

Structural alignment of the German passive in dialog (playing *the game with no name*)

Yvonne Portele (Goethe University Frankfurt)

y.portele@gmail.com

Structural priming in language production, the tendency of speakers to reuse previously processed structures, has been found for many structures and languages. While most studies investigated monologue settings (participants producing both primes and targets), more natural language settings, such as dialogs, induce a constant alternation between comprehending and producing. The finding of speakers adapting to the interlocutor's structures has been termed *syntactic co-ordination* or *syntactic/structural alignment*. Some dialog studies suggest that structural alignment may even be stronger in dialog than monologue settings (e.g., Branigan et al., 2000). Although there is a remarkable number of structural alignment studies by now, there are only few studies including active and passive structures (Branigan & McLean, 2016; Hardy et al., 2017 for English; Deng et al., 2012 for Japanese). The experiment presented here aimed at filling an empirical gap by investigating passive structures in German. **Participants.** Twenty-six native speakers of German (mostly students) participated. **Materials.** Twenty-four experimental item sets consisting of prime sentences (active, passive, baseline) and target pictures of transitive action events (see Tab 1) were created. Verbs were always repeated between primes and targets (inducing a *lexical boost*). Half of the materials involved animate agents and patients. The second half included inanimate agents and inanimate patients. Intransitive verbs were used in the baseline condition.

Procedure. Using a modification of the confederate-scripting technique by Branigan et al. (2000), participants were told they would participate in a *game* ("with no name"; Fig 1). During picture choice (*confederate's turn*), participants heard descriptions of game board positions and subsequent picture descriptions given by the confederate. They were asked to search their pictures and, where applicable, position a picture. During picture description (*the participant's turn*; Fig 2), participants were asked to give locations of the game board (marked in their folder). Participants should then describe their picture in one sentence, using the verb printed below. Afterwards, it was the confederate's turn again.

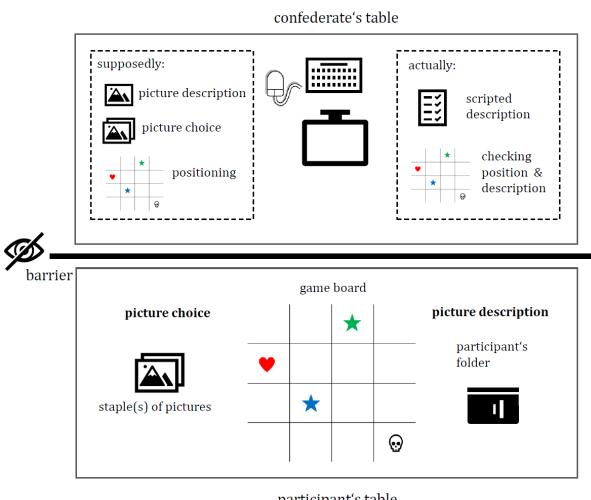


Figure 1: Experimental set-up.

Results. A generalized linear mixed model showed a significant main effect of *Prime*. Participants were more likely to produce passive descriptions following passive compared to baseline primes (Fig 3). The results also showed a significant main effect of *Agent*. For pictures including animate patients and inanimate agents, participants were more likely to produce passive descriptions than for targets depicting animate patients and animate agents. **Discussion.** The results showed structural alignment for passives in German. After the comprehension of a passive (produced by the interlocutor), participants were more likely to produce passive structures in subsequent picture descriptions involving the same verb as the prime. The experiment also replicated effects of *inherent conceptual accessibility* on sentence production. Pairings of animate patients and inanimate agents caused significantly more passive descriptions than pairings of animate agents and patients. The inclusion of this manipulation is discussed in the context of the imbalance between the active/passive and dative alternation in the literature. Compared to results of a monologue setting including the same materials (Portele, 2018), priming was also stronger in the dialog setting, in line with previous research (focussing on the dative alternation).

Table 1: Example of prime sentences and corresponding target pictures.

prime	sentence	
	animate agent, animate patient	inanimate agent, animate patient
active	Das Mädchen umarmt den Prinz. <i>The girl hugs the prince.</i>	Der Blitz trifft den Spaziergänger. <i>The lightning hits the walker.</i>
passive	Der Prinz wird von dem Mädchen umarmt. <i>The prince is hugged by the girl.</i>	Der Spaziergänger wird von dem Blitz getroffen. <i>The walker is hit by the lightning.</i>
baseline	Die Schülerin liest vor. <i>The pupil reads aloud.</i>	Das Segelflugzeug stürzt ab. <i>The glider crashes.</i>
target pictures:	umarmen (<i>to hug</i>) 	treffen (<i>to hit</i>) 

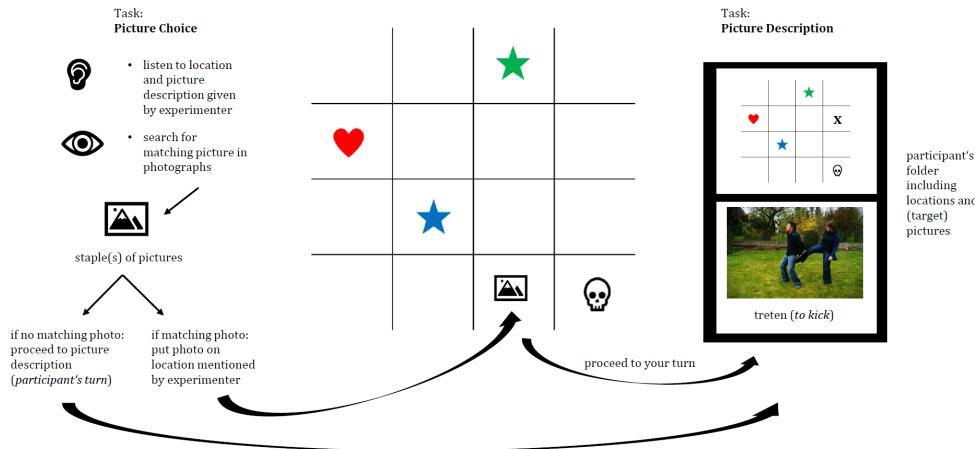


Figure 2: Construction of the game from the participant's view.

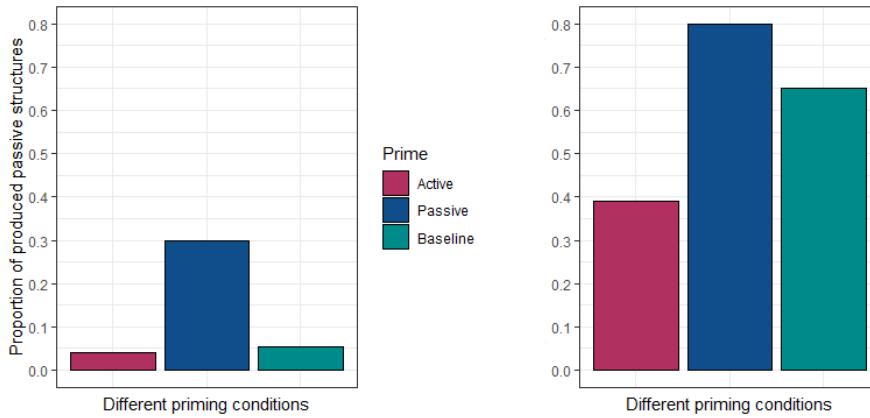


Figure 3: Proportions of produced passive descriptions in the different prime conditions for animate (left) and inanimate agents (right).

References. • Branigan, Holly P., Martin J. Pickering, and Alexandra A. Cleland (2000). Syntactic co-ordination in dialogue. *Cognition* 75.2, B13–B25. • Branigan, Holly P. and Janet F. McLean (2016). What children learn from adults' utterances: An ephemeral lexical boost and persistent syntactic priming in adult–child dialogue. *Journal of Memory and Language* 91, pp. 141–157. • Deng, Ying, Hajime Ono, and Hiromu Sakai (2012). How Function Assignment and Word Order are Determined: Evidence from Structural Priming Effects in Japanese Sentence Production. *Proceedings of the Annual Meeting of the Cognitive Science Society*. Vol. 34, pp. 1488–1493. • Hardy, Sophie M., Katherine Messenger, and Elizabeth A. Maylor (2017). Aging and syntactic representations: Evidence of preserved syntactic priming and lexical boost. *Psychology and Aging* 32.6, p. 588–596. • Portele, Yvonne (September 2018). Structural Priming of the German Passive in Language Production. Poster at AMLaP. Berlin, Germany.