

Moss Rehabilitation Research Institute
And
The Neuro-Cognitive Rehabilitation Research Network

Present

Seeing Hands, Seeing Objects, Seeing Words

Behavioural, neurophysiological and brain imaging studies have provided compelling evidence showing that vision and action are tightly interrelated. In addition, research adopting an embodied cognition approach has shown that language comprehension activates a simulation, i.e. that the same perceptual and motor system are recruited both during interaction with objects, and during word and sentence comprehension. I will provide an overview of recent studies that show that an embodied simulation is activated during observation of the effectors (e.g., hand postures), as well as during observation of manipulable objects. Finally, I will describe some studies showing that the simulation formed during language comprehension is sensitive both to the effector involved (e.g., kick vs. throw the ball) and to objects' intrinsic properties, such as weight.

**Anna Borghi, Ph.D., Associate Professor of Psychology,
University of Bologna**

Dr. Borghi is also an associate researcher at the Laboratory of Autonomous Robotics and Artificial Life (LARAL) (<http://laral.istc.cnr.it>), Institute of Cognitive Sciences and Technologies (ISTC), National Research Council (CNR), Rome.

She obtained her PhD in Psychology with a dissertation on the role of perception and action in categorization. Dr. Borghi is currently the coordinator of an FP7 project **ROSSI** (Emergence of communication in Robots through Sensorimotor and Social Interaction).

Dr. Borghi's main area of research is embodied cognition and the interaction between knowledge and perception and action. Her current interests focus on the relationships between object concepts and action, the role of affordances in categorization, the grounding of language in sensorimotor processes. She works using both experimental methods and computer simulations.

**Thursday, October 1, 2009
2:00 – 3:00 pm
University of Pennsylvania
Neurology Conference Room
3400 Spruce Street
3rd Floor West Gates Bldg**

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Conflict of Interest Statement: Faculty and all others who have the ability to control the content of continuing medical education activities sponsored by Albert Einstein Medical Center are expected to disclose to the audience whether they do or do not have any real or apparent conflict(s) of interest or other relationships related to the content of their presentation(s).

