

DOES A COMMUNICATIVE CONTEXT PRODUCE A PREFERENCE FOR EARLY NEGATION? AN ARTIFICIAL LANGUAGE LEARNING STUDY

Danielle Burgess^{*1}

^{*}Corresponding Author: dlburge@umich.edu

¹Linguistics Department, University of Michigan, Ann Arbor, USA

Tendencies for negation to appear early in the sentence have been observed by scholars working in typology (Dryer, 1988), creole language emergence (Schneider, 2000), and language acquisition (Kim & Yun, 2013; Dimroth, 2010). Some scholars have proposed that a tendency for early negation marking may be motivated by considerations of audience design in communication, because delaying the negator could increase misunderstanding or comprehension difficulty when the sentence up to but not including the negative is the opposite of the intended meaning (Dryer, 1988: 102; Horn, 1989: 449). However, such proposals have not yet been widely investigated. Furthermore, evidence for an early negation preference in L1 and L2 acquisition is complicated by confounds of difficulty, complexity, or frequency of negative constructions and co-occurring elements such as, for example, verb-raising (Dimroth 2010).

The present study utilizes an artificial language learning paradigm to verify the presence of a preference for earlier negation in a language that allows for free variation between preverbal and postverbal negation. Participants were also paired to take part in a director-matcher paradigm to investigate whether a preference for early negation could be plausibly driven by the specific pressures of communication, as opposed to learning and production in isolation.

54 English-speaking participants were exposed to a miniature language that contained a mixture of preverbal and postverbal negation (NegVSO and VNegSO). Participants were divided equally among three experimental conditions corresponding to different proportions of preverbal negation ordering they were exposed to during training (25%, 50%, and 75%). After training, participants first produced sentences in a non-communicative context by

describing images withheld from the training set. Then, participants were paired with another learner (trained on the same input proportions) to perform a director-matcher task, followed by a final solo retest.

Across conditions and production phases, participants produced more preverbal negation on average compared to the proportion of preverbal negation in the input (see Figure 1). Statistical analysis using mixed effects logistic regression revealed that the use of the majority order in training was significantly lower in the Majority VNeg condition than the Majority NegV condition ($\beta = -0.97$, $SE = 0.35$, $p = 0.006$). There was also a significant interaction indicating an additional effect on the difference in use of the majority order between the Majority NegV and Majority VNeg conditions in the interaction stage, compared to pre-interaction production ($\beta = -0.36$, $SE = 0.09$, $p < 0.001$). Subsequent pairwise comparisons revealed that within each condition, the only significant differences in use of NegV order between production stages were within the Majority NegV training condition, where there was significantly more NegV use in the interaction stage ($\beta = -1.22$, $SE = 0.29$, $p = 0.001$) and post-interaction stage ($\beta = -1.10$, $SE = 0.28$, $p = 0.003$) compared to pre-interaction production.

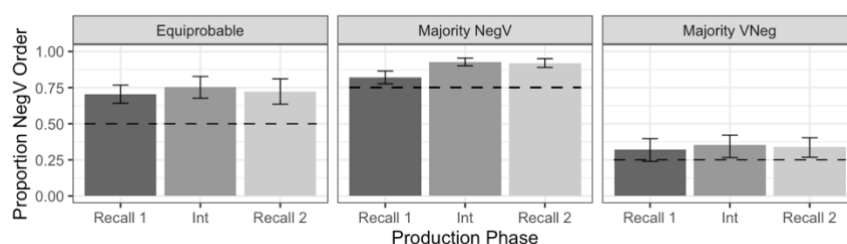


Figure 1. Plot showing participants' average proportion of NegV production. The dashed lines indicate the proportion of NegV order seen in training. Error bars represent standard error.

These results verify the existence of a production bias consistent with preverbal negation preferences in adult English speakers learning and producing a language which contains both preverbal and postverbal negation, consistent with preferences observed in, for example, naturalistic L2 learning of Korean (Kim & Yun, 2013). Further research is necessary to test whether this preference extends to speakers of postverbal negation languages like Japanese, though note that in studies of naturalistic L2 acquisition, even learners with L1s that use postverbal negation have also shown some preference for preverbal negation patterns (Kim & Yun, 2013; Hyltenstam 1977). Looking at the role of interaction, the director-matcher task failed to reliably boost NegV use compared to production in isolation prior to interaction, which does not support the idea that a communicative context induces a greater preference for preverbal negation in general.

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