Title

Language Complexity and Cognitive Load in a Dual-Task Context

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Abstract

In this work, we investigate the effect of linguistic complexity on cognitive load in a dual-task scenario, namely simultaneous driving and language use. To this end, we designed and implemented a psycholinguistic experiment where participants use a driving simulator while listening to spoken utterances and answering comprehension questions. On-line physiological measures of cognitive load, including the recently established Index of Cognitive Activity, as well as measures of performance in both tasks, have been collected. The resulting rich corpus of aligned fine-grained data streams can be used to test a vast array of different hypotheses about the relationship between performance, difficulty and cognitive load in dual tasks, at various levels of temporal resolution and linguistic structure. In this Master's thesis, we present the theoretical motivation and background, the methodological and technical aspects of the experiment, the resulting corpus and some first interesting results from the data analysis.