

MIND, TECHNOLOGY, AND SOCIETY

Seminar Series

UC MERCED, Fall 2016

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“Experiments investigating the emergence of structure and meaning in language”

Language is an important defining feature of the human species. There is, however, still a lot we do not know about how language evolved. I will discuss recent data collected as part of several studies that mimic language evolution processes by inviting participants to take part in experiments disguised as interactive games. Previous work has shown that language-like signals emerge spontaneously in the laboratory when people are asked to communicate through a medium that is linguistically novel to them. When laboratory languages are transmitted from person to person, features of language structure gradually appear. Such experimental methods provide a window into the mechanisms that were likely involved in the early emergence of human language. The first two studies I will present investigate the influence of cultural transmission on the emergence of phonological patterning. Participants had to learn and reproduce an artificial language with a slide whistle and predictable patterns emerged as these whistled systems were transmitted. Another study focuses on the role of cognitive biases and social coordination in the emergence of space-time metaphors in language. Pairs of participants used a novel, spatial signaling device to play guessing games about temporal concepts. Rapidly, communication systems were established that mapped systematically between time and space. Finally I will show how Microsoft Kinect, a technology that was designed for video game control, can be used to measure changes in gesture as a consequence of conventionalization in interactive games. The results of these experiments contribute to our understanding of the relation between the macro-level patterns we see emerge in languages and the micro-level individual behaviors and cognitive biases that shape them.



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3:00 PM - 4:30 PM

COB 114

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