

The presence of meaning constrains productive language processes: A test of the language game hypothesis in type writing.

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Abstract: How does meaning influence cognitive processes involved in the production and reception of language? The language-game hypothesis (LGH) states that meaning acts to constrain the cognitive processes involved in language comprehension. The degree of constraint can be gauged by measures of structuredness of a process, e.g. using Recurrence Quantification Analysis (RQA). LGH was originally formulated in the area of reading. The present study investigate its generalization to productive language processes, i.e. writing. In this study participants copy-typed a comprehensible text, written in their native language, and an incomprehensible text, written in an unfamiliar language. The writing process was recorded via key-logging and the time-series of inter-stroke-intervals was subjected to RQA. Results showed that comprehensible texts significantly increased the degree of structuredness of the writing process compared to incomprehensible texts. This suggests that meaning does indeed constrain language processes, and that this is the case for receptive and productive language tasks.