Origins of Mind: Philosophical Issues in Cognitive Development

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Introduction

How do humans first come to know about things like objects, causes, words, numbers, colours, actions and minds? This question goes back to Plato or earlier and remains unanswered. Two recent scientific breakthroughs appear to bring us closer to an answer, and to show that the question is even less straightforward than previously assumed. The first breakthrough concerns social interaction; it is the discovery that preverbal infants enjoy surprisingly rich social abilities. These abilities enable infants to engage in some forms of social interaction. This may well facilitate the subsequent acquisition of linguistic abilities and enable the emergence of knowledge (e.g. Csibra and Gergely 2009; Meltzoff 2007; Tomasello et al. 2005). A second breakthrough involves the use of increasingly sensitive—and sometimes controversial—methods to detect expectations without relying on subjects' abilities to talk or act. These methods have revealed sophisticated expectations about causal interactions, numerosity, actions, mental states and more besides in preverbal infants (e.g. Spelke 1990; Baillargeon et al. 2010). These expectations or the representations and processes underpinning them arguably also enable the emergence of knowledge. This course aims to introduce readers to new philosophical issues raised by these findings and to explain their relevance to longstanding philosophical questions about the mind.

Outline of Lectures

The course will be organised by domains of knowledge, so that one session concerns knowledge of objects, another knowledge of causes, and so on. See table 1 on the following page for a provisional schedule. The schedule may change depending on group discussion and research interests.

1.	sept 23	*Objects* Reading: Spelke (1998); Moore and Meltzoff (2008)
2.	sept 23	*Causes* Reading: Spelke and Van de Walle (1993); Hood et al. (2000)
3.	sept 23	*Colours* Reading: Franklin et al. (2005); Kowalski and Zimiles (2006)
4.	sept 24	*Languages* Reading: Lidz et al. (2003); Lidz and Waxman (2004)
5.	sept 24	*Communication* Reading: Tomasello et al. (2007); Baldwin (2000)
6.	sept 24	*Minds* Reading: Baillargeon et al. (2010)
7.	sept 25 am	*Actions* Reading: Csibra (2003)

Table 1: Provisional schedule

Preparatory Reading

It would be useful to read these items before the course, ideally in addition to the papers in table 1.

- Moll, H. and Tomasello, M. (2007). Cooperation and human cognition: the vygotskian intelligence hypothesis. *Philosophical Transactions of the Royal Society B*, 362(1480):639–648
- Robbins, P. (2010). Modularity of mind. In Zalta, E. N., editor, *The Stanford Encyclopedia of Philosophy*. Summer 2010 edition
- Spelke, E. and Kinzler, K. D. (2007). Core knowledge. *Developmental Science*, 10(1):89–96

References

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

Baldwin, D. (2000). Interpersonal understanding fuels knowledge acquisition. *Current Directions in Psychological Science*, 9(2):40–5.

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

Csibra, G. and Gergely, G. (2009). Natural pedagogy. *Trends in Cognitive Sciences*, 13(4):148–153.

Davidson, D. (1999). The emergence of thought. *Erkenntnis*, 51:7–17.

Franklin, A., Clifford, A., Williamson, E., and Davies, I. (2005). Color term knowledge does not affect categorical perception of color in toddlers. *Journal of Experimental Child Psychology*, 90(2):114–141.

Hood, B., Carey, S., and Prasada, S. (2000). Predicting the outcomes of physical events: Two-year-olds fail to reveal knowledge of solidity and support. *Child Development*, 71(6):1540–1554.

Kowalski, K. and Zimiles, H. (2006). The relation between children's conceptual functioning with color and color term acquisition. *Journal of Experimental Child Psychology*, 94:301–321.

Lidz, J. and Waxman, S. (2004). Reaffirming the poverty of the stimulus argument: a reply to the replies. *Cognition*, 93(2):157–165.

Lidz, J., Waxman, S., and Freedman, J. (2003). What infants know about syntax but couldn't have learned: experimental evidence for syntactic structure at 18 months. *Cognition*, 89(3):295–303.

Meltzoff, A. (2007). 'like me': a foundation for social cognition. *Developmental Science*, 10(1):126–134.

Moll, H. and Tomasello, M. (2007). Cooperation and human cognition: the vygotskian intelligence hypothesis. *Philosophical Transactions of the Royal Society B*, 362(1480):639–648.

Moore, M. K. and Meltzoff, A. N. (2008). Factors affecting infants' manual search for occluded objects and the genesis of object permanence. *Infant Behavior and Development*, 31(2):168–180.

Robbins, P. (2010). Modularity of mind. In Zalta, E. N., editor, *The Stanford Encyclopedia of Philosophy*. Summer 2010 edition.

Spelke, E. (1990). Principles of object perception. *Cognitive Science*, 14:29–56.

Spelke, E. (1998). Nativism, empiricism, and the origins of knowledge. *Infant Behavior and Development*, 21(2):181–200.

Spelke, E. and Kinzler, K. D. (2007). Core knowledge. *Developmental Science*, 10(1):89–96.

Spelke, E. and Van de Walle, G. (1993). Perceiving and reasoning about objects. In Eilan, N., McCarthy, R., and Brewer, B., editors, *Spatial representation: problems in philosophy and psychology*. Oxford University Press, Oxford.

Tomasello, M., Carpenter, M., Call, J., Behne, T., and Moll, H. (2005). Understanding and sharing intentions: The origins of cultural cognition. *Behavioral and Brain Sciences*, 28:675–735.

Tomasello, M., Carpenter, M., and Liszkowski, U. (2007). A new look at infant pointing. *Child Development*, 78(3):705–722.