Not all pupillary responses are logical: Measuring the cognitive cost of scalar implicature generation using pupillometry

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Abstract

Scalar Implicature (SI) generation is often argued to incur a cognitive cost. However, this claim is not undisputed and contrasting findings emerge in the experimental literature. In this study, we investigated SI processing using Reaction Times (RT) and a sensitive measure of cognitive effort: pupillometry. Our RT results replicate a classical finding of the previous literature: *some*-underinformative sentences elicit longer RTs when they are interpreted pragmatically than when interpreted logically. On the other hand, larger pupil dilations (pointing to effortful processing) for pragmatic interpretations emerged only in some of our participants, namely those with higher autistic-like traits.

Keywords: scalar implicatures, pupillometry, cognitive effort

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