

**GRAMMATICAL ENCODING FOR COMMUNICATIVE EFFICIENCY –  
EVIDENCE FROM THE PRODUCTION OF ORC AND PASSIVE-SRC IN CHINESE**

Lan Tao (University of International Business and Economics), Johannes Gerwien  
(Heidelberg University)  
03299@uibe.edu.cn

Speakers tailor their utterances for addressees, as evidenced in studies on word production and articulation (Ferreira, 2019). While evidence for audience design during grammatical encoding of sentence production is limited (Morgan & Ferreira, 2022), studies on morphosyntactic encoding, such as Kurumada and Jaeger (2015), suggest that it may occur. In Chinese, passive-SRCs and ORCs have similar meanings, pragmatic functions, and word order, but differ with respect to the passive marker *bei* (passive-SRC: *bei*<sub>passive-marker</sub> *agent V de*<sub>RC-marker</sub> *patient*; ORC: *agent V de*<sub>RC-marker</sub> *patient*). The *bei* marker signals to listeners that the following discourse is transitive and can reduce temporary syntactic ambiguity (the beginning of an ORC may be interpreted as a main clause temporarily). A comparison of the contexts in which both structures can occur offers a unique opportunity to investigate syntactic audience design in sentence production. To explore this, we conducted one production and comprehension experiment.

In the production experiment, 30 participants were given pictures showing either one or two transitive events (e.g., in Condition A, a picture showed *a skinny tourist on the left and a chubby tourist that is being bitten by a dog on the right*; in Condition B, a picture showed *a cat that bites a skinny tourist on the left, and a dog that bites a chubby tourist on the right*; 20 items per condition). The task was to produce a response to questions yielding relative clauses (e.g., Q: *Which tourist is chubbier*; A: *The one that the dog bites/ the one that is bitten by the dog*). In Condition A, participants produced more passive-SRCs than in Condition B. Given that Chinese speakers prefer to produce passive-SRCs over ORCs in isolated contexts – possibly due to *bei* in SRCs providing more time to formulate content and reduce semantic interference (Hsiao & MacDonald, 2016), the asymmetry of syntactic choices between conditions in our experiment cannot be attributed to production ease alone. However, our findings can be explained by syntactic audience design as a factor for syntactic choice. The transitivity-predictive feature of the *bei* marker in passive-SRC can reveal to potential addressees that a transitive event is about to be expressed, aiding them in quickly identifying the target event (e.g., *The dog bites the chubby tourist*) in contexts with a single transitive event, whereas this cue does not help in contexts with two transitive events. To investigate whether the *bei* marker indeed has this aiding effect, we conducted a visual world comprehension experiment.

Using the same pictures from the production experiment, we asked another 32 Mandarin participants to identify the referent mentioned as the head noun in pre-recorded RCs (passive-SRC, ORC) as quickly as possible while monitoring gaze. We found that only in one transitive event contexts, the passive-SRC (compared to ORC) facilitated identification, resulting in faster reaction times (using agent-onset as the reference point) and more frequent gaze towards the target picture at agent-onset. These results support our interpretation of the production experiment and suggest that speakers tend to select syntactic structures depending on the informativeness of these structures as they unfold in real-time depending on specific contexts, which suggests that syntactic choice is to some extent driven by communicative efficiency.

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