Origins of Mind: Philosophical Issues in Cognitive Development

<s.butterfill@warwick.ac.uk>

The Challenge

Explain how humans come to know about objects, causes, words, numbers, colours, actions and minds.

What will I learn about?

Recent scientific breakthroughs about the emergence of minds in development, and the philosophical issues arising from these.

Also issues like innateness, modularity and prelinguistic cognition.

How is it organised?

The course will be organised around domains of knowledge. Some the topics to be covered may include:

- 1. Social Interaction without Words
- 2. Objects and How They Interact
- 3. Numbers
- 4. Seeing and Talking about Colours

- 5. Words and Other Communicative Tools
- 6. Actions: Teleology and Motor Awareness
- 7. Mindreading

Do I have to know something about science?

No but you will learn to read scientific papers papers, and consume quite a bit of developmental psychology. You will also learn to integrate philosophy with psychology.

Is there a web page?

http://origins-of-mind.butterfill.com

Currently this page contains materials from an earlier version of the module. I will update it as the module progresses.

Can you suggest some reading?

There's a list on the back of this handout.

Reading Suggestions by Topic

These are some of the topics which may be covered in the module.

1. Social Interaction without Words

Could social interaction enable cognitive development? 19,18,8,2,16,25

2. Objects and How They Interact

When can infants first know things about objects they aren't perceiving? 17,1,11

3. Numbers

How might abilities based on core knowledge enable the emergence in development of knowledge proper? ^{28,27,10,6}

4. Seeing and Talking about Colours

How do children acquire colour concepts and colour words—concepts and words for red, blue and green, say? ^{23,12,13}

5. Words and Other Communicative Tools

What comes first in development, knowledge or language? ^{26,4,22,14}

6. Actions: Teleology and Motor Awareness

Which events do infants take to be actions? And how do they understand the relation be-

tween actions and the goals to which they are directed? 5,7,21,3

7. Mindreading

What is involved in representing belief? ^{20,24,15,9}

References

- [1] Baillargeon, R., Spelke, E. S., & Wasserman, S. (1985). Object permanence in five-month-old infants. *Cognition*, *20*(3), 191–208.
- [2] Baldwin, D. (2000). Interpersonal understanding fuels knowledge acquisition. *Current Directions in Psychological Science*, *9*(2), 40–5.
- [3] Bekkering, H., Wohlschlager, A., & Gattis, M. (2000). Imitation of gestures in children is goal-directed. *The Quarterly Journal of Experimental Psychology A*, 53(1), 153–164.
- [4] Bloom, P. (2000). How children learn the meanings of words. Learning, development, and conceptual change. Cambridge, Mass.; London: MIT Press.
- [5] Bratman, M. E. (1987). *Intentions, Plans, and Practical Reasoning*. Cambridge, MA: Harvard University Press.
- [6] Carey, S. (2009). *The Origin of Concepts.* Oxford: Oxford University Press.
- [7] Csibra, G. & Gergely, G. (1998). The teleological origins of mentalistic action explanations: A developmental hypothesis. *Developmental Science*, 1(2), 255–259.
- [8] Csibra, G. & Volein, Á. (2008). Infants can infer the presence of hidden objects from referential gaze infor-

- mation. British Journal of Developmental Psychology, 26, 1–11.
- [9] Davidson, D. (1990). The structure and content of truth. *The Journal of Philosophy*, 87(6), 279–328.
- [10] Fodor, J. (1981). The present status of the innateness controversy. In *Representations*. Brighton: Harvester.
- [11] Fodor, J. (1983). *The Modularity of Mind: an Essay on Faculty Psychology.* Bradford book. Cambridge, Mass; London: MIT Press.
- [12] Franklin, A., Catherwood, D., Alvarez, J., & Axelsson, E. (2010). Hemispheric asymmetries in categorical perception of orientation in infants and adults. *Neuropsychologia*, 48(9), 2648–2657.
- [13] Franklin, A., Clifford, A., Williamson, E., & Davies, I. (2005). Color term knowledge does not affect categorical perception of color in toddlers. *Journal of Experimental Child Psychology*, 90(2), 114–141.
- [14] Goldin-Meadow, S. (2003). The resilience of language: what gesture creation in deaf children can tell us about how all children learn language. Essays in developmental psychology. New York, N.Y.: Psychology Press.
- [15] 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.
- [16] Liszkowski, U., Carpenter, M., & Tomasello, M. (2008). Twelve-month-olds communicate helpfully and appropriately for knowledgeable and ignorant partners. *Cognition*, *108*(3), 732–739.
- [17] Meltzoff, A. & Moore, M. K. (1998). Object representation, identity, and the paradox of early permanence: Steps toward a new framework. *Infant Behavior and Development*, 21(2), 201–235.

- [18] Meltzoff, A. N. & Moore, M. K. (1977). Imitation of facial and manual gestures by human neonates. *Science*, *198*(4312), 75–78.
- [19] Moll, H. & Tomasello, M. (2007). Cooperation and human cognition: the vygotskian intelligence hypothesis. *Philosophical Transactions of the Royal Society B*, *362*(1480), 639–648.
- [20] Onishi, K. H. & Baillargeon, R. (2005). Do 15-monthold infants understand false beliefs? *Science*, 308(8), 255–258.
- [21] Rizzolatti, G. & Sinigaglia, C. (2010). The functional role of the parieto-frontal mirror circuit: interpretations and misinterpretations. *Nature Reviews: Neuroscience*, 11(4), 264–274.
- [22] Senghas, A. & Coppola, M. (2001). Children creating language: How nicaraguan sign language acquired a spatial grammar. *Psychological Science*, *12*(4), 323–328.
- [23] Soja, N. N. (1994). Young children's concept of color and its relation to the acquisition of color words. *Child Development*, *65*(3), 918–937.
- [24] Southgate, V., Senju, A., & Csibra, G. (2007). Action anticipation through attribution of false belief by two-year-olds. *Psychological Science*, *18*(7), 587–592.
- [25] Tomasello, M. (2008). *Origins of human communication*. The MIT Press.
- [26] Wittgenstein, L. (1974). On certainty. Oxford: Blackwell.
- [27] Wynn, K. (1992). Addition and subtraction by human infants. *Nature*, *358*(6389), 749–750.
- [28] Xu, F. & Spelke, E. S. (2000). Large number discrimination in 6-month-old infants. *Cognition*, 74(1), B1–B11.