

Aspects of Consciousness

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Consciousness is a fascinating but, at first sight, intractable topic. A central theme of this series of classes is that consciousness, like other vague terms (e.g. emotion, memory, tyranny), is not possible to study directly—one must instead define and consider somewhat more specific questions. The hope and expectation is that, through defining and answering enough specific questions that fall under the umbrella term of consciousness, our understanding of consciousness as a whole will improve. It is possible that, by so doing, we will end up discarding the term consciousness entirely, in the same way that every secondary school kid has a reasonable grasp of the concept of *oxygen* but only historians of science talk about the once-popular concept of *phlogiston* (*Phlogiston theory*, 2012).

This course will not provide any simple explanation of consciousness; its aim is to engage you in the debates—some empirical, some philosophical—that define this field of study. At the end of the course, I hope you will have a clearer and deeper understanding of the issue, and how progress has been made in studying consciousness in a scientific manner. Across 5 two-hour classes, we will explore the following topics: (1) Conceptions of consciousness, (2) Consciousness and perceptual awareness, (3) Altered states of consciousness, (4) Conscious recollection, (5) Conscious control.

I hope you will find engaging with this material as interesting, and as challenging, as I found it to put together.

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What should you be reading?

The classes are designed to be an introduction to the material contained in the References. You should also be reading extensively, and you should base your reading around the Reference section of this document. You should set aside around 90 hours for a total of two tasks: (1) reading, understanding, and making notes on these References; (2) planning, writing and enhancing your essay.

Make as many connections as you can between what you have just read, and everything else you have read already for this topic. The exercise of doing this will improve your understanding of the material.

Depending on your speed of reading and understanding, you may find that I have referenced more material than you have time to read, so you may have to prioritise; as final-year undergraduates you should be up to this challenge. Note that some of the References are books or wikipedia articles; secondary sources like these are good for breadth, but your answers to assessment questions should use only primary sources.

Course structure

Conceptions of consciousness

We start with a discussion of what the term *consciousness* means to each of us. I then introduce some key ideas and terms in the study of consciousness, including the distinction between P-consciousness, and A-consciousness (Block, 1995), and the nature of free will (*Free will*, 2012). We

then tackle the nature of free will, specifically voluntary action, from a neuroscience perspective (Lau, Rogers, Haggard, & Passingham, 2004; Libet, Gleason, Wright, & Pearl, 1983; Haggard, 2005).

Consciousness and perceptual awareness

I start with some demonstrations of some compelling illusions that serve to illustrate that conscious awareness is narrower (Simons & Rensink, 2005), and less unitary (Aglioti, DeSouza, & Goodale, 1995), than introspection might suggest. We then consider the implications of *blindsight* patients (Cowey, 2004; Azzopardi & Cowey, 1997; Kentridge, Heywood, & Weiskrantz, 1999) for theories of conscious awareness. After the break, we consider the existence (Williams Jr., 1938; Kolb & Braun, 1995) of perception without awareness in non-brain-damaged individuals (Merikle, Smilek, & Eastwood, 2001). Outside the class, I encourage you to follow up the work of Fendrich and Corballis (2001), which is also relevant to the topic of this session.

Altered states of consciousness

We start with a brief review of last week's material and consider the nature of perception without awareness in non-brain-damaged individuals (Debner & Jacoby, 1994; McCormick, 1997; Moore & Egeth, 1997; Marcel, 1983). We then move on to a discussion of the meaning and phenomenology of the term *altered states of consciousness*. I then review what we know of the cognitive and neural consequences of meditation (Jha, Krompinger, & Bairne, 2007; Lutz, Slagter, Dunne, & Davidson, 2008; Lutz, Greischar, Rawlings, & Davidson, 2004), and also briefly speak to its therapeutic potential (Miller, Fletcher, & Kabat-Zinn, 1995; Ramel, Goldin, Carmona, & McQuaid, 2004; Tang et al., 2007). After the break, we consider what, if anything, research into 5-HT agonists (e.g. LSD) have revealed about the nature of human consciousness (Nichols, 2004).

Conscious recollection

We begin with a literary example of *remembrance* (Proust, 1913). I use this example to introduce the concepts of episodic memory, autobiographical memory, and *autonoetic* consciousness, and review evidence that an intact hippocampus, whilst not required for some types of memory retrieval (Cermak, Talbot, Chandler, & Wolbarst, 1985), is required for the episodic (Rempel-Clower, Zola, Squire, & Amaral, 1996) and perhaps the deliberate (Baddeley & Wilson, 1994), use of long-term memory. After the break, we consider the idea that relatively simple organisms, such as birds, appear to have episodic memories (Clayton & Dickinson, 1998). Such evidence seems to imply that we must go beyond the definition of episodic memory to articulate what is special about remembrance. We consider the evidence that the frontal lobes are the seat of autonoetic consciousness (Wheeler, Stuss, & Tulving, 1997), and close with a consideration of evidence that autobiographical memories may be neurally special (Fink et al., 1996).

Conscious control

We consider research on dopaminergic drug addiction (Robinson, 2003) and, under the assumption that addiction is a paradigmatic case of the failure of conscious control, discuss what such research tells us about human consciousness.

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