Seminar Tasks : Philosophical Issues in Behavioural Science

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Contents

1.   Seminar 1

1.1.   Question

According to Dickinson (2016, p. 177),

> 'instrumental behavior is controlled by two dissociable processes: a goal-directed and an habitual process'

What does this mean?

1.2.   Reading

- Dickinson (2016)

If you find this too difficult, stop reading at p. 182 and focus on just the first section.

We will cover some of the evidence Dickinson mentions in *Goal-Directed and Habitual: Some Evidence* in Lecture 02.

1.3.   Preparation

Please follow the instructions for *Seminar Tasks*.

1.4.   Lecture Notes

- *Instrumental Action* in Lecture 01
- *Goal-Directed and Habitual Processes* in Lecture 01

1.5.   Where to Find the Reading?

In some cases the reference section of the lecture notes already includes a link to help you find the reading.

If there is no link in the lecture notes, start by searching for the title (and, if that fails, by title and authors) on google scholar. If this fails, the library has resources. If those fail, please check first with others on the course. If you still have problems, you may email your seminar tutor.

2.   Seminar 2

2.1.   Question

How, if at all, should discoveries about habitual processes inform attempts to solve The Problem of Action?

2.2.   Reading

- Davidson (1971)

Note: if you follow the link in the references, you will get to a collection of Davidson's essays called *Essays on Actions and Events*. The reading is the chapter of that book with the title 'Agency' (likely Chapter 3 on pp. 43–62).

This seminar's question also requires reading set for previous seminars:

- Dickinson (2016)

And of course you can find more reading in the lecture notes.

2.3.   Preparation

Please follow the instructions for *Seminar Tasks*.

2.4.   Lecture Notes

- *Goal-Directed and Habitual Processes* in Lecture 01
- *The Problem of Action meets Habitual Processes* in Lecture 02

2.5.   Where to Find the Reading?

In some cases the reference section of the lecture notes already includes a link to help you find the reading.

If there is no link in the lecture notes, start by searching for the title (and, if that fails, by title and authors) on google scholar. If this fails, the library has resources. If those fail, please check first with others on the course. If you still have problems, you may email your seminar tutor.

3.   Seminar 3

3.1.   Question

What, if any, objection to an application of decision theory would arise from the truth of Dickinson's dual-process theory of instrumental action?

3.2.   Reading

You only need **one** of the new sources:

- Tadelis (2013, Chapter 1) is reliable and super simple (but maybe too simple); this book is also one you could use later for game theory.

- Bermúdez (2009, pp. 20ff) is another simple intro, but by a philosopher.

- Jeffrey (1983, Chapters 1–3) is an advanced source (make sure you get the second edition)

This seminar's question also requires reading set for previous seminars:

- Dickinson (2016)

3.3.   Preparation

Please follow the instructions for *Seminar Tasks*.

3.4.   Lecture Notes

- *Goal-Directed and Habitual Processes* in Lecture 01
- *Expected Utility* in Lecture 03
- *What Are Preferences?* in Lecture 03
- *Dual Process Theory Opposes Decision Theory?* in Lecture 03

3.5.   Where to Find the Reading?

In some cases the reference section of the lecture notes already includes a link to help you find the reading.

If there is no link in the lecture notes, start by searching for the title (and, if that fails, by title and authors) on google scholar. If this fails, the library has resources. If those fail, please check first with others on the course. If you still have problems, you may email your seminar tutor.

4.   Seminar 4

This seminar is a bit different. Instead of discussing a question, we will discuss the essay plans of anyone who prepares one in advance and brings it to the seminar.

4.1.   Aims

- Identify a question for your short essay;
- do some background reading; and
- produce an outline for the essay
- plus a list of readings.

4.2.   Questions

You can take one of the suggested questions from the list provided:

- The questions for your short essay are here

Or, if you prefer, you can propose your own question (which will need to be approved before you can submit the essay).

4.3.   Hint

Ensure that your plan specifies ideas and arguments in detail. A wishlist is not a plan.

5.   Seminar 5

5.1.   Questions

- What is the central claim of Bratman's account of shared intention?
- What does this account aim to achieve?
- Does the account succeed?

5.2.   Lecture Notes

- *Bratman on Shared Intentional Action* in Lecture 04

5.3.   Reading

If you like books, the first chapters (read as far as you can) of

- Bratman (2014)

are the best source. But, conveniently,

- Bratman (2022)

is an 8 page precis you could consult instead.

5.4.   Where to Find the Reading?

In some cases the reference section of the lecture notes already includes a link to help you find the reading.

If there is no link in the lecture notes, start by searching for the title (and, if that fails, by title and authors) on google scholar. If this fails, the library has

resources. If those fail, please check first with others on the course. If you still have problems, you may email your seminar tutor.

6.   Seminar 6

This seminar is a bit different. Instead of discussing a question, we will discuss the short essays you wrote in the light of feedback.

6.1.   Preparation

- Re-read your essay and the feedback (if available).

- Formulate with care any questions you have about the substance of the essay or the feedback.

- Rehearse a 90 second oral presentation of how you answered the question in your essay.

- Bring your essay and feedback to the seminar

7.   Seminar 7

7.1.   Questions

What is a forward model? And what might forward models be useful for?

How, if at all, should discoveries about motor processes and representations inform attempts to solve The Problem of Action?

7.2.   Lecture Notes

- *Motor Representation and The Problem of Action* in Lecture 07

7.3.   Reading

- Wolpert (1997) but please skip the last section on motor learning (which we will not discuss).

Before you read this, try out some very small-scale actions while paying attention to the way your arm, hand and fingers moves:

- place a finger on the spacebar of your keyboard and then move it to (i) a near key; and (ii) a far key;

- do the same with a small obstacle blocking your direct path near the target key; and

- use your finger to trace out a figure of eight (∞) with a small loop and a larger loop.

- using a mug or cup with a handle, grasp it around the top, lift it up, rotate it (i) through 15 degrees or (ii) through 45 degrees then place it down.

If you are short of time and need something shorter, much of the above is contained in:

- Wolpert et al. (1995)

If you want more, consider any more recent work by Wolpert, Kawato and collaborators. Or, if you can get hold of it:

- Rosenbaum (2010)

This seminar's question also requires reading set for previous seminars:

- Davidson (1971)

7.4. Where to Find the Reading?

In some cases the reference section of the lecture notes already includes a link to help you find the reading.

If there is no link in the lecture notes, start by searching for the title (and, if that fails, by title and authors) on google scholar. If this fails, the library has resources. If those fail, please check first with others on the course. If you still have problems, you may email your seminar tutor.

8. Seminar 8

This seminar is a bit different. Instead of discussing a question, we will discuss the essay plans of anyone who prepares one in advance and brings it to the seminar.

8.1. Aims

- Identify a question for your long essay,
- do some background reading;
- and produce an outline for the essay
- plus a list of readings.

8.2. Questions

You can take one of the suggested questions from the list provided:

- The questions for your long essay are here

Or, if you prefer, you can propose your own question (which will need to be approved before you can submit the essay).

8.3.   Hint

Start by stating the thesis your essay will defend.

Your thesis need not provide a complete answer to your chosen question but it must be a step towards an answer. You may wish to say explicitly how your thesis relates to your chosen question.

Aim to provide a single, coherent line of argument for that thesis and nothing else.

Ensure that your plan specifies ideas and arguments in detail. A wishlist is not a plan.

Glossary

decision theory I use 'decision theory' for the theory elaborated by Jeffrey (1983). Variants are variously called 'expected utility theory' (Hargreaves-Heap & Varoufakis 2004), 'revealed preference theory' (Sen 1973) and 'the theory of rational choice' (Sugden 1991). As the differences between variants are not important for our purposes, the term can be used for any of core formal parts of the standard approaches based on Ramsey (1931) and Savage (1972). 4

dual-process theory of instrumental action Instrumental action 'is controlled by two dissociable processes: a goal-directed and an habitual process' (Dickinson 2016, p. 177). (See instrumental action.) 4

forward model A model used to predict 'the sensory consequences of a motor command' (Wolpert et al. 2003, p. 595). In action performance, forward models are used to compensate for feedback delays, to distinguish self-produced movements and their sensory consequences, and to select between different courses of action. 7

instrumental action An action is *instrumental* if it happens in order to bring about an outcome, as when you press a lever in order to obtain food. (In this case, obtaining food is the outcome, lever pressing is the action, and the action is instrumental because it occurs in order to bring it about that you obtain food.) You may encounter variations on this definition of *instrumental* in the literature. For instance, Dickinson

(2016, p. 177) characterises instrumental actions differently: in place of the teleological 'in order to bring about an outcome', he stipulates that an instrumental action is one that is 'controlled by the contingency between' the action and an outcome. And de Wit & Dickinson (2009, p. 464) stipulate that 'instrumental actions are *learned*'. 9

The Problem of Action What distinguishes your actions from things that merely happen to you? (According to Frankfurt (1978, p. 157), 'The problem of action is to explicate the contrast between what an agent does and what merely happens to him.') 3, 7

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