

The touchscreen as an attention measure: evidence from a dative alternation study

Eye-tracking is an established measure of attention and processing, and has been useful in linguistic investigations of issues ranging from syntactic ambiguity to semantic word recognition (Roberts and Siyanova-Chanturia 2013). However, eyetrackers are expensive and difficult to set up, and they often make for uncomfortable and unnatural experimental tasks. One recent trend to address these problems has been to use touchscreen devices (cf. Dufau et al. 2011, Hatfield to appear): due to the prevalence of smartphones and tablet computers, many research participants will be familiar with touchscreens. Because touchscreen devices obviously do not restrict participants heads, they are more comfortable as well. However, touchscreen input is less quick and automatic than eye movements are. A parallel study of touchscreen input and eye gaze would allow direct comparison of the data from these two measures.

I present data from an experiment that used an interactive visual-world paradigm presented on a touchscreen computer together with eye-tracking to measure the expectations/biases in the processing of English dative alternation sentences. The dative alternation is the phenomenon that some ditransitive verbs alternate between the double object construction (1) and the prepositional construction (2).

Following corpus studies by Wasow (2002) and Bresnan et al. (2007), psycholinguists have viewed the dative alternation as a choice between constructions that is driven by features of the two objects, like length, animacy, and grammatical number. The touchscreen/eyetracker comparison study presented here investigated the acquisition of this choice by testing children aged four to eight as well as adults. I discuss how adults and childrens data from the two attention-measure methodologies compare, and what implications these results have for future experimental work in psycholinguistics and other cognitive sciences.

Examples

- (1) Rick gave Kate a coffee.
- (2) Rick gave a coffee to Kate.

References

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