

The development of syntactic representations in beginning L2 learners of Dutch: A longitudinal structural priming study

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Introduction. Sentence production in L2 learners can be investigated using structural priming (processing a structure facilitates re-using that structure). Based upon proficiency effects in previous structural priming studies, the developmental model of Hartsuiker & Bernolet (2017) outlines five possible stages in the L2 acquisition of syntactic structures. Learners start with item-specific representations. Abstract priming (i.e., without lexical overlap) of structures occurs at a later stage, and earlier in more frequent structures than in less frequent structures. In a longitudinal study, we test the predictions for the early stages of this model in beginning learners of Dutch with transitives. We hypothesize that priming effects are initially only found for the more frequent active structure and only later for the less frequent passive structure.

Method. 17 students in a full-time Dutch language course (start level A0, target level B2) participated five times in a structural priming experiment. Students learned the active structure before the first session; the passive structure was taught before the third session. During each session, participants listened to 24 prime sentences with a baseline, an active or a passive prime sentence. They were then asked to describe a target picture using the transitive verb below it. There was no verb overlap between prime and target. Halfway each session, we included an intervention of four passive items with verb overlap between the prime and the target in order to boost the passive structure. We also inserted 48 intransitive fillers.

Results. We coded the responses as Active (49.5%), Passive (29.9%) or Other (20.5%). The results show that the proportion of passives increases over time ($p < .001$), then stabilizes ($p < .05$). (Session 1: 10.6%, Session 2: 15.8%, Session 3: 41.0%, Session 4: 39.6%, Session 5: 43.5%). Participants also produce more passives after the intervention than before the intervention ($p < .001$), but this effect decreases over time ($p < .05$). Participants produce more active sentences after an active prime than after a baseline prime (i.e., active priming, $p < .05$) in Session 1 after the intervention and in Session 3. During Session 4, after the intervention, participants tend to produce more passives after a passive prime than after a baseline prime (i.e., passive priming) ($p < .1$). Unexpectedly, in this session, the proportion of passives is also higher after an active prime than after a baseline prime ($p < .05$). We do not find any priming effects during Session 5.

Discussion/Conclusion. The results suggest that learners are primed for the more frequent active structure in the early stages of learning. This active priming only occurs when the passive structure is boosted. In Session 1, the intervention boosts the production of the passive. In Session 3, production of the passive is boosted by the explicit instruction of the passive structure in class shortly before the session. The boost only affects the baseline and passive conditions: active priming seems to prevent the boost of the passive in the active condition. The absence of active priming in later sessions indicates that active priming reduces over time and that learners gradually develop more native-like production patterns: in native speakers, we usually find priming for passives, but not for actives. The results show that the development of the passive structure takes place in two stages: (a tendency to) priming of the passive structure is found only in Session 4, after a period of time in which participants start to use the structure more frequently (more frequent than what is usually found in native speakers). However, this passive priming effect was not found in Session 5, and the higher proportion of passives after an active prime during the fourth session is also surprising. The results may have been confounded by the longitudinal design: after a couple of sessions, the participants may have been aware of the targeted structure and consequently, may have used more passives consciously, which prevented them from being primed reliably.

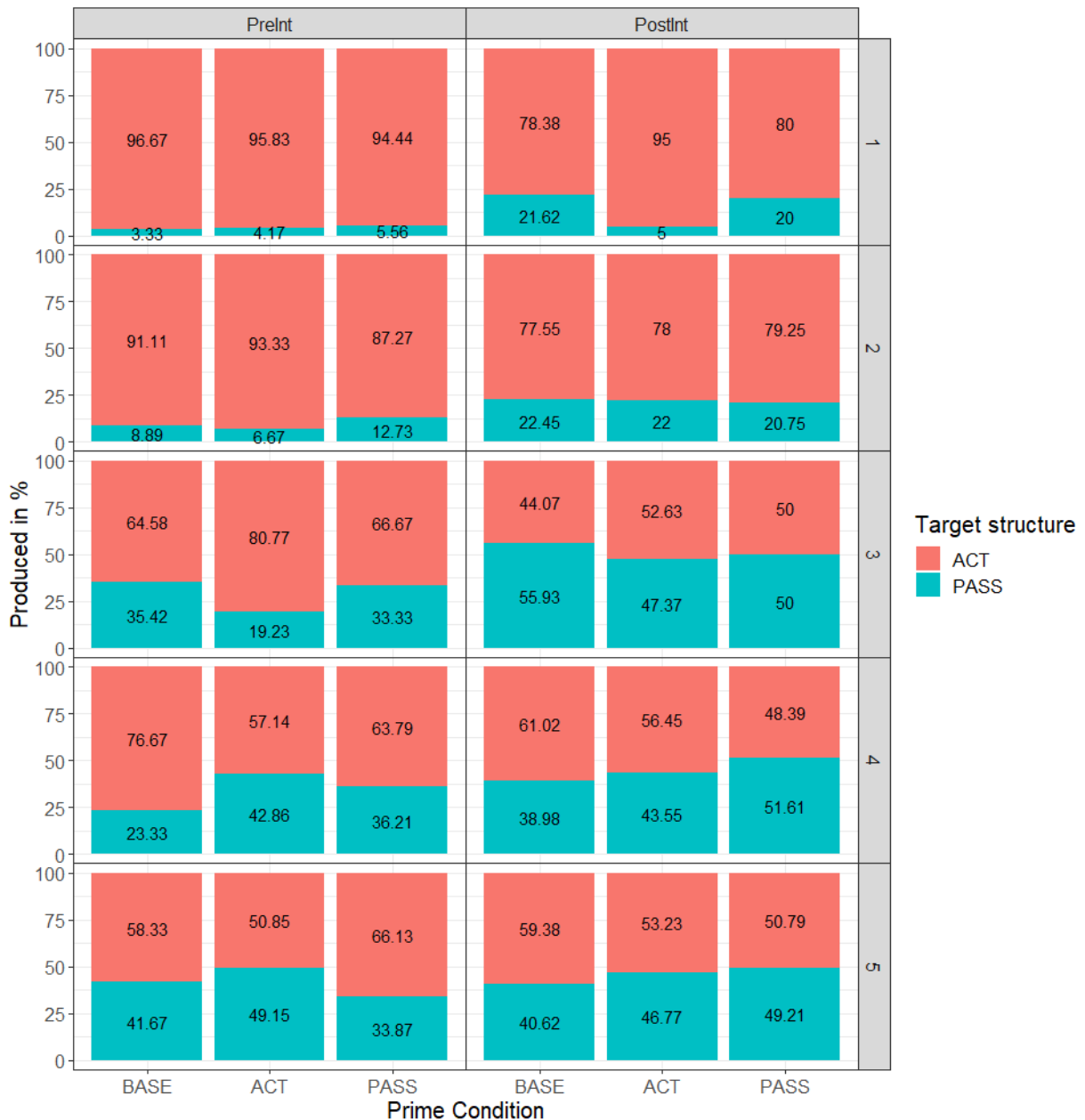
Stimuli examples

Baseline prime: de dokter en de bakker [the doctor and the baker]

Active prime: de bakker roept de dokter [the baker calls the doctor]

Passive prime: de dokter wordt geroepen door de bakker [the doctor is called by the baker]

Figure 1. The proportion of active and passive responses per session, per prime condition before and after the intervention.



References

Hartsuiker, R., & Bernolet, S. (2017). The development of shared syntax in second language learning. *Bilingualism: Language and Cognition*, 20, 219-234.