

# CENTER FOR COGNITIVE SCIENCE

University at Buffalo, State University of New York

**Wednesday, November 28, 2001**

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

## **“Expressive Movement in a Deafferented Subject”**

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Explanations of neonate imitation of facial gestures have been framed in terms of motor ability and intermodal perception (Meltzoff and Moore, 1977; 1993; 1995). Meltzoff and his colleagues have offered explanations that rely on concepts like an innate body schema, perception and action coupling, and the reproduction of movement based on matching proprioception to visual stimulus (Chaminade, Decety, and Meltzoff, in press; Decety, et al., 2001; Gallagher and Meltzoff, 1996). I want to ask whether imitation of facial gestures is given a full account in these terms, or whether there might be some other mechanism that needs to be considered. To provide a framework for this question, I examine a case where gesture is clearly dissociated from certain aspects of normal motor ability, that is, where gesture, as a form of expressive movement, is irreducible to instrumental or locomotive movement. The case is that of IW, a man who lives without the sense of touch and proprioception below the neck. IW has profound problems with both locomotive and instrumental movement. Without proprioception he is not capable of controlling his movement without conscious use of vision and cognitive effort. When he wants to pick up a glass from the table, for example, he must think through his movement, consciously calculating distance, trajectory, grip, pressure, etc. Despite these problems with movement, IW, with and without vision, is capable of conversational gestures that are in most regards normal. I will report on experiments that show in precise terms that this is the case. I will also offer a theoretical account (in contrast to motor theories of gesture) to explain why gestures are not reducible to instrumental or locomotive movement. If gesture is a form of expressive movement that is not reducible to instrumental or locomotive movement, and if imitation of gestures is also a form of expressive movement, then I want to suggest that neonate imitation of facial gesture is not fully accounted for by innate body schemas, or other terms that focus on movement alone.

**Refreshments will be available  
Everyone is welcome to attend!**

For information please call the Cognitive Science Office at (716) 645-3794 or check  
[http://wings.buffalo.edu/cogsci/html/2001\\_fall.htm](http://wings.buffalo.edu/cogsci/html/2001_fall.htm)