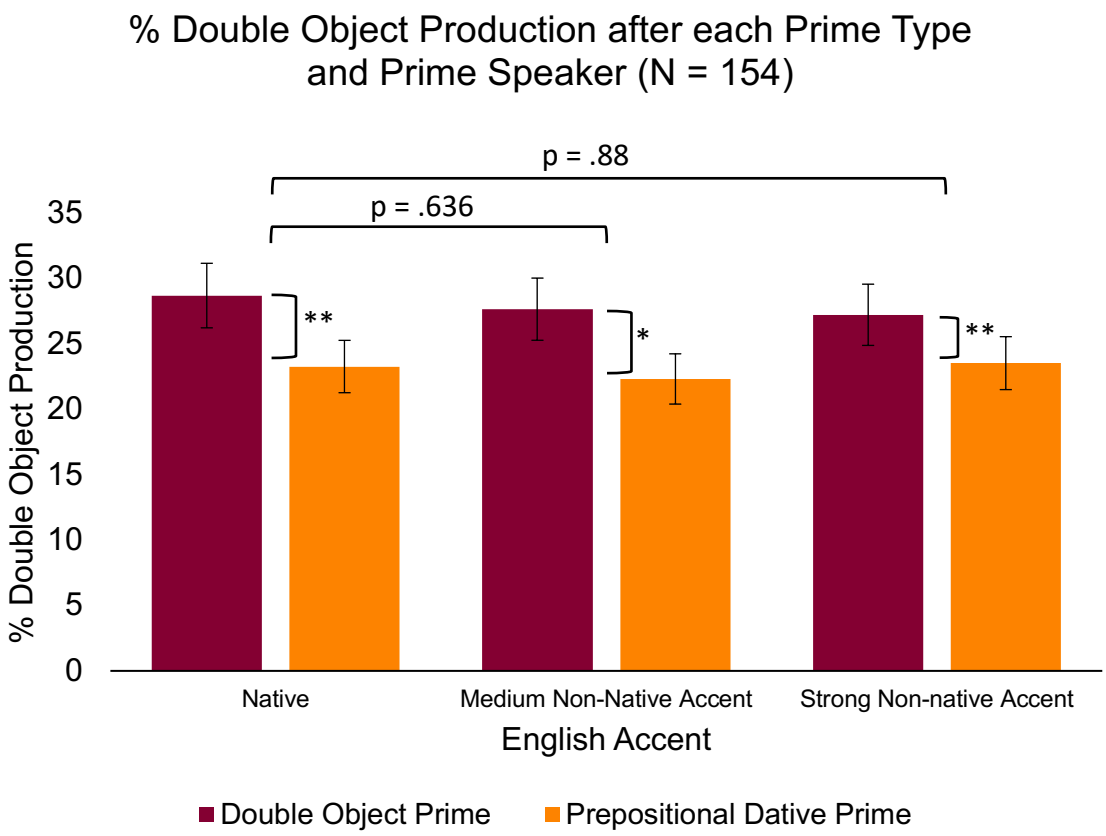
This study investigates structural priming from nonnative-accented utterances, to examine the role of attentional focus for structural priming. The processing of nonnative-accented speech is cognitively effortful (Gass & Veronis, 1984; Munro & Derwing, 1995), and the effort invested in decoding nonnative-accented speech may detract attention from structural processing and thus reduce the magnitude of structural priming. Accordingly, Bock et al., (1992) found structural priming only when participants were instructed to focus on sentence form but not when they were instructed to focus on sentence meaning. These results suggest that focusing attention on linguistic aspects other than structure (such as meaning, word choice or accent) might reduce or eliminate the priming effect because of reduced attention to structure. If so, nonnative-accented utterances should prime less than native-accented utterances. Conversely, the effort invested in the processing of nonnative-accented speech may increase overall attention to an utterance, including its structure and thus *increase* structural priming. Chun et al., (2016) found that participants structurally aligned more to nonnative-accented speakers than to native speakers in a noninteractive task. These results suggest that focusing attention to accented speech increases attention to the overall utterance, including the structure. If so, nonnative-accented utterances should prime more than native-accented utterances.

One hundred and fifty-four English monolinguals were recruited from Amazon Mechanical Turk, and listened to 24 recorded English prime utterances, half of which had a prepositional dative structure (e.g., *The charity worker gave some essential groceries to the needy family*), and half had a double object structure (e.g., *The charity worker gave the needy family some essential groceries*). The prime utterances were spoken by three speakers selected among seven speakers whose accents were rated for nativeness by 34 additional Mechanical Turk participants. The final three were a native speaker of American English (98.7%; *native-accented condition*), a native speaker of Mexican Spanish (46.2%; *medium nonnative-accented condition*), and a native speaker of Japanese (22.9%; *strong nonnative-accented condition*). Each participant heard eight utterances from each speaker, and critical items were separated by 1-3 fillers. After listening to a prime utterance, participants answered a multiple-choice comprehension question and then typed descriptions of pictures of transfer events.

LMER analyses showed that participants produced more double object descriptions after double object primes than after prepositional dative primes for native-accented primes (5.44%, p = .001), medium nonnative-accented primes (5.34%, p = .017), and strong nonnative-accented primes (3.7%, p = .004). However, the priming magnitude was not modulated by accent: The interactions between prime structure and accent condition were not significant either in a model comparing priming in the native-accented condition to priming in the medium nonnative-accented condition (p = .636), or in a model comparing the native-accented condition to priming in the strong nonnative-accented condition (p = .876).

These results are inconsistent with either hypothesis They are also inconsistent with an alternative reason why structural priming from nonnative-accented speech could be reduced – perceived social distance or outgroup membership (cf. Weatherholtz et al., 2014). Still, a second experiment with a dual-task paradigm will put the first hypothesis to a further test (planned N = 192). Participants will listen to the native-accented and strong nonnative-accented primes from the current study while they either track three moving dots with their eyes to detract attention from language processing (Motion-Object Tracking task, Heyselaar et al., 2017) or look at stationary dots. If processing nonnative-accented speech detracts attention from structural processing, there should be equivalent priming from nonnative- and native-accented utterances when the dots are still (replicating the current results) but less priming from nonnative- than from native-accented utterances when the dots are moving.



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