

Lecture notes for Philosophy of Cognitive Science

An upper level under-graduate course taught by:
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Introduction

In 2010 I was subcontracted to teach (lecture, tutor, grade) around $\frac{3}{4}$ of a course in Philosophy and Cognitive Science at Macquarie University, Sydney.

The tenured Professor had received an Australian Research Council grant to research psychopathy. That financially empowered her to sub-contract at least some of her teaching responsibilities to casual workers. I was informed that this was standard practice for students while they were waiting for their work to go out for external examination.

These lecture notes were written by me to accompany the textbook that had already been ordered by the department:

Clarke, A. (2002). *Mindware: An introduction to the philosophy of cognitive science*. Oxford University Press.

What follows is my adaptation of the notes from individual power-point slides (that were uploaded to the online learning platform in advance of the lecture with physical copies supplied to attendees) into \LaTeX so that I can provide a single link to all the content that I developed for the class.

The notes are a basic outline only, printed 3 to a page with plenty of room for additional notes and questions etc.

Thanks to students for attending, engaging in such high-quality discussion, and writing such wonderful essays in response to the content of this course.

I believe that Macquarie retains the audio recordings of my presentation of the lectures.

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Introduction

What is cognitive science?

- Thinking, reasoning, inferring, choosing, deciding, willing, intending, loving, fearing, hoping, wishing, imagining, seeing, hearing, smelling, tasting, feeling, experiencing, dreaming...
- Inter-disciplinary science of cognition
 - Philosophy
 - Cognitive psychology
 - Computer science (artificial intelligence and robotics)
 - Linguistics
 - Anthropology
 - Neuroscience
 - Researchers and theorists in related fields such as education, developmental psychology, ethology etc.

What is the role of philosophy in cognitive science?

- This is controversial. Two main views:
 1. There is a radical divide between philosophy and the natural sciences
 2. There is a continuum between philosophy and the natural sciences

1. The radical divide

- Some theorists maintain that there is a radical divide between philosophy and the natural sciences
 - Soul vs matter
 - Mind vs matter
 - Value vs matter
 - Meaning vs matter
- The findings of science are not relevant to answering philosophical questions
- Science misses the point / changes the subject
 - If this is so it may be that it is because philosophical theories aren't testable

2. The continuum

- There is some kind of reciprocal relationship or continuity between philosophy and the natural sciences
- Look to science for data that is relevant for answering philosophical questions
 - If this is so science may be data collection for the philosophical theorist
- Look to philosophy for questions, hypotheses, and / or theories
 - If this is so there may be no more philosophy with scientific progress
- In doing science we have to start somewhere
- Better to start from some place plausible rather than from some place implausible
- So let us start with some 'common-sense' intuitions
 - I mean to say I will try and articulate some of the following, hopefully in a way that seems intuitive to you

Mental states as propositional attitudes

- Each of these mental states seems to be ABOUT something (p):

Thinking that p, reasoning that p, inferring that p, choosing p, deciding p, willing p, intending p, loving p, fearing that p, hoping that p, wishing that p, imagining p, seeing p, hearing p, smelling p, tasting p, experiencing p, dreaming p...
- What they are about (p) is the CONTENT of the mental state
- Mental contents are thought to be PROPOSITIONAL ATTITUDES
- Propositions are (for our purposes) abstract meanings or informational contents
 - ‘The sun is hot’
 - ‘Hot, the sun is’
 - Sentences in other language that are synonymous
- Different sentences, phrases, expressions, thoughts that have the same meaning, informational, or propositional content

Some features of the propositional view

- One person can entertain the very same propositional content at different points in time
- Different people can entertain the very same propositional content
- Speakers of different languages can entertain the same propositional content (say the same things or think the same thoughts)

Folk psychology (aka belief-desire psychology or ‘common-sense psychology’)

- We can make fairly good predictions about what people will do by appealing to what they believe (the way they represent the world to be) and what they desire (the way they are motivated to alter the world)
- We also explain actions by appealing to what people believed (represented) and what people desired (were motivated to do)

- It seems common-sense that (roughly) ‘an agent will act so as to satisfy or obtain their strongest desire under the assumption that their beliefs are true’
- No other (scientific) theory seems to capture the relevant predictions

Questions

- What enables us to attribute mental states to others / employ folk-psychology?
- What does this ability show us about the structure of the mind?
- What is the status of folk-psychology compared to scientific theories in physics, chemistry, biology, cognitive psychology etc?
- What does folk-psychology show us about the nature of mental states?
- Are (all?) mental states usefully thought of as propositional attitudes?

Theories of the mind-body relationship: Dualism

Reminder of the cognitive phenomenon

- Thinking, reasoning, inferring, choosing, deciding, willing, intending, loving, fearing, hoping, wishing, imagining, seeing, hearing, smelling, tasting, feeling, experiencing, dreaming...

Preview

- Theories of the mind-body (mind vs matter) relationship that we will be looking at:
 1. Dualism
 2. Behaviourism
 3. Identity theory
 4. Eliminativism
 5. Functionalism

Dualism (mind is distinct from matter)

- *Why* is dualism thought to be plausible?
 - Introspection. It just seems (upon introspection) that the mind (or perhaps the soul) is different or distinct from matter
 - How could... How could certain phenomenon (the way that my pain feels or inferential reasoning, for example) arise from ‘matter

nicely orchestrated'?

- There are two main kinds of dualism
 1. Substance dualism
 2. Property dualism

1. Substance dualism

- The mind (soul, spirit) is a substance (kind of stuff, object, or thing) that is fundamentally or radically different from matter

2. Property dualism

- Mental states are non-physical (immaterial) properties (states) of the physical brain or body

Objects vs Properties

- In order to understand the difference between substance and property dualism we will need to take a look at the difference between substance and property
- Water is thought to be a substance
- Liquidity is thought to be a physical property of water (and substances other than water)
- Mental states (according to the dualist) are different from water or from fluidity in being non-physical or immaterial

Dualism and causal interaction

- There are three main views on how the mental (substance or property) causally interacts with or relates to material or physical substance or property
 1. Interactionism
 - Two-way causal interaction between body and mind (e.g., Descartes)

2. Epi-phenomenalism

- Matter causes changes to matter but mind is itself causally impotent (the shadow analogy)

3. Paralellism

- No causal interaction between body and mind (e.g., Leibniz)

Problems for dualism

- Providing an account of non-material stuff / properties
- Understanding how causal interaction is possible (on the interactionist views)
- A simpler explanation posits only one kind of stuff (or property) rather than two (Morgan's cannon, Ockham's razor)
- Analogy with mind and vital spirit as science progresses and common-sense is revised

Currently

- No many defenders of substance dualism
- A few defenders of property dualism for consciousness (more on that later) e.g., Block, Chalmers
- Most would say that dualism has been abandoned as the result of scientific advances (taking the vitalism analogy very seriously indeed)
- We will return to this when we look at consciousness

Theories of the mind-body relationship: Behaviourism

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