Mindreading and Joint Action: Philosophical Tools Notes for Lecture 1

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1. Terminology

Mindreading is the process of identifying mental states and actions as the mental states and actions of a particular subject on the basis, ultimately, of bodily movements and their absence, somewhat as reading is the process of identifying propositions on the basis of inscriptions (Apperly 2010, p. 4).

A *joint action* is an event with two or more agents (Ludwig 2007).

2. Aim

In this course I want to introduce a variety of new and established philosophical ideas related to mindreading and joint action.

In selecting what to cover, I was looking for ideas that (i) might usefully inform scientific research on mindreading or on joint action (or both) but (ii) have so far been neglected or misunderstood by cognitive scientists.

So the idea is to offer a course in the philosophy of mind and action for scientists working on joint action or mindreading.

3. Four Challenges

Scientists investigating mindreading and joint action face various challenges. I want to mention four such challenges that these philosophical ideas might be helpful for.

3.1. First challenge: Decomposition

The first challenge is to find ways of decomposing mindreading into components, in something like the way that actual reading can be decomposed into orthographic, lexical, syntactic, semantic and pragmatic components.

If someone said they had identified the reading mechanism—ordinary reading, not mindreading—or the reading module, it would be hard to make sense of this claim. Surely reading involves multiple mechanisms and processes. Some might be modular, but it seems likely that others are not. At the very least, it makes little sense to argue about such matters for reading taken as a whole. Instead you have to look at components of reading, and ask about the mechanisms and processes these involve.

The first challenge, then, is find ways of decomposing mindreading into components.

3.2. Second challenge: Kinds of mindreading

The second, closely related, challenge is to find theoretically coherent and empirically motivated ways of distinguishing kinds of mindreading.

There are several primitive forms of reading that you can master without being a fully competent reader. For example, there is:

- the ability to recognise individual graphemes,
- the ability to segment sequences of graphemes into words,
- the ability to recover phonemes from graphemes and multigraphs and to blend these phonemes together into a word, and
- the ability to map a limited number of written words onto their spoken counterparts.

Acquiring these primitive forms of reading is often a step towards becoming a fully competent reader. And having these primitive forms of reading can be useful in their own right.

The second challenge is to identify primitive forms of mindreading that are useful in their own right and that might be acquired on the way to becoming a fully competent mindreader.

While there are some existing proposals on what these might be, I think few people appreciate how difficult it is to find ways of distinguishing kinds of mindreading that are both theoretically coherent and empirically motivated.

One problem is that some researchers' views about mindreading seem to be based almost entirely on their own grasp of commonsense psychology. But an adult humans' commonsense psychology exhibits a kind of holism. According to Donald Davidson,

> 'We are stuck with our two main ways of describing and explaining things, one which treats objects and events as mindless, and the other which treats objects and events as having propositional attitudes. I see no way of bridging the gap by introducing an intermediate vocabulary.' (Davidson 2003, p. 697)

It may be tempting to dismiss this assertion on the grounds that we can readily describe an infant as excited by a clapping game, or as preferring one toy to another. On the surface at least, these descriptions seem neither to involve propositional attitudes nor to involve treating the infant as mindless; it seems there are non-propositional forms of excitement and preference which are nevertheless mental states.

Even so, Davidson is right that there is a genuine difficulty when it comes to understanding non-propositional counterparts of attitudes like belief and perception. We cannot rely entirely on commonsense here because our commonsense concepts of perception, belief, intention and action exhibit a form of holism: we grasp them only if we understand their interdependent roles in reason explanations (Davidson 1995b,a).

3.3. Third challenge: kinds of joint action

The third challenge concerns joint action. It is to find ways of understanding how joint action might involve more than the coordinated and cooperative behaviours exhibited by some insects, while also not requiring sophisticated forms of mindreading at close to the limits of what human adults are capable of.

Why should we face this challenge? Sebanz and Knoblich conjecture that:

> '[F]unctions traditionally considered hallmarks of individual cognition originated through the need to interact with others ... perception, action, and cognition are grounded in social interaction.' (Knoblich & Sebanz 2006, p. 103)

If this is right, there must exist forms of social interacting that (i) can 'ground' sophisticated forms of perception or cognition and (ii) don't already presuppose those very forms of cognition.

Relatedly, Moll and Tomasello offer a 'Vygotskian Intelligence Hypothesis':

> 'the unique aspects of human cognition ... were driven by, or even constituted by, social co-operation.' (Moll & Tomasello 2007, p. 1)

If this is right, there must exist forms of social co-operation that (i) can 'drive' unique forms of human cognition, such as sophisticated theory of mind cognition, and (ii) don't already presuppose those very forms of cognition.

In fact, whether or not these hypotheses are true, if they are even theoretically coherent, then there are plausibly kinds of joint action which involve more than the coordinated and cooperative behaviours exhibited by some insects, while also not requiring sophisticated forms of mindreading at close to the limits of what human adults are capable of. The third challenge is to identify these kinds of joint action.

3.4. Fourth challenge: integrating joint action

A fourth and final challenge is to understand how different forms of coordination are integrated in joint action. Suppose you and I are setting up our tent on a windy hillside in the pouring rain just as the light is fading. It seems likely that several different forms of coordination will be involved. We have a joint commitment to the activity, and a shared intention that we assemble the tent. In addition there needs to be fine-grained coordination at the motor level if, for instance, we are to succeed in passing things to each other. And we may also rely on bodily forms of coordination, as for example when we are each holding one end of a tent pole and bending it, so that our bodies are physically coupled and linked via tactile feedback.

Ultimately these several forms of coordination have to facilitate a single activity, the erection of our tent. But how does that happen? How, if at all, does our having a shared commitment to put a tent up affect the coordination of our movements? Answering this question—and, more generally, explaining how different forms of coordination are integrated in joint action—is the fourth challenge.

3.5. Summary

So these are four challenges that will shape much of this course. I don't mean to suggest that we can fully resolve the challenges, of course, or that they are merely philosophical challenges. It's just that I've selected philosophical ideas which I think might be helpful to meeting these four challenges.

These challenges will function for us as a measure of the value of the philosophical ideas. Anything that might help with meeting the challenges is good.

4. Quick Outline

Go over planned lectures.

Ask for volunteers for discussions.

So now let's get started ...

5. Not understanding mindreading

In this course I'm deliberately not trying to offer you a big idea or a unified story—the idea is that even if we disagree about almost everything, we might still all find the philosophical ideas valuable.

But a key premise for what follows is that we don't adequately understand what mindreading is. (I'll also suggest that we don't adequately understand what joint action is, but that's for later.)

By not *adequately* understanding, I don't only mean that we don't *fully* understand what mindreading is; I also mean that our understanding is limited in ways that might be obstacles to understanding the development or evolution or cognitive underpinnings of mindreading.

But, you might say, surely we do understand mindreading. After all, I started by giving a definition of mindreading. To repeat:

> *Mindreading* is the process of identifying mental states and actions as the mental states and actions of a particular subject on the basis, ultimately, of bodily movements and their absence, somewhat as reading is the process of identifying propositions on the basis of inscriptions (Apperly 2010, p. 4).

Of course other people might use the word 'mindreading' differently. But it hardly matters how we use the word.

Whether we can define mindreading hardly matters at all. Surely scientific progress doesn't often depend on having good definitions in advance. Good definitions are usually a consequence of progress, not a pre-requisite for it.

Understanding what mindreading is is not a matter of being able to define it.

Here's a sign that we don't adequately understand mindreading. There are a series of questions about mindreading that we can't knowledgeable answer.

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

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 differences in belief 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?

If we adequately understood what mindreading was, we would be able to answer these questions.

5.1. ***

Empirical questions about mindreading include:

- When in development does mindreading first occur?
- What representations and processes make mindreading possible?
- Is mindreading automatic?
- Which animals are capable of mindreading?

Much progress has been made on these questions, and there is more still to make. I want to suggest that there is also an obstacle to progress. The obstacle is that we don't adequately understand what mindreading is.

Why think that we don't adequately understand what mindreading is? The strongest reason is this. Some apparently puzzling patterns in findings about mindreading can be resolved by thinking carefully about what mindreading is. But we'll only be in a position to evaluate this claim right at the end, when we have reflected on what mindreading is.

There are, though, some hints that we might not adequately understand what mindreading is. As we'll see, there are controversies concerning what mental states are, and what actions are. But when the topic is mindreading, these controversies are usually ignored and it is assumed that we all know what actions and mental states are. To better understand what mindreading is we will need to reflect on what actions and mental states are.

So my plan is to step back from empirical questions about mindreading and first focus on more narrowly philosophical issues about what mindreading is. Having done this, we'll come back to the empirical questions about mindreading. The philosophical part is valuable to the extent that it supports progress with questions about when, how and where mindreading occurs.

But you might still be sceptical that philosophy is really needed. Do we really not adequately understand what mindreading is? You probably shouldn't take my word for it. After all, not understanding things is what I do for a living. So consider these questions [*more refined version in the plan for these lectures]:

- 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 a mindreader be 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?
- Could there be mindreaders who can identify intentions and knowledge states but not beliefs?
- Does identifying an action necessarily involve representing an intention?

If we fully understood what mindreading was, we would be able to answer these questions in a principled way. The fact that we can't shows that we don't fully understand what mindreading is. And it suggests that we don't adequately understand it either.

To better understand what mindreading is we have to take a step back and ask what actions are and what mental states are.

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