Do older age and cognitive load increase reliance on “good-enough” language processing?

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According to the “good-enough” approach to language comprehension, language users do not always engage in full algorithmic processing of linguistic input (Ferreira et al., 2002). Rather, we often form shallow and superficial representations based on heuristics such as lexical content of the sentence and world knowledge. But so far, little is known about what factors trigger increased reliance on “good-enough”, over algorithmic, language processing. In this study, we tested two such potential factors: aging and cognitive load. Younger and older adults read sentences and answered binary-choice comprehension questions. In the high cognitive load condition, sentences were presented word-by-word, placing high demands on working memory; in the low cognitive load condition, sentences were presented as a whole. Stimuli included semantically plausible sentences, where syntactically correct parsing is also the most probable parsing based on lexico-semantic cues, versus semantically implausible sentences, where syntactic parsing is in conflict with semantic cues (e.g., “Я окликнула дочку учительницы, working in school”: semantically, it would be most plausible that the teacher works at school but the correct syntactic parsing is that the daughter works at school). We used the difference in comprehension accuracy in semantically plausible and implausible condition as a proxy for reliance on “good-enough” language processing. In our current sample (n=48), reliance on good-enough language processing is increased both by older age and by higher cognitive load, with no interaction between these two factors. Data from a larger sample will be available by the time of presentation.

Keywords: good-enough language processing, healthy aging, cognitive load.