

EFFECTS OF INPUT TYPE FREQUENCY ON STRUCTURAL PRIMING AND STATISTICAL PREEMPTION IN THE ACQUISITION OF L2 DATIVE CONSTRUCTION

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Second language (L2) learners usually have difficulty in learning dative constructions, particularly in abstracting double object (DO) structure (e.g., *John gave Mary a necklace*) and prepositional dative (PD) structure (e.g., *John gave a necklace to Mary*). L2 learning of dative constructions requires learners to extend the acceptability of less preferred structures but avoid excessively accepting certain combinations between verbs and structures that are ungrammatical (e.g., **John donated a necklace to Mary*). However, it was still unclear how L2 learning results in overgeneralization in the first place. Overgeneralization might be caused by structural priming, that is the persistence of syntactic structures between language input and production/comprehension (Ivanova et al., 2012). In addition, it was suggested that L1 learners constrain the overgeneralized form via statistical preemption (Boyd & Goldberg, 2011), whereby they take the repeated input of structure X (e.g., non-generalizable PD) as indirect negative evidence of the appropriateness of a semantically related structure Y (DO) in the same context. However, it is still debatable whether statistical preemption affects L2 learners' language generalization. Finally, high variability in verbs (i.e., high type frequency) would increase the productivity of the input structure (Goldberg, 2019), but the effect of such a statistical feature on L2 learning has not yet been elucidated.

To test the above questions, the present study investigated the effects of structural priming and statistical preemption on L2 learning of DO structure, and how the type frequency of the input modulates these effects. Chinese L2 English learners (N=188) were randomly assigned to two pretest-exposure-posttest experiments. In both experiments, the experimental groups received input of English dative sentences during the exposure session (DO in Experiment 1, DO and non-generalizable PD in Experiment 2). The type frequency of the DO input was manipulated between groups in Experiment 1 (HDZP vs. LDZP) and that of the non-generalizable PD input was manipulated between groups in Experiment 2 while the input type frequency of DO was kept high (HDHP vs. HDLP). The production of dative structures for each group was assessed before, immediately after, and two days after exposure. The findings were two-fold: first, there were both short-term and long-term effects of structural priming on well-formed and overgeneralized production (i.e. the likelihood of well-formed and overgeneralized DO production increased in the posttests, see Figure 1) and statistical preemption (i.e., the likelihood of overgeneralized DO production was lower in the posttests of HDHP vs. HDZP); second, in terms of the DO overgeneralization, the short-term effect of type frequency was found on structural priming and statistical preemption, while the long-term effect of type frequency was found on preemption. In sum, in two experiments, we showed that L2 learners' overgeneralization, and avoidance of overgeneralization in dative learning can be driven by structural priming and statistical preemption. Both processes are sensitive to input type frequency. These findings provide evidence in support that statistical-driven processes can facilitate L2 learners to recover from conservativity and overgeneralization.

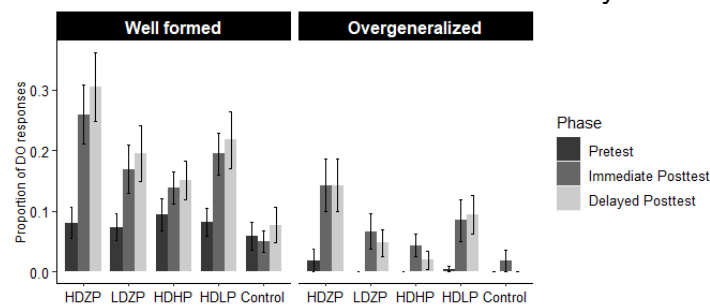


Figure 1. Proportion of DO responses collapsed by group, phase, and production type. HDZP = High type frequency DO, Zero PD, LDZP = Low type frequency DO, Zero PD, HDHP = High type frequency DO, High type frequency PD, HDLP = High type frequency DO, Low type frequency PD.