

Perspective and Embodiment

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Introduction

Embodied cognition is a rapidly expanding research program that emphasizes the formative role of interactions with the environment in how cognitive processes develop and function. A variety of theoretical accounts have been formulated in the different cognitive science sub-fields (cognitive development/psychology, cognitive robotics, psycholinguistics, social cognition, and philosophy of mind), enriching this interdisciplinary research arena and at the same time underlining the need for more dialogue across fields, theories, and methodologies. Recent research attempts to account for embodiment not only in terms of an individual's interactions with the environment but also with other minds and other bodies. This brings to the fore issues concerned with perspective taking, both in spatial and in more general conceptual terms. Indeed, much of the research in embodied cognition has a spatial dimension.

Issues involved with spatial perspective taking would seem to provide a particularly interesting venue for examining embodiment. When referencing spatial location, choices of spatial perspective and/or frames of reference must be considered. Perspective taking involves abstracting from the visual scene and packaging information in accordance with one or another viewpoint. For example, an environment can be thought of from the viewpoint of an individual on the move, an egocentric perspective that carries a stronger sense of embodiment or a viewpoint external to the environment.

Having a workshop that brings together perspective taking and embodiment research will benefit both areas individually and will move toward outlining a shared research agenda that addresses common issues and shares theoretical and methodological concerns.

The topic of this workshop is at the intersection between two strong areas of interest in the cognitive science community, i.e., spatial cognition and embodiment. Both topics are relatively young, in their own right, yet showing rapid growth and moving towards a more central position in the community of research. Exploring more explicitly the interaction between them is a logical next step.

The main goals of the workshop are to provide a forum for key researchers to present cutting edge research to be presented by key researchers, to foster cross-disciplinary

dialogue and cooperation, and to address the interests of a wide range of sub-fields with a focus on perspective taking and its relationship with embodied approaches, broadly conceived. A special emphasis is placed on providing a venue for a lively discussion involving keynote speakers, current research, and the audience. Key questions for the discussion are listed below. In addition to presenting their research, speakers will be asked to discuss possibilities for future integration of approaches across research communities. We will also attempt to address more general issues related to theoretical and methodological integration of the two research areas and defining a shared research agenda.

Key Questions

The workshop presentations and discussion will be framed around the following key questions:

- A) Do different perspectives tap into embodiment to a different extent? Or is embodiment associated with perspectives in varying degrees?
- B) Is embodiment necessary for perspective processing?
- C) What can individual differences in perspective preferences and perspective taking tell us about constraints on embodied cognition?
- D) To what extent does perspective more generally (spatial and conceptual) incorporate embodiment?

Program

The workshop program will consist of two sessions. This is expected to offer opportunities to participants to become involved in a wider discussion after the key speakers make their presentations.

Session 1: Invited Talks

Three key speakers will give invited talks in the first 90 minute session. They will be asked to share their viewpoint on the issues formulated prior to the workshop and discuss possibilities for future integration of approaches across communities of research, in addition to presenting on their own research and viewpoint. The three key speakers are:

Anna Borghi, University of Bologna

Daniel Casasanto, MPI Nijmegen

Barbara Tversky, Stanford University

Session 2: Discussion Forum

In the second session, all participants can become engaged in a discussion focused on a core set of issues as formulated previously and in the invited speakers' presentations. Participants will be invited to prepare single-slide, blitz presentations on research or issues directly related to the workshop. These will be designed to stimulate discussion while allowing participants to efficiently present their ideas.

Documenting Workshop Outcomes

We envision documentation of the workshop to take one of two possible forms. The most appropriate form will be determined after the workshop in consultation with the participants. In the first possibility, a proposal will be submitted to a cognitive science journal for a special issue. Participants will be asked to submit new work, integrative summaries or reviews, or presentations of theoretical perspectives that build on the workshop discussions as well as their own research. Submissions will be peer reviewed. Alternatively, the presentations and discussion at the workshop will be compiled into a collection of major work in an edited volume.

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