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Joint Attention and Joint Action: Simple or Reducible?

* *TALK 1: Gaze Co-Ordination, Joint Attention, and Mutual Belief*
* *TALK 2: Could Joint Action Ground Social Cognition?*
* *TALK 3:The Simplicity of Joint Attention*

*Summary*

Joint attention and joint action play a crucial role in the mental life of humans and, arguably, non-human primates. As is increasingly recognized by psychologists and philosophers, these joint phenomena facilitate the development of communicative capacities, are involved in the acquisition of self-awareness and the ability to understand other subjects. Despite exciting recent developments in cognitive science, logic, and game theory, many challenges remain.

One such challenge we call the *Reduction Question.* Can joint phenomena be reductively explained (where the reduction base would be individual phenomena) or are they in some sense primitive? Thus, there are lively debates about whether collective intentionality can be explained in terms of particular sets of interlocking individual intentions, or whether joint attention can be analysed as attending to someone else’s attention.

The Reduction Question bears on at least two practical concerns. The first is the developmental role of the capacity for joint attention and action. What function you ascribe to a creature’s capacity for joint engagement depends on whether you think that this creature’s psychological constitution is of a fundamentally social kind. The second concern is whether there are mechanisms, such as neural correlates, that specifically undergird joint phenomena. Whether you allow for specific such mechanisms depends on whether you think of these phenomena as *sui generis*.

The symposium addresses these and related questions. The first speaker presents an array of psychological evidence exploring the emergence and function of joint attention in infants and adults. The second speaker explores how issues in the metaphysics of action bear on scientific conjectures about a role for joint action in explaining the evolution or development of social cognition. The third speaker presents three ways of thinking about joint attention – simulation theory, theory theory, and the relational view – and will argue that the issue of reduction in joint attention is of relevance for this debate.

*List of Speakers*

Daniel Richardson

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*Time Allotted*

The symposium opens with a fifteen-minute introduction by the chair. Each talk will last twenty minutes and will be followed by a fifteen-minute discussion.

*Abstracts*

Gaze Co-Ordination, Joint Attention, and Mutual Belief (Daniel C. Richardson, co-authored with Natasha Kirkham)

One important question in joint attention research is whether the phenomenon amounts to more than the coordination of gaze; and if so, what additional capacities are required for a creature to be able to jointly attend to an object with another. I will present new research that addresses this question in infants and adults. It has long been recognized that joint attention is necessary for an infant to begin learning language. But before that point, infants do not just follow the gaze of others: compared to other cues that equally direct their attention, they engage in richer learning of information that is the focus of shared gaze. Much later in life, when two adults have a conversation about a shared scene, they seek to coordinate their gaze, moment by moment. We have found that such gaze coordination plays a causal role in comprehension, and that is determined by what the conversants believe about what each other knows, and what each other can see. Issues of joint attention run throughout the phenomena conversation, but perhaps surprisingly, we also find them when people do not interact whatsoever. In our joint attention experiments, people view sets of images and are told that another person, sat out of view, is either looking at the same images, or not. We find that gaze is systematically shifted by the mere belief that a perceptual experience is shared. Whatever one’s final response to the Reduction Question, therefore, behavioural evidence shows that from birth to adulthood attention is highly attuned to the attention of others.

Could Joint Action Ground Social Cognition? (Stephen Butterfill)

Could joint action explain how sophisticated forms of social cognition emerge in evolution or development? There is an obstacle to supposing that it could. On nearly all accounts, the joint-ness of joint action requires a distinctive kind of intention or a distinctive structure of ordinary intentions; or else it requires a distinctive kind of reasoning, subject, reliance or commitment. This talk will argue that no such distinctive ingredient is needed. The argument involves constructing an account of joint action without appealing to any distinctive ingredients at all. The key to this construction is to notice that earlier researchers have taken for granted an underlying metaphysics of action which is unjustifiably and artificially restricted to cases involving just one agent. This matters for understanding what joint action demands of agents’ cognitive and conceptual powers. Depending on the agents’ situations, joint action may in practice demand various kinds of ability to coordinate and share; but none of these particular demands are intrinsic features of joint action. If this is right, basic forms of joint action presuppose no more conceptual sophistication than abilities to act and we have removed one obstacle to understanding how joint action might ground sophisticated forms of social cognition.

The Simplicity of Joint Attention (Axel Seemann)

For us both to jointly attend to an object involves two things (at least). We both have to be attending to the same thing. And each of us has to be aware that we are attending to the same thing. So much is uncontroversial. The question of what it takes to meet the second condition, however, is hotly debated. Do you have to deploy a general theory of mind? Do you have to be able to simulate my perspective? Or do you have to possess a capacity for intersubjectivity in order to gain access to my embodied state of mind? This talk will suggest that this apparently intractable debate can be sharpened by focusing on the issue of whether or not joint attention can be reductively analysed. Thinking about the second condition of joint attention in these terms makes it possible to interpret an array of psychological evidence in a new and insightful way. This interpretation provides the basis for an argument that in humans (and, arguably, non-human primates too), joint attention is a simple, non-reducible capacity.

*Audio-Visual Requirements*

The speakers need a screen projector that can be accessed from a laptop.

*Speaker Biographies*

Daniel Richardson is an experimental psychologist who investigates how internal cognitive processes are grounded in the body, the environment and the social world. His research uses eye tracking and body motion tracking technologies. His papers have been recognized by an APA young experimenter award, as an Editor’s choice article in *Science*, and discussed in *Time* magazine. After a PhD in cognitive science at Cornell University, he was a postdoctoral researcher at Stanford University and then an Assistant Professor at the University of California, Santa Cruz. He is currently a Senior Lecturer at University College London where he runs the eyethink lab (<http://www.eyethink.org>) and is co-director of the Multimodal Lab.

Stephen Butterfill studies philosophical issues in developmental and cognitive psychology. He is currently working on collaborative and individual projects in roughly four areas: metaphysical and psychological aspects of joint action; intention and motor cognition; cognitive bases of theory of mind abilities; and perception of causation, speech and color. Some of this work has been published in the *Philosophical Quarterly* and *Psychological Review*. After graduate work at Oxford he held a junior research fellowship at Cambridge and is currently Associate Professor of Philosophy at Warwick University.

Axel Seemann’s main research interest is in social cognition; much of his recent work has been concerned with joint attention. He has edited an interdisciplinary anthology on joint attention for MIT Press (forthcoming 2011). His most recent publications have appeared in the *Review of Philosophy and Psychology*, the *Journal of the Philosophy of History*, the *Journal of Consciousness Studies*, the *International Journal of Philosophical Studies*, and *Inquiry*, as well as various anthologies. He was a postdoc at UC Berkeley and did his graduate work at the LSE. He currently is Associate Professor of Philosophy at Bentley University.