

# This Week's Citation Classic

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**Tulving E & Pearlstone Z.** Availability versus accessibility of information in memory for words. *J. Verb. Learn. Verb. Behav.* 5:381-91, 1966. [University of Toronto, Canada]

**Information stored in memory is accessible to retrieval only under special conditions. Inability to recall learned material, therefore, does not necessarily mean that the information has been lost; it may only reflect the inadequacy of retrieval cues. This paper describes an experimental demonstration of these facts. [The Science Citation Index® (SCI®) and the Social Sciences Citation Index™ (SSCI™) indicate that this paper has been cited over 255 times since 1966.]**

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"This paper owes its existence to a student who questioned a routine statement I made in my memory seminar one day early in 1963. The statement was to the effect that people remember many things they cannot recall even when they try very hard and are given a lot of time for it. The sceptical student wanted to know what kind of evidence was available for the statement, and I had to admit that it was a self-evident truth that did not require any laboratory results for its support. Such an unscientific attitude did not please the members of the seminar. In an attempt to convince them, I did a simple demonstration experiment on the spot, the nine students in the seminar serving as subjects.

"The Tulving and Pearlstone paper describes a much more extensive and tightly controlled version of the original classroom demonstration. The results of a large experiment provided massive data in support

of the conclusion that recall of studied material depends critically on both the conditions of storage and the conditions of retrieval: large variations in the amount recalled can occur when either of these two sets of conditions is held constant.

"Neither our experimental findings nor attendant theoretical speculations were novel, the distinction between what we called 'availability' and 'accessibility' of memory information—corresponding to the distinction between storage and retrieval—having appeared in various disguises at various times in history. But we may have been among the first to combine data and theory in a reasonably convincing package. Since the paper appeared relatively early in the *zeitgeist*-driven period of growing interest in the interaction between storage and retrieval processes in memory, it frequently serves as a convenient reference for some of the basic facts pertaining to the distinction. An interesting observation is that although 'availability' and 'accessibility' are generally identified with our paper, another term we introduced, 'retrieval cue,' widely used in contemporary psychological literature on memory, suffered absolutely instant obliteration.

"Zena Pearlstone was my research assistant. She tested over 900 high-school students as subjects in the experiment and helped to collate and analyze the data. Some time after completing this Herculean task, she left Toronto and also the field of experimental psychology. She now lives in New Jersey, and is on the verge of receiving her Ph.D. in art history. I have continued working on problems of memory. Almost all of my research over the past 15 years has its roots in the Tulving and Pearlstone experiment and the lessons it taught us."