

Open

Memory for general and specific sentences*

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Cued recall indicated that memory was better for sentences containing specific verbs (e.g., scratched) than for sentences containing general verbs (e.g., injured). When synonymic verb responses were included, however, the general-specific difference was eliminated. Also, for complete sentence recall, subject nouns were better retrieval cues than verbs or object nouns.

There have been, in recent years, a number of studies which have investigated the role of the verb in memory for sentences. In most of these studies where sentence recall was prompted with the subject, the verb, or the object as a cue, the verb typically was relatively ineffective as a retrieval cue. In one recent study Wearing (1972) suggests several possible reasons why the verb often is a poor retrieval cue. One reason is that, when a sentence is encoded, it may be stored such that the subject and object nouns are maintained as separate events and the verb is broken into components which are linked to these nouns. That is, the verb may indicate those aspects or qualities of the interacting nouns which are important for the intended communication. Thus, the verb may be stored in memory only indirectly.

The present study investigated memory for sentences which contained either general or specific verbs. It was predicted that specific sentences would be remembered better than general sentences because they specify more attributes of the interacting nouns. For example, the general sentence, "The uncle made the toy," indicates that a person (uncle) caused some object (toy) to come into existence. In the specific sentence, "The uncle carved the toy," the same information as above is indicated. However, in addition, the specific sentence implies that the toy was made of a substance capable of being carved (probably wood) and that a sharp instrument was used (probably a knife). It was hypothesized that the specific verb, by indicating additional properties of the interacting nouns, would provide more information which could potentially aid Ss during later sentence retrieval.

A second purpose of this study was to further investigate the relative effectiveness of different types of retrieval cues. Thus, some Ss were cued with the subject noun, some were cued with the verb, and some were cued with the object noun.

METHOD

Subjects

The Ss were 60 undergraduates at the University of Virginia.

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They were naive with respect to verbal learning experiments and were either paid for participation or received credit for a course requirement.

Stimulus Materials and Apparatus

The sentence materials were constructed in the following way. For each of 22 noun pairs, both a general and a specific verb were selected. In each instance, the specific verb was chosen to specify the same type of activity indicated by the general verb. For example, "The hunter improved the cottage" is a general sentence, whereas "The hunter painted the cottage" is a specific sentence. In this instance, painting, of course, represents only one of many possible ways in which the cottage could have been improved. In selecting the sentences, an attempt was made to minimize associative connections between words both within sentences and between sentences. Prior to the experiment, an independent group of Ss had rated the general and specific sentences to be approximately equal in ease of comprehension. Also, the sentence nouns were rated on a 7-point scale for image value. The subject nouns and object nouns were rated equal in image value (mean = 4.12 for subject nouns and 4.18 for object nouns).

All sentences and test cues were photographed on 35-mm film and mounted on slides. They were projected onto a large screen by a slide projector. Timing sequences were controlled by an electronic timer.

Experimental Design

Verb relationship (either general or specific) was a within-Ss variable. Twenty Ss were tested under each cue condition and all Ss were presented with 26 sentences. The first four sentences were buffers and were included to control for primacy effects. Recency was controlled by insuring that none of the last four input sentences was tested in any of the first four test positions. For the 22 critical sentences (11 general, 11 specific), one input order was determined, such that the mean list position was approximately equal for general and specific sentences. A second list order was formed by flip-flopping the general and specific sentences in the first order. There were two orders of test cues. In both orders the mean list position for general and specific sentence cues was approximately the same. Ss were tested in groups of five. The experimental condition for each group was determined randomly as each group reported to the laboratory.

Procedure

Both the sentences and test cues were presented visually. During the 10-sec presentation time, Ss rated each sentence on a 6-point scale as to how easy or how difficult it was to comprehend the sentence. This was done to help insure that Ss paid attention to all sentences. Immediately following presentation, Ss were presented with the cues for recall and each cue was presented for 20 sec. All Ss were presented with a booklet for recall. On each page of the booklet was the sentence frame: The _____ the _____. When presented with the cue, Ss wrote the cue in the appropriate blank and then filled in the remainder of the