

**Article reference:**

Recchia, G., B. T. Johns, and M. N. Jones. 2008. Context repetition benefits are dependent on context redundancy. *Proceedings of the 30th Annual Conference of the Cognitive Science Society*, 267-72.

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**Experiment #: 1**

**Hypothesis:** Based on the principle of likely need (PLN), the benefit of context or frequency is dependent on the uniqueness of the context relative to the word's history of contextual occurrences (pg 268).

**Independent variable(s):** a word's semantic distinctiveness (SD), number of contexts in which it appears (document count; DC), and simple repetitions of the word (WF)

**Dependent variable(s):** lexical decision time (LDT) i.e. the time it takes to identify an item as a word

**Results:** Higher DC words had faster LDTs than lower DC words. Substituting WF for DC produced the same results. Also, more semantically unique words had faster LDTs than less unique words. "As the document count increased, words that appeared in a greater number of semantically unique documents saw a greater benefit on their LDTs from the additional contextual occurrences (pg 269)."

**Conclusion:** "Words appearing in many contexts are processed more quickly if the contexts are highly unique;" therefore "one must account for the semantic uniqueness of each context in which the words appears (pg 269)."

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**Experiment #: 2**

**Hypothesis:** "Appearing in diverse semantics contexts facilitates processing the most for highly frequent words, and less so for infrequent words (pg 269)."

**Independent variable(s):** contextual diversity (CD) and word frequency (WF), within an artificial language paradigm

**Dependent variable(s):** response latency/pseudo-lexical-decision task (PLDT)

**Results:** There were no significant main effects or response latencies of either WF or CD, but a significant frequency-by-diversity interaction (pg 270). "Processing is facilitated for words appearing in a large number of contexts (High-WF) which are high semantically distinct (High-CD). However, appearing in a large number of redundant contexts (High-WF, Low-CD) produced equivalent response latencies to a much lower number of repetitions in the redundant context (Low-WF, Low-CD) (pg 271)."

**Conclusion:** "Contextual variability benefits processing for high-frequency words, but for low-frequency words, variability of contexts neither facilitates nor inhibits processing (pg 271)."