

# Philosophical Issues in Behavioural Science

University of Warwick, Autumn Term 2022–3  
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## Outline

Acting together is emerging as a major topic in both philosophy and behavioural sciences. Philosophical investigation is indispensable for fully understanding many discoveries in the behavioural sciences, and for identifying new areas of investigation. Conversely, theories and discoveries in behavioural sciences can inform and constrain philosophical investigation.

Key questions include: When two or more agents act together, in virtue of what can their actions have a collective goal? What is it for agents to act together cooperatively, or to be committed to do so? Are there distinct roles for intention and motor representation in explaining the purposiveness of action? How if it all do motor representations shape experiences of actions, one's own or others'? Are there multiple systems for tracking others' actions, beliefs and other mental states?

## Some Relevant Reading

*This is not an exhaustive list but will give you a flavour of the course. You will not be expected to read all of these works.*

Apperly, I. A. (2010). *Mindreaders: The Cognitive Basis of "Theory of Mind"*. Psychology Press, Hove

Apperly, I. A. and Butterfill, S. (2009). Do humans have two systems to track beliefs and belief-like states? *Psychological Review*, 116(4):953–970

Bach, K. (1978). A representational theory of action. *Philosophical Studies*, 34(4):361–379

Borg, E. (2007). If mirror neurons are the answer, what was the question? *Journal of Consciousness Studies*, 14:5–19

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1. *Action: Instrumental and Habitual*
    - Do discoveries about why humans act create new problems in philosophy of action?
    - Introducing the notion of an interface problem.Reading: Dickinson (2016)
  2. *Decision Theory, Habitual Action and Planning*
    - Decision theory as a model.
    - Limits of the model from below (habitual action) and above (planning).Mechanistically neutral vs mechanistically committed theories of action.  
Reading: Jeffrey (1983); Bratman (1987)
  3. *Purposive Action: Intention and Motor Representation*
    - What is motor representation? Why are goals represented motorically?Reading: Butterfill and Sinigaglia (2014); Mylopoulos and Pacherie (2016); Bach (1978)
  4. *Acting Together: Shared Intention*
    - Introducing philosophical questions about acting together.
    - What is shared intention and what is its role in acting together?Reading: Bratman (2014)
  5. *Joint Commitment*
    - Is irreducibly joint commitment needed to characterise normative aspects of acting together?Reading: Gilbert (2013)
  6. *Game Theory and Acting Together*
    - Can we model acting together using game theory?Reading: Sugden (2000); Gold and Sugden (2007); Bratman (2011)
  7. *Collective Goals and Motor Representation*
    - If collective goals are represented motorically, what follows about acting together?Reading: Knoblich et al. (2011); Butterfill (2016)
  8. *Cooperation*

What is cooperation and what is its role in cultural development?

Reading: Tomasello (2009)
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Table 1: Indicative List of Possible Topics

- Butterfill, S. A. (2015). Perceiving expressions of emotion: What evidence could bear on questions about perceptual experience of mental states? *Consciousness and Cognition*, 36:438–451
- Butterfill, S. A. and Apperly, I. A. (2013). How to construct a minimal theory of mind. *Mind and Language*, 28(5):606–637
- Carruthers, P. (2015). Two systems for mindreading? *Review of Philosophy and Psychology*, 7(1):141–162
- Christensen, W. and Michael, J. (2016). From two systems to a multi-systems architecture for mindreading. *New Ideas in Psychology*, 40:48–64
- Gallese, V., Keysers, C., and Rizzolatti, G. (2004). A unifying view of the basis of social cognition. *Trends in Cognitive Sciences*, 8(9):396–403
- Gergely, G., Nadasky, Z., Csibra, G., and Biro, S. (1995). Taking the intentional stance at 12 months of age. *Cognition*, 56:165–193
- Gilbert, M. P. (2013). *Joint Commitment: How We Make the Social World*. Oxford University Press, Oxford
- Gold, N. and Sugden, R. (2007). Collective intentions and team agency. *Journal of Philosophy*, 104(3):109–137
- Heider, F. and Simmel, M. (1944). An experimental study of apparent behaviour. *American Journal of Psychology*, 57(2):243–59
- Jacob, P. and Jeannerod, M. (2005). The motor theory of social cognition: a critique. *Trends in Cognitive Sciences*, 9(1):21–25
- Lieberman, A. M. and Mattingly, I. G. (1985). The motor theory of speech perception revised. *Cognition*, 21(1):1–36
- Low, J. and Watts, J. (2013). Attributing false-beliefs about object identity is a signature blindspot in humans' efficient mindreading system. *Psychological Science*, 24(3):305–311
- Michael, J., Sebanz, N., and Knoblich, G. (2016). The Sense of Commitment: A Minimal Approach. *Cognitive Science*, page 1968
- Michael, J. and Christensen, W. (2016). Flexible goal attribution in early mindreading. *Psychological Review*, 123(2):219–227
- Michael, J. A. and Sziget, A. (2018). “The Group Knobe Effect”: Evidence that people intuitively attribute agency and responsibility to groups. *Philosophical Explorations*, 0(0):1–18
- Michael, J., Wolf, T., Letesson, C., Butterfill, S., Skewes, J., and Hohwy, J. (2018). Seeing it both ways: Using a double-cuing task to investigate the role of spatial cuing in Level-1 visual perspective-taking. *Journal of Experimental Psychology: Human Perception and Performance*, 44(5):693–702

- Rizzolatti, G. and Sinigaglia, C. (2008). *Mirrors in the Brain: How Our Minds Share Actions, Emotions*. Oxford University Press, Oxford
- Samson, D., Apperly, I. A., Braithwaite, J. J., and Andrews, B. (2010). Seeing it their way: Evidence for rapid and involuntary computation of what other people see. *Journal of Experimental Psychology: Human Perception and Performance*, 36(5):1255–1266
- Sinigaglia, C. and Butterfill, S. A. (2015). On a puzzle about relations between thought, experience and the motoric. *Synthese*, 192(6):1923–1936
- Sugden, R. (2000). Team preferences. *Economics and Philosophy*, 16:175–204
- van der Wel, R. P. R. D., Sebanz, N., and Knoblich, G. (2014). Do people automatically track others' beliefs? evidence from a continuous measure. *Cognition*, 130(1):128–133
- Zacks, J. M., Tversky, B., and Iyer, G. (2001). Perceiving, remembering, and communicating structure in events. *Journal of Experimental Psychology: General*. Vol. 130(1), 130(1):29–58
- Zawidzki, T. W. (2013). *Mindshaping*. MIT Press, Cambridge, MA