CENTER FOR COGNITIVE SCIENCE
University at Buffalo, State University of New York

Wednesday, March 3, 2004
280 Park Hall
North Campus
2:00 pm –4:00 pm

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"Interaction in language processing: Pragmatic constraints on lexical access"

Everyday language use is rich and textured. Conventional psycholinguistic laboratory tasks abstract away from natural complexity in order to isolate information relevant at different levels of linguistic description. Such simplifications reduce language use to smaller, tractable problems, and allow fine-grained chronometric processing measures. I argue that this approach paradoxically overestimates the complexity and modularity of language processing, as natural contexts provide layers of constraints that reduce the burden on bottom-up and within-level processing.

I will address two primary issues. The first is how we can study language in naturalistic contexts without sacrificing fine-grained measures and precise stimulus control. I will describe an eye tracking measure that is closely time-locked to spoken instructions in naturalistic tasks and that can be transparently linked to computational models, and an artificial lexicon paradigm that provides precise control over lexical characteristics. I will discuss how we have used both techniques to address debates in adult and developmental word recognition.

The second issue is whether lexical access - a process typically assumed to be encapsulated from higher levels of linguistic representation - is constrained by pragmatic context. Subjects learned to recognize an artificial lexicon of names of novel objects ("nouns") and textures that could be applied to them ("adjectives"). Each word had phonological competitors in both form classes. We compared competition effects given visual displays that required adjective use or made adjectives infelicitous. Consistent with the hypothesis that language processing makes use of reliable contextual constraints, we found an immediate impact of pragmatic visual cues: similar-sounding words competed when they were from the same class, but not when they were from different classes. This result adds to growing evidence that language processing is highly interactive, and the approach provides a foundation for the development of integrated theories of language use in natural contexts.

Refreshments will be available

Everyone is welcome to attend!

For information please call the Cognitive Science Office at (716) 645-3794 or check
 http://www.cogsci.buffalo.edu/Activities/Colloquium/CLLQs04/2004spring.htm
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