

This Week's Citation Classic

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Mandler J M & Johnson N S. Remembrance of things parsed: story structure and recall. *Cognitive Psychol.* 9:111-51, 1977.
[University of California, San Diego, La Jolla, CA]

An analysis is presented of the structure of simple stories, couched in the form of a grammar, consisting of rules defining story units and their relationships. Experience with this structure creates a schema that guides encoding and retrieval. Reanalyses of Bartlett's¹ protocols and new developmental data support the formulation. [The *Social Sciences Citation Index*[®] (SSCI[®]) indicates that this paper has been cited in over 190 publications since 1977.]

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"When I began work on cognitive development at the University of California, San Diego, in the early-1970s, I wanted to study how complex, naturalistic kinds of materials are processed. Most of my work at that time was on memory for scenes. I wanted to extend this kind of work to the verbal realm, and that old standby—lists of words—simply would not do. Stories seemed to be excellent materials. I was familiar with Piaget's² claim that children have difficulty in recalling stories in their proper order. From my observation of children, this finding seemed odd. The clue as to what might be wrong came when I examined the stories he had used. I tried to retell one of them one day and botched it. This (not surprisingly) suggested to me that there was something odd about the story, not the child. But how could one characterize what was wrong with the story?

"At about this time Dave Rumelhart was working on the notion of a story schema.³ When I heard him talk about it in one of our departmental seminars, I realized that this sort of analysis could be used not only to differentiate well-structured stories from poorly structured ones, but also to express the ways in which one recall protocol differed from another. What a boon for developmental research! We might be able to say not just that adults remember more than children, but to characterize the qualitative differences, if any, in their recall.

"So, using Rumelhart's work as a base, Nancy Johnson and I began to develop our story grammar. We spent many months trying to formulate a simple and workable, yet comprehensive, set of rules to describe the typical forms of folktales and other stories from the oral tradition. In the process, we found (as had linguists before us) that the same forms occurred repeatedly in the stories of many cultures. Something looking very much like a universal type of structure began to emerge, but one that had psychological, as well as linguistic, significance.

"The *Citation Classic* described the rules of the grammar and showed that six-year-olds recall stories in ways very similar to adults. Later work showed that when stories are poorly structured, children indeed have trouble in sequencing their recall, but so do adults.⁴ People from other cultures also recall stories in the same way—the universals are not just in the form of the texts, but in how they are processed as well.⁵

"This paper has been highly cited for several reasons. The ability to relate a text's structure in a detailed fashion to the way in which it is understood and remembered was new, and led to a great deal of research by developmental, cognitive, and educational psychologists. The ideas espoused in the paper (and in the more recent expansions^{6,7}) also fit in well with the growing interest in schema theory in general, which probably contributed to the article's popularity. Its title may have helped too!"

1. Bartlett F C. *Remembering*. Cambridge, England: Cambridge University Press, 1932. 317 p.
2. Piaget J. *The language and thought of the child*. London: Routledge & Kegan Paul, 1960.
3. Rumelhart D E. Notes on a schema for stories. (Bobrow D G & Collins A, eds.) *Representation and understanding: studies in cognitive science*. New York: Academic Press, 1980. p. 211-36.
4. Mandler J M. A code in the node: the use of a story schema in retrieval. *Discourse Process*. 1:14-35, 1978.
5. Mandler J M, Scribner S, Cole M & DeForest M. Cross-cultural invariance in story recall. *Child Develop.* 51:19-26, 1980.
6. Johnson N S & Mandler J M. A tale of two structures: underlying and surface forms in stories. *Poetics* 9:51-86, 1980.
7. Mandler J M & Goodman M S. On the psychological validity of story structure. *J. Verb. Learn. Verb. Behav.* 21:507-23, 1982.