

The role of vision and attention in language processing

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Abstract

In recent years, psycholinguistic theories have become increasingly concerned with the relationships between domain-specific linguistic and general cognitive processes. In my talk I will (a) discuss some of the relationships between vision, attention, and linguistic processing, and (b) demonstrate how eye tracking can be used to study these relationships.

In the first part of the talk I will review studies of spoken language comprehension demonstrating that the listener's eyes tend to be drawn to objects mentioned or implied in spoken utterances. I will propose that listeners aim to generate conceptual representations that, as much as possible, integrate visual and auditory information, that this process is facilitated by directing visual attention at the named or implied objects, and that the direction of visual attention is reflected in the eye movements.

In the second part of the talk I will review studies of language production demonstrating that speakers describing displays or events tend to fixate upon each object they name, and that their gaze remains focussed on the object until they have retrieved the sound form of its name. I argue that the tight link between eye gaze and speech output and the long gazes to the objects arise because directing one's visual attention at an object facilitates not only the recognition of the object but also the retrieval of associated information, including the object name. The easiest way of directing one's attention to an object is to fixate upon it.

In final part of the talk I will summarise some of the strengths and weaknesses of eye tracking as a tool for psycholinguistic research and suggest directions for future research.