

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

**Wednesday, October 6, 2004**

280 Park Hall  
North Campus  
2:00 pm –4:00 pm

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**"The Role of Phonology in the  
Acquisition and Processing of Syntax"**

When learning their language children face a difficult "chicken-and-egg" problem. Discovering the syntactic constraints governing their native language requires being able to assign individual words to lexical categories, such as nouns and verbs. Lexical categories, on the other hand, are only useful for acquisition insofar as they support syntactic constraints. In this talk, I consider how phonological cues in combination with distributional information may be used for solving this "bootstrapping" problem in language acquisition, and the possible consequences that such multiple-cue integration has for adult processing. I report on computational analyses of child-directed speech and connectionist simulations, quantifying the usefulness of phonological and distributional cues, and showing that there are learning mechanisms that can integrate them efficiently. On a theoretical level, these results suggest that multiple-cue integration becomes a crucial part of the child's emerging language system, and thus should also affect adult processing as well. I present results from on-line sentence processing experiments to corroborate this prediction by demonstrating the impact of phonological cues on adult language processing. I conclude that the integration of phonological cues with other types of information is integral to the computational architecture of our language system both in acquisition and adult processing.

**Refreshments will be available**

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