

Public Abstract
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Eye-Tracking Investigations of Lexical Ambiguity
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Many words have multiple meanings, and this can result in ambiguity. For example, the word “bank” can refer to a financial institution, the most frequent meaning, or the edge of a river, a less frequent meaning. The purpose of this study was to determine how people arrive at an interpretation of ambiguous words. Participants viewed pictures and listened to sentences while their eye movements were monitored with a camera. Some of the pictures were related to different meanings of ambiguous words in the sentences. If participants looked at a picture related to a specific meaning of an ambiguous word (e.g., a picture of money after they heard the word “bank”), then it was inferred that the “financial institution” meaning of the word had been accessed.

The results revealed that multiple meanings of an ambiguous word are accessed in a neutral sentence context. In a biased context (e.g., “It was an old building, but the bank...”), a single meaning or multiple meanings may be accessed, depending on how frequent the biased meaning is. These results indicate that both context and meaning frequency are important sources of information when word meanings are being accessed and selected.

The specific pattern of results changed depending on the type of visual stimuli used (pictures or words), the specific task that was given to participants (passive viewing or instructions to look at the most closely related target), and the individual participant’s use of strategies. These factors should be taken into account when this methodology is utilized.