

Thomson D M & Tulving E. Associative encoding and retrieval: weak and strong cues. *J. Exp. Psychol.* 86:255-62, 1970.
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To-be-remembered words were presented for study in the presence of weakly associated cue words. Recall of to-be-remembered words was facilitated when these weakly associated words were provided as retrieval cues. No facilitation of recall occurred where strong normative associated words were provided as retrieval cues. It was concluded that the effectiveness of retrieval cues depends on the format of the to-be-remembered information at the time of its storage. [The *Science Citation Index*® (SCI®) and the *Social Sciences Citation Index*® (SSCI®) indicate that this paper has been cited in over 170 publications since 1970.]

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"The research reported in this paper was conceived by me with two objectives in mind: to illuminate memory processes and as a means of launching an attack on Endel Tulving. In 1967, I had resigned a well-paid job and, with my wife and children, moved from Australia halfway around the world to undertake graduate studies in social psychology at the University of Toronto. On arriving in Toronto, I was stunned to learn that I had been shanghaied into memory research. My initial meeting with the person assigned as my supervisor, Tulving, exacerbated my resentment and anger. I was subjected to a comprehensive oral quiz on memory research. My humiliation was complete when, at the conclusion of the interview, Tulving informed me that on a 0 to 10 scale I was somewhere about -3. I left Tulving's room determined to master the area and to puncture his arrogant mien.

"I read widely on different aspects of memory and then critically examined all of Tulving's publications. In one of his papers,¹ which then was about to be published, I found what I thought was the means of achieving my goals. In the paper, it was implicitly denied that cues strongly associated to the information to be remembered would be effective in retrieving the information. For the next three months, I avoided Tulving while I designed and ran experiments that would surely reveal his foolishness. It is history that the experimental findings provided convincing support for Tulving's claim. The findings of this research formed the basis of this paper, the first of three^{2,3} published by Tulving and me reporting findings in support of the encoding specificity principle. The effectiveness of a retrieval cue varies directly with the extent it matches the format of the to-be-remembered information stored in memory.

"Perhaps predictably, the reactions of my academic colleagues passed through two phases. In the first phase, both the results and the theory were fiercely disputed; and in the second phase, my colleagues asserted, just as vehemently, that both the results and the theory were obvious and trite.

"In my judgment, the reason why this paper had the impact it did was that the position it espoused more accurately described memory than previous explanations. Whereas previously researchers had examined memory as a function of encoding events or as a function of retrieval events, this paper treated encoding and retrieval as interrelated and integrated processes. My current research in this area indicates that the validity of the encoding specificity principle extends to memory for objects and persons.⁴

"Cognizance of these latter findings has been taken in the recommendation of the Australia Law Reform Commission with respect to identification procedures."

1. Tulving E & Osler S. Effectiveness of retrieval cues in memory for words. *J. Exp. Psychol.* 77:593-601, 1968. (Cited 150 times.)
2. Tulving E & Thomson D M. Retrieval processes in recognition memory: effects of associative context. *J. Exp. Psychol.* 87:116-24, 1971. (Cited 160 times.)
3. Encoding specificity and retrieval processes in episodic memory. *Psychol. Rev.* 80:352-73, 1973. (Cited 600 times.)
4. Thomson D M, Robertson S L & Vogt R. Person recognition: the effect of context. *Hum. Learn.* 1:137-54, 1982.