Origins of Mind: Philosophical Issues in Cognitive Development

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1.   Short description

How do humans come to know about objects, causes, words, numbers, colours, actions and minds? We will attempt to answer this question using a range of conceptual tools from philosophy to examine puzzles arising from some recent scientific breakthroughs. The question, which goes back to Plato or earlier, is challenging because it requires us to consider minds where knowledge is neither clearly present nor obviously absent. This is challenging because, as Donald Davidson observes, '[w]e have many vocabularies for describing nature when we regard it as mindless, and we have a mentalistic vocabulary for describing thought and intentional action; what we lack is a way of describing what is in between' (1999, p. 11). To understand the emergence of knowledge we need to investigate what is in between mindless nature and the sorts of cognition captured by commonsense psychological notions.

Questions arising include:

Action   Does identifying an action as such necessarily involve representing an intention?

Holism   Could there be mindreaders who can identify intentions and knowledge states but not beliefs?

Modularity   If mindreading is modular (or automatic), what can we infer about the representations and processes it involves?

Tracking   What could someone represent that would enable her, perhaps within limits, to track another's mental states?

Evidential basis	What evidence could in principle support the ascription of a particular belief to a given subject, and how does the evidence support the ascription?
Objectivity	Could there be mindreaders who are able to identify beliefs despite not understanding what it is for a belief to be true or false?
Self-awareness	Does being a mindreader entail being able, sometimes, to identify one's own mental states and actions?
Interaction	How is mindreading involved in joint action?
Social Grounding	In what ways (if any) could mindreading, or its development or evolution, depend on abilities to engage in joint action?

2. Provisional schedule

Most classes will take the form of a lecture with questions and discussion time. There are also four afternoon sessions in which we'll discuss key papers. See table 1 on the following page for a provisional schedule. The schedule may change depending on group discussion and research interests.

3. Method of evaluation

Students may be asked to prepare one or more short (5–10 minute) presentations to introduce a discussion sessions. Presentations will not be graded nor contribute to any overall mark.

Students may submit a short midterm paper of no more than 3000 words (fewer is better). Midterm papers will not contribute to any overall mark. Midterm papers will receive feedback some feedback (a paragraph or so) but will not receive grades.

Students should submit a short term paper. The topic of each paper should ideally be agreed in advance; alternatively term papers may answer a question chosen from the list of questions below. Term papers may not substantially overlap with midterm papers where any individual is an author of both.

4. Sample essay questions

In addition to those below, also consider questions from the titles of lectures in table 1 on the next page.

1.	sept 12	*Introduction: Some Questions about Mindreading and Joint Action*
2.	sept 19	*What Are Mental States?* Reading: Jeffrey (1983, §§1.1–1.3, 3.1–3.4, 4.1), Fitch & Nelson (2009, §1)
	sept 26	[no class]
3.	oct 3	*Tracking, Measuring and Representing Beliefs* Reading: Matthews (1994), Kovács et al. (2010)
4.	oct 10	*What is Core Knowledge (or Modularity)?* Reading: Fodor (1983, 2000); Baillargeon et al. (2010); Wellman et al. (2001) Discussion: Sugden (2000)
	oct 14	[no class]
5.	oct 24	*Actions, Intentions and Goals* Reading: Davidson (1971, 1980); Bratman (1985, 2000) Discussion: ~~Matthews (1994)~~ (Shah & Velleman 2005)
6.	oct 31	*Goal Ascription: the Teleological Stance and Motor Awareness* Reading: Millikan (1989, 1993b,a); Gergely et al. (1995); Csibra (2003); Fogassi et al. (2005) Discussion: Davidson (1973)
	nov 7	[no class]
7.	nov 14	*What Is Joint Action?* Reading: Bratman (1992, 1993); Ludwig (2007); Searle (1990); Carpenter (2009) Discussion: Bratman (1984)
8.	nov 21	*Shared Intention and Motor Representation in Joint Action* Reading: Knoblich & Sebanz (2008); Kourtis et al. (2010)
	nov 28	[no class]
9.	dec 5	*Interacting Mindreaders* Reading: Csibra & Gergely (1998, 2009); Leekam et al. (2010)

Table 1: Provisional schedule

1. Are there limits on the behaviour that can be modelled using simple forms of decision theory (such as the version presented in Jeffrey 1983)? You may choose to answer with respect to one of Sugden (2000) or Bratman (2000).

2. How, if at all, can we distinguish different kinds of mindreading? If you provide a distinction, discuss an application of it.

3. Which events are actions?

4. What is the relation between a goal and an action when the action is directed to the goal?

5. What could someone represent that would enable her to track others' desires?

6. What could count as evidence that a mindreader was ascribing intentions to other individuals? You might relate your answer one or more of the following: Fogassi & Ferrari (2007); Dasser et al. (1989); Astington (2001); Malle & Knobe (2001).

7. 'The concept of a joint action as such is just that of an event of which there are multiple agents' (Ludwig 2007, p. 366). First explain and then evaluate this claim.

8. Does joint action necessarily involve mindreading?

5. Deadlines for submitting papers

5.1. Midterm papers

Midterm papers should be submitted by 9 am on Monday 5th November. Mindterm papers should be emailed directly to me (Butterfill). Late midterm papers will not be read without prior agreement. Midterm papers will be returned with feedback by Wednesday November 14, 2012 (unless there are very many).

5.2. Term papers

The deadline for submitting term papers is 9 am on January 7, 2012. The grades will be returned by the instructor by January 21, 2013 together with some feedback (a paragraph or so).

6. Reading and Sources

(See the provisional schedule in table 1 on page 3.)

Astington, J. (2001). The paradox of intention: Assessing children's metarepresentational understanding. In B. F. Malle & L. J. Moses (Eds.), *Intentions and Intentionality: Foundations of Social Cognition* (pp. 85–103). MIT Press.

Baillargeon, R., Scott, R. M., & He, Z. (2010). False-belief understanding in infants. *Trends in Cognitive Sciences*, *14*(3), 110–118.

Bratman, M. E. (1984). Two faces of intention. *The Philosophical Review*, *93*(3), 375–405.

Bratman, M. E. (1985). Davidson's theory of intention. In B. Vermazen & M. Hintikka (Eds.), *Essays on Davidson: Actions and Events* (pp. 13–26). Oxford: Oxford University Press. Reprinted in Bratman, M. (1999) *Faces of Intention*. Cambridge: Cambridge University Press (pp. 209–224).

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Bratman, M. E. (2000). Valuing and the will. *Noûs*, *34*, 249–265. Reprinted in Bratman, M. (2007) *Structures of Agency*. Oxford: Oxford University Press (pp. 47-67).

Carpenter, M. (2009). Just how joint is joint action in infancy? *Topics in Cognitive Science*, *1*(2), 380–392.

Csibra, G. (2003). Teleological and referential understanding of action in infancy. *Philosophical Transactions: Biological Sciences*, *358*(1431), 447–458.

Csibra, G. & Gergely, G. (1998). The teleological origins of mentalistic action explanations: A developmental hypothesis. *Developmental Science*, *1*(2), 255–259.

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Dasser, V., Ulbaek, I., & Premack, D. (1989). The perception of intention. *Science*, *243*(4889), 365–367.

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Davidson, D. ([1984] 1973). Radical interpretation. In *Inquiries into Truth and Interpretation* (pp. 125–139). Oxford: Oxford University Press.

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Fitch, G. & Nelson, M. (2009). Singular propositions. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Spring 2009 ed.). `http://plato.stanford.edu/archives/spr2009/entries/propositions-singular/`.

Fodor, J. (1983). *The Modularity of Mind: an Essay on Faculty Psychology.* Bradford book. Cambridge, Mass ; London: MIT Press.

Fodor, J. (2000). *The mind doesn't work that way : the scope and limits of computational psychology.* Representation and mind. Cambridge, Mass.: MIT Press.

Fogassi, L. & Ferrari, P. F. (2007). Mirror neurons and the evolution of embodied language. *Current Directions in Psychological Science, 16*(3), 136 –141.

Fogassi, L., Ferrari, P. F., Gesierich, B., Rozzi, S., Chersi, F., & Rizzolatti, G. (2005). Parietal lobe: From action organization to intention understanding. *Science, 308*(5722), 662–667.

Gergely, G., Nadasky, Z., Csibra, G., & Biro, S. (1995). Taking the intentional stance at 12 months of age. *Cognition, 56,* 165–193.

Jeffrey, R. C. (1983). *The Logic of Decision, second edition.* Chicago: University of Chicago Press.

Knoblich, G. & Sebanz, N. (2008). Evolving intentions for social interaction: from entrainment to joint action. *Philosophical Transactions of the Royal Society B, 363,* 2021–2031.

Kourtis, D., Sebanz, N., & Knoblich, G. (2010). Favoritism in the motor system: Social interaction modulates action simulation. *Biology Letters.*

Kovács, Á. M., Téglás, E., & Endress, A. D. (2010). The social sense: Susceptibility to others' beliefs in human infants and adults. *Science, 330*(6012), 1830 –1834.

Leekam, S. R., Solomon, T. L., & Teoh, Y. (2010). Adults' social cues facilitate young children's use of signs and symbols. *Developmental Science, 13*(1), 108–119.

Ludwig, K. (2007). Collective intentional behavior from the standpoint of semantics. *Nous, 41*(3), 355–393.

Malle, B. & Knobe, J. (2001). The distinction between desire and intention: A folk-conceptual analysis. *Intentions and intentionality: Foundations of social cognition*, 45–67.

Matthews, R. J. (1994). The measure of mind. *Mind, 103*(410), 131–146.

Millikan, R. G. (1989). In defense of proper functions. *Philosophy of Science, 56*(2), 288–302.

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Shah, N. & Velleman, J. D. (2005). Doxastic deliberation. *The Philosophical Review, 114*(4), 497–534. ArticleType: research-article / Full publication date: Oct., 2005 / Copyright © 2005 Duke University Press.

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Wellman, H., Cross, D., & Watson, J. (2001). Meta-analysis of theory of mind development: The truth about false-belief. *Child Development, 72*(3), 655–684.