Origins of Mind
Seminar Tasks

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Contents

Warning

This document may be updated during the course. Tasks might change. Please always check you have the latest version from `http://origins-of-mind.butterfill.com` before completing a task. This version was last edited October 1, 2014.

Formal requirement

All students are required to submit a 1500 word unassessed essay by 12 noon on Thursday of week 7.

I will provide essay questions and reading lists in Week 4 for this unassessed essay. I am also happy to discuss your essay plan individually.

I will return unassessed essays with comments and we will discuss them in weeks 8 and 9.

All other tasks are optional.

About the seminars

Seminars focus on the tasks described below. Some tasks need to be completed by the Monday or Tuesday before the seminar (at least if you want feedback). Which task should be completed before which seminar? See the table below.

1.	week 2	*Task 1* Introduce a scientific paper
2.	week 3	*Task 2 or 3* Write a review
3.	week 4	*Task 3 or 2* Peer-review a review essay
4.	week 5	*Task 4* Plan an essay
	week 6	(No seminar)
5.	week 7	*Task 5* Submit unassessed essay early
6.	week 8	*Task 5 ctd* Discussion of unassessed essays
7.	week 9	*Task 6 or 7* Write a third essay
8.	week 10	*Task 7 or 6* Peer-review an essay

Table 1: Provisional seminar schedule

Wildcard Task: Ask a Question

Ask a question in or after a lecture, in person or by email. Write up the question you asked, the answer you got, and your reflections on the question and answer.

You should complete this task, either in addition to the tasks below or in place of one of them (you can choose which task to substitute).

Task 1: Introduce a scientific paper

Your group will be assigned one of these papers:

- Baillargeon, R. (1987). Object permanence in 3.5-and 4.5-month-old infants. *Developmental psychology*, 23(5):655–664
- Shinskey, J. and Munakata, Y. (2001). Detecting transparent barriers: clear evidence against the means-end deficit account of search failures. *Infancy*, 2(3):395–404
- Chiandetti, C. and Vallortigara, G. (2011). Intuitive physical reasoning about occluded objects by inexperienced chicks. *Proceedings of the Royal Society B: Biological Sciences*, 278(1718):2621–2627. PMID: 21270036

Your task, as a group, is to prepare a 7–10 minute presentation to introduce the paper. This presentation should answer the following questions:

1. What question is the paper intended to answer?
2. Who are the subjects of the experiment(s)?
3. What materials did the experiment(s) involve?
4. What was the procedure?
5. What were the main results?
6. What did the researchers conclude from these results?
7. What further questions arise from all of this?

If the paper has multiple experiments, don't describe them all. Pick the most interesting.

You should probably not describe all the control conditions. But you should be prepared to explain them in response to questions.

Task 2: Write a review of some scientific research

Suggested question

Can 4-month-old infants represent objects they are not perceiving?

Aim

The aim of this first essay is just to get you reading scientific papers and to practice writing about evidence. Later essays will demand more analysis. But for this essay it's enough to provide a review of some scientific research.

Hint

In this essay you might:

1. review some of evidence that infants can represent objects they are not perceiving (see readings, especially Baillargeon 1987);
2. consider the apparently conflicting findings that infants cannot do this (Shinskey and Munakata 2001);
3. attempt to resolve the conflict.

Peer review

Your review essay will be subject to peer review (see next task). Another student in your seminar group will be assigned as your reviewer. You should send the essay to your reviewer by 6pm on the Monday before your seminar.

Reading: Essential

Baillargeon, R. (1987). Object permanence in 3.5-and 4.5-month-old infants. *Developmental psychology*, 23(5):655–664

Shinskey, J. and Munakata, Y. (2001). Detecting transparent barriers: clear evidence against the means-end deficit account of search failures. *Infancy*, 2(3):395–404

Spelke, E. (1998). Nativism, empiricism, and the origins of knowledge. *Infant Behavior and Development*, 21(2):181–200 (You need read only as far as p. 189.)

Reading: Optional (*=hard)

Aguiar, A. and Baillargeon, R. (2002). Developments in young infants' reasoning about occluded objects. *Cognitive Psychology*, 45:267–336

*Charles, E. P. and Rivera, S. M. (2009). Object permanence and method of disappearance: looking measures further contradict reaching measures. *Developmental Science*, 12(6):991–1006

McCurry, S., Wilcox, T., and Woods, R. (2009). Beyond the search barrier: A new task for assessing object individuation in young infants. *Infant Behavior and Development*, 32(4):429–436

*Moore, M. K. and Meltzoff, A. N. (2010). Numerical identity and the development of object permanence. In Johnson, S. P., editor, *Neoconstructivism: The new science of cognitive development*, pages 61–83. Oxford University Press, Oxford

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

Spelke, E. and Hespos, S. (2001). Continuity, competence, and the object concept. In Dupoux, E., editor, *Language, Brain, and Cognitive Development*. MIT, Cambridge, Mass

Where to find the readings

All the readings are available online unless otherwise noted.

One fast way to find a paper is to copy its title into google scholar and search. To download the paper from the journal website, you may need to select 'log in' or 'institutional log in'.

If you have trouble locating a resource, check the list of journals available here: `http://fs6jr8lx8q.search.serialssolutions.com/`

Citations

When citing articles in your essay, use the same system that my handouts and nearly all the readings use. That is, put author-year in the main text (e.g. 'Spelke et al have argued that ... (Spelke et al 1993, p. 22).') and include the full citation in a list of references at the end.

A bibliography manager like Zotero can save you a lot of time.

Length

Your review may not exceed 2000 words. Reviews longer than this words may be rejected without review.

Shorter is better, all things being equal.

Task 3: Peer-review an essay

A student will send you a short essay by 6pm on the Monday before your seminar. Your task is to write a review of the essay and send the review to the student by 6pm the day before your seminar.

Hints

Your review should start by stating the essay's aim and briefly outlining what it achieves.

You should discuss one or more of the main claims defended in the essay. It may be useful to mention sources the author has not considered, or to raise objections.

Discussion of the essay's flaws is important. But make sure that adverse criticism is carefully justified.

If you can, suggest how the essay could be improved.

Alternative Essay Question for Task 2

Suggested question

What do 6-month-olds know about physical objects' causal interactions?

Aim

The aim of this first essay is just to get you reading scientific papers and to practice writing about evidence. Later essays will demand more analysis. But for this essay it's enough to provide a review of some scientific research.

Peer review

Your review essay will be subject to peer review (see Task 3). Another student in your seminar group will be assigned as your reviewer. You should send the essay to your reviewer by 6pm on the Monday before your seminar.

Hint

In this essay you might:

1. review some of the evidence that infants can track causal interactions (see readings, Spelke et al. 1992a or Leslie and Keeble 1987);
2. consider findings that are hard to reconcile with the claim that infants' simply know that barriers stop objects (see Hood et al. 2000, 2003)
3. attempt to resolve the conflict (potentially useful sources include Haith 1998; Keen 2003)

Reading

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

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

Further reading

Spelke, E. S., Breinlinger, K., Macomber, J., and Jacobson, K. (1992b). Origins of knowledge. *Psychological Review*, 99(4):605–632

Leslie, A. and Keeble, S. (1987). Do six-month-old infants perceive causality? *Cognition*, 25:265–288

Hood, B., Cole-Davies, V., and Dias, M. (2003). Looking and search measures of object knowledge in preschool children. *Developmental Science*, 29(1):61–70

Santos, L. R., Seelig, D., and Hauser, M. D. (2006). Cotton-top tamarins' (saguinus oedipus) expectations about occluded objects: A dissociation between looking and reaching tasks. *Infancy*, 9(2):147–171

Haith, M. (1998). Who put the cog in infant cognition? is rich interpretation too costly? *Infant Behavior and Development*, 21(2):167–179

Keen, R. (2003). Representation of objects and events: Why do infants look so smart and toddlers look so dumb? *Current Directions in Psychological Science*, 12(3):79–83

Where to find the readings

All the readings are available online unless otherwise noted.

One fast way to find a paper is to copy its title into google scholar and search. To download the paper from the journal website, you may need to select 'log in' or 'institutional log in'.

If you have trouble locating a resource, check the list of journals available here: `http://fs6jr8lx8q.search.serialssolutions.com/`

Citations

When citing articles in your essay, use the same system that my handouts and nearly all the readings use. That is, put author-year in the main text (e.g. 'Spelke et al have argued that ... (Spelke et al 1993, p. 22).') and include the full citation in a list of references at the end.

A bibliography manager like Zotero can save you a lot of time.

Length

Your review may not exceed 2000 words. Reviews longer than this words may be rejected without review.

Shorter is better, all things being equal.

Task 4: Plan an essay

In this task you identify a question for your unassessed essay, do some background reading and produce an outline for the essay plus a list of readings.

You can take one of the suggested questions from the list provided. Or, if you prefer, you can propose your own question (which will need to be approved before you can submit the essay).

Send your essay plan to your seminar leader by 6pm on the Monday before your seminar.

Pre-approved essay questions

For any of these questions, your answer may focus on a particular domain, such as core knowledge of objects or of number. You are not required to provide a comprehensive survey.

The readings suggested here are for general guidance. You're welcome to see me to discuss readings in relation to your plans for the essay.

Mindreading

What is the puzzle about when humans can first represent others' beliefs? How might the puzzle be resolved?

—Reading

Onishi, K. H. and Baillargeon, R. (2005). Do 15-month-old infants understand false beliefs? *Science*, 308(8):255–258

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

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

Butterfill, S. and Apperly, I. A. (2012). How to construct a minimal theory of mind. *Mind and Language*, forthcoming

Carruthers, P. (2013). Mindreading in infancy. *Mind & Language*, 28(2):141–172

Core knowledge

What is core knowledge and what role, if any, could it play in explaining the transition from being unable to know things to being able to know things?

—Reading

Carey, S. and Spelke, E. (1996). Science and core knowledge. *Philosophy of Science*, 63:515–533

Spelke, E. S., Breinlinger, K., Macomber, J., and Jacobson, K. (1992b). Origins of knowledge. *Psychological Review*, 99(4):605–632

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

Carey, S. (2009). *The Origin of Concepts*. Oxford University Press, Oxford

Innateness

What if anything is innate in humans?

Hint: You should be careful to examine the notion of innateness (see Samuels 2004). Otherwise the reading is divided into topics; you should not try to cover all topics. I also suggest *not* structuring your essay by topic.

—Reading

Samuels, R. (2004). Innateness in cognitive science. *Trends in Cognitive Sciences*, 8(3):136–41

—Reading: comparative (cross-species)

Chiandetti, C. and Vallortigara, G. (2011). Intuitive physical reasoning about occluded objects by inexperienced chicks. *Proceedings of the Royal Society B: Biological Sciences*, 278(1718):2621–2627. PMID: 21270036

Haun, D. B., Jordan, F. M., Vallortigara, G., and Clayton, N. S. (2010). Origins of spatial, temporal and numerical cognition: Insights from comparative psychology. *Trends in Cognitive Sciences*, 14(12):552–560

—Reading: syntax

Note: this is one-sided.

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

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

—Reading: replying to Fodor's argument

Fodor, J. (1981). The present status of the innateness controversy. In *Representations*. Harvester, Brighton

Carey, S. (2009). *The Origin of Concepts*. Oxford University Press, Oxford chapters 4, 8

(There is also an exchange between Carey and Rey forthcoming in the journal Mind and Language—their papers may be available by the time you read this.)

Knowledge of colour

At birth humans do not know this lime fruit is green whereas that tomato is red. How could some humans come to be in a position to know this?

Hint: you should discuss categorical perception of colour and its relation to knowledge. There was a lecture on this topic; the handout includes many references.

—Reading

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

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

Franklin, A., Pilling, M., and Davies, I. (2005b). The nature of infant color categorization: Evidence from eye movements on a target detection task. *Journal of*

Experimental Child Psychology, 91(3):227–248

Wiggett, J. A. and Davies, I. R. L. (2008). The effect of stroop interference on the categorical perception of color. *Memory & Cognition*, 36(2):231–239

Social interaction

If humans were incapable of social interaction and could only observe each other from behind one-way mirrors (if such a thing existed), how if at all would this affect the processes by which they get to know things?

—Reading

Tomasello, M. (2008). *Origins of human communication*. The MIT Press

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 [Read the commentaries.]

Butterfill, S. (2012a). Interacting mindreaders. *Philosophical Studies*, 165(3):841–863

Joint action

Could there be a role for joint action in explaining how humans come to know things about other minds?

—Reading

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

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

Tollefsen, D. (2005). Let's pretend: Children and joint action. *Philosophy of the Social Sciences*, 35(75):74–97

Butterfill, S. (2012b). Joint action and development. *Philosophical Quarterly*, 62(246):23–47

Language

'Children learn words through the exercise of reason' (BLOOM). Discuss.

Note: the reading for this is one-sided, which makes this question difficult.

—Reading

Bloom, P. (2000). *How children learn the meanings of words*. Learning, development, and conceptual change. MIT Press, Cambridge, Mass. ; London

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

Sabbagh, M. and Baldwin, D. (2001). Learning words from knowledgeable versus ignorant speakers: Links between preschoolers' theory of mind and semantic development. *Child Development*, 72(4):1054–1070

Matthews, D., Lieven, E., and Tomasello, M. (2008). How toddlers and preschoolers learn to uniquely idenitfy referents for others: A training study. *Child Development*, 78(6):1744–1759

Dummett, M. (1993). Language and communication. In *The seas of language*. Clarendon Press, Oxford

Task 6: Write an essay

Suggested question

What is 'shared intentionality' and what might it explain?

Compare Tomasello et al. (2005, p. 688): 'Our ... hypothesis is that it is precisely these two developing capacities [to read intentions and to share psychological states] that interact during the first year of life to create the normal human developmental pathway leading to participation in collaborative cultural practices.'

—Reading: theoretical

Pick one of these (first is probably the best; last is shortest; the middle one comes with critical commentaries).

*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

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. and Carpenter, M. (2007). Shared intentionality. *Developmental Science*, 10(1):121–5

—Reading: experimental (pick one or more)

Moll, H., Richter, N., Carpenter, M., and Tomasello, M. (2008). Fourteen-month-olds know what we have shared in a special way. *Infancy*, 13(1):90–90

Warneken, F., Chen, F., and Tomasello, M. (2006). Cooperative activities in young children and chimpanzees. *Child Development*, 77(3):640–663

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

—Reading: background

Bratman, M. E. (1992). Shared cooperative activity. *The Philosophical Review*,

101(2):327–341

Searle, J. R. (1990). Collective intentions and actions. In Cohen, P., Morgan, J., and Pollack, M., editors, *Intentions in Communication*, pages 90–105. Cambridge University Press, Cambridge. Reprinted in Searle, J. R. (2002) *Consciousness and Language*. Cambridge: Cambridge University Press (pp. 90–105)

Butterfill, S. (2012b). Joint action and development. *Philosophical Quarterly*, 62(246):23–47