Understanding "Because": How Important Is the Task?¹

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The causal connective "because" requires the order of clauses within a sentence to violate the order of events in the real world; i.e., "effect because cause" is correct. Children's (4, 6, and 8 years of age) ability to comprehend "because" was explored in a series of four studies. The first, a replication with variations of existing studies, assessed children's ability to judge as anomalous sentences in which the order of clauses is reversed. Comprehension of impersonal sentences is better than of sentences derived from narratives of their own experiences, although children do poorly at this task until age 8. However, results of study 2 suggest that children's poor understanding of task requirements is partly responsible, since increased task instructions and modeling led to significant improvement in the ability of preschoolers to judge sentences as anomalous. In the third study, children named the cause event after being told a causal sequence (involving either psychological or physical causality) of the form: Event A, "Event C (effect) because Event B (cause)," Event D. Comprehension of physical causality sequences is superior, but again, only 8-year-olds showed good performance. In Study 4, children were asked to find the cause event in four-clause sequences of the same form as in Study 3, but memory props were added in the form of pictures of events A, B, and D. Near perfect performance was shown by all children. Overall, comprehension studies of "because" are judged to be rife with methodological problems, and memory demands are seen to be particularly important.

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How and when do children begin both to syntactically comprehend and express causal relationships between events? The first focus of this debate was the question of whether or not young children understand the concept of cause-effect relationships. Piaget (1928/1972) first suggested that children under 7 or 8 years of age have difficulty understanding causal relationships. The belief that causes temporally precede their effects develops rather late, he claimed, specifically during the period of concrete operations. His conclusions, and that of supportive research done by others, were largely based upon children’s inability to understand or correctly use the causal connective “because.” An example of the kind of error he documented is the following: “The man fell off his bicycle because he broke his arm.”

Recently, a number of researchers have demonstrated that children do seem to understand causal relationships between events, and, more particularly, they understand that causes must precede effects in time. Bullock and Gelman (1979), Green (1977), and Kun (1978) all found that children at ages 3, 4½, and 5, respectively, readily identify a preceding event rather than a succeeding event as a cause of a specific occurrence. (However, Shultz & Mendelson, 1975, found that 3- to 3½-year-olds tend to identify a subsequent event as causal rather than a preceding event.) See Sedlak and Kurtz, 1981, for a review of children’s understanding of causality.

However, understanding causal relationships between events and linguistically coding those relationships seem to be different matters. Most researchers agree that young children do not understand causal connectives. Bebout, Segalowitz, and White (1980), Corrigan (1975), Emerson (1978), Johnson and Chapman (1980), Katz and Brent (1968), Kuhn and Phelps (1976), and Sullivan (1972) all found that children do not understand the meaning of “because,” and often interpret “because” connectives as “and” or “then.” Thus, they often interpret “A because B” sentences as “A then B” sentences, which reverses the real temporal order between events; other researchers found less systematic misinterpretation. Good performance on comprehension tasks using “because” did not occur until the children were 7 or 8 years of age in most studies, although Emerson (1978), using reversible cause-effect sentences where “X because Y” is just as logical as “Y because X,” found that mastery of “because” did not occur until a child was 10 or older. Homzie and Gravitt (1976) and Bullock and Gelman (1979) suggest that children’s difficulties with comprehending sentences with “because” are paralleled by production difficulties in experimental tasks.