

From Japanese Passive toward Typological Psycholinguistics

Are (benefactive) passives are difficult to comprehend than (benefactive) actives in Japanese?

Masataka Ogawa

Doctor's Programme, Department of Language and Information Sciences,
Graduate School of Arts and Sciences, The University of Tokyo
ogawa@phiz.c.u-tokyo.ac.jp

If passive diathesis is defined as the mapping of patient role to a sentential subject and agent role to an adjunct (Zúñiga and Kittilä 2019), Japanese has two types of passive voice to express it: conventional *V-(r)are* passive, which is contrasted with the zero-marked active, and *V-te morau* benefactive passive, which is equipollently opposed to benefactive active *V-te ageru*. Although *V-te morau* benefactive passive has received less attention compared to *V-(r)are*, *V-te morau* can contribute to elucidating the following two typological questions: 1. whether passives are cognitively demanding to comprehend than actives; and 2. whether the patient-like beneficiary in *V-te morau* and conventional patient in *V-(r)are* constitute one broad role (e.g. Proto-Patient role of Dowty 1991; Undergoer macrorole of Hartmann et al. 2014) or these two are distinct thematic roles.

The previous researchers (Paolazzi, Grillo, Alexiadou, et al. 2016, 2019; Paolazzi, Grillo, and Santi 2017, in English; Grillo et al. 2019, in German) conducted self-paced reading tasks (hereafter, SPR) and argued that the reading time for passives was shorter than for actives or that there was no reading time difference between passives and actives. Moreover, they showed that the accuracy and response time to the comprehension question for passive were comparable to those for actives. On the other hand, results of experiments using *V-rare* passive in Japanese suggest that passives do have a processing difficulty (Kinno et al. 2008; Tamaoka et al. 2005; Tanaka et al. 2017). However, no results of SPR tasks using Japanese passive constructions are published, impeding direct cross-linguistic comparison of the reading time and comprehension accuracy. Therefore, an SPR experiment comparing *V-te morau* benefactive passive and its active counterpart *V-te ageru* would clarify whether passives are more cognitively demanding than actives, complementing the results of previous studies using *V-rare*.

Previous research in English (Chang et al. 2003; Ziegler and Snedeker 2018) also found that a structural priming occurs from benefactive constructions to dative alternations, suggesting that the commonality of thematic role between constructions contributes to the priming effect. However, it is still unknown whether the patient-like beneficiary together with patient itself composes one broad patientive role or beneficiary and patient are different thematic roles. Therefore, the primability of *V-te morau* benefactive passive to *V-rare* would reveal the representation of the thematic roles in human parsing system; i.e. if *V-te morau* facilitates fast and accurate comprehension of *V-rare*, the patient-like beneficiary in *V-te morau* and conventional patient in *V-(r)are* would be categorised into the same patientive macrorole.

An SPR experiment was conducted comparing the reading time between *V-te morau* benefactive passive and *V-te ageru* benefactive active. A comprehension question task using either normal active or *V-rare* passive was also administered after each trial targeting either of those two benefactive constructions. Therefore, there were four conditions: 1. *V-te morau* priming *V-rare* (voice match), 2. *V-te morau* priming normal active (voice mismatch), 3. *V-te ageru* priming *V-rare* (voice mismatch), 4. *V-te ageru* priming normal active (voice match). The results will be reported in the presentation.

References

- Chang, Franklin, J. Kathryn Bock, and Adele E Goldberg (2003). "Can thematic roles leave traces of their places?" In: *Cognition* 90.1, pp. 29–49.
- Dowty, David (1991). "Thematic Proto-Roles and Argument Selection". In: *Language* 67.3, p. 547.
- Grillo, Nino et al. (2019). "Processing unambiguous verbal passives in German". In: *Journal of Linguistics* 55.3, pp. 523–562.
- Hartmann, Iren, Martin Haspelmath, and Michael Cysouw (2014). "Identifying semantic role clusters and alignment types via microrole coexpression tendencies". In: *Advances in research on semantic roles* 38.3, pp. 463–484.

- Kinno, Ryuta et al. (2008). “Neural correlates of noncanonical syntactic processing revealed by a picture-sentence matching task”. In: *Human Brain Mapping* 29.9, pp. 1015–1027. eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1002/hbm.20441>.
- Paolazzi, Caterina Laura, Nino Grillo, Artemis Alexiadou, et al. (2016). “Processing English passives: Interaction with event structure, but no evidence for heuristics”. In: *29th Annual CUNY Conference on Human Sentence Processing*. University of Florida.
- (2019). “Passives are not hard to interpret but hard to remember: evidence from online and offline studies”. In: *Language, Cognition and Neuroscience* 34.8, pp. 991–1015.
- Paolazzi, Caterina Laura, Nino Grillo, and Andrea Santi (2017). “Passives are not always more difficult than actives”. In: *Proceedings of the Architectures and Mechanisms for Language Processing 2017*. AMLaP.
- Tamaoka, Katsuo et al. (2005). “Priority Information Used for the Processing of Japanese Sentences: Thematic Roles, Case Particles or Grammatical Functions?” In: *Journal of Psycholinguistic Research* 34.3, pp. 281–332.
- Tanaka, Kyohei et al. (2017). “Activation changes of the left inferior frontal gyrus for the factors of construction and scrambling in a sentence”. In: *Proceedings of the Japan Academy, Series B* 93.7, pp. 511–522.
- Ziegler, Jayden and Jesse Snedeker (2018). “How broad are thematic roles? Evidence from structural priming”. In: *Cognition* 179, pp. 221–240.
- Zúñiga, Fernando and Seppo Kittilä (2019). *Grammatical Voice*. Cambridge Textbooks in Linguistics. Cambridge University Press.