

L2 READERS RETAIN MORE VERBATIM INFORMATION THAN NATIVE READERS

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Research on memory for gist vs. surface linguistic information seems to converge on the assumption that linguistic information is not retained verbatim, but is converted to conceptual form which is then stored in long term memory. While conceptual information can be stored and retrieved also after long periods of time, verbatim surface information is assumed to decay rapidly and almost immediately after processing (Sachs 1967; Just & Carpenter 1992). At the same time, usage-based theories of grammar acquisition assume that grammatical knowledge is derived from a database of chunks that are stored verbatim in memory (e.g. Ellis 1996; Tomasello 2003). Yet how can a database of memorized verbatim sequences emerge, if verbatim linguistic information is not retained?

Our study explored whether L2 German learners (B2-C1 level, Slavic/Romance L1) overrepresent verbatim information in the mental text models that they construct during reading compared to L1 German natives. We hypothesized that non-proficient readers are more likely to store verbatim information, since they might either need it more for acquisition purposes and/or compensate their shallower linguistic representations lacking hierarchical structures (cf. Shallow Structure Hypothesis, SSH, Clahsen & Felser 2006). Consequently, L2 readers should be able to better predict the surface information than L1 speakers in a change-text paradigm and show larger surprisal effects if their expectation is not validated.

Both groups of participants read six short texts (300-400 words) twice while their eye movements were tracked. Four ROIs involved nouns (lexical condition) and four two sentences in active and two in passive voice (syntactic condition). The second version (V2) of each text differed from the first one in that half of the ROIs always stayed the same and the other half was changed. In the lexical condition, the noun was exchanged for its near-synonym, in the syntactic condition active was transformed into passive and vice versa. The rationale of the design was that if readers represent verbatim surface information in their mental text model, this information should be included in their text predictions during the second reading. Thus, they should respond to the changes in V2 by longer fixation times (surprisal = unfulfilled prediction).

The results revealed that only L2 readers showed reliable surprisal effects. They fixated the changed ROIs significantly longer in both conditions. The findings support the initial hypothesis that less proficient readers retain more details regarding linguistic surface information. The results will be discussed in the context of present cognitive (Fuzzy Trace Theory), acquisition (Declarative/Procedural Model) and processing (SSH) approaches.

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