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Preface

O, what a world of unseen visions and heard silences, this insubstantial country of the mind! What ineffable essences, these touchless rememberings and unshowable reveries! And the privacy of it all! A secret theater of speechless monologue and prevenient counsel, an invisible mansion of all moods, musings, and mysteries, an infinite resort of disappointments and discoveries... An introcosm that is more myself than anything I can find in a mirror. This consciousness that is myself of selves, that is everything, and yet nothing at all – what is it?

And where did it come from?

And why?

(Jaynes 1976, 1)

What is the most intense physical pleasure you have ever experienced? Try to recall the occasion. Think of what it was like – the wonderful quality of the feeling, the way it spread through your body and overwhelmed your mind, blotting out all other thoughts and feelings. Next think of the most intense physical pain you have ever experienced. Again, try to recall it as vividly as you can. Now ask yourself this: What exactly was happening on those occasions? Various physical processes were taking place inside you – sensory receptors were being stimulated, nerve impulses travelling to your brain, clusters of brain cells undergoing electrochemical changes and so on. But how did all that produce the overwhelming sensations you felt? How could nerve impulses and electrochemical changes in brain cells produce feelings at all? This, in essence, is the problem of consciousness.

Few philosophical problems are as contentious as this one. Some philosophers regard it as one of the hardest problems there is; others deny that there is any special difficulty about it. Some argue that we shall never solve it; others that we have almost done so. Some claim that its solution will require a revolution in our view of reality; others that it merely requires some conceptual reorganization. The only thing on which there is any agreement is that the problem is an important one – if only for the misconceptions it generates. The problem of consciousness concerns the very essence of human life and has implications for our treatment of other living creatures and for the prospects of creating artificial life. It is, in short, a big problem – arguably one of the few really big problems left to solve.
All this makes consciousness an exciting topic to think about. And this is an exciting time to be thinking about it. After neglecting the topic for many years, philosophers and scientists have recently taken a renewed interest in consciousness, with the 1990s and early 2000s seeing a proliferation of articles, books, journals, websites and conferences devoted to the topic. Consciousness is now one of the hottest topics in philosophy of mind and looks set to continue so for some time.

This book is an introduction to the problem of consciousness. It will outline some of the key positions and arguments and guide you through some important readings from the contemporary literature. The book has five chapters. The first introduces consciousness and the so-called ‘hard problem’ it presents for a science of the mind. Chapters 2 and 3 are devoted to the question of whether consciousness is a physical phenomenon which can be explained by standard scientific methods – Chapter 2 setting out the arguments for a non-physicalist approach and Chapter 3 looking at some physicalist responses. Chapter 4 then goes on to examine some contemporary theories of consciousness which aim to explain it in broadly physical terms. Finally, Chapter 5 explores the idea that our view of consciousness involves some serious misconceptions and that we need to rethink our approach to the problem.

By the end of the book you should have a good understanding of the problem of consciousness and be in a position to decide where you stand on it. You will also, I hope, have discovered what a fascinating and challenging subject consciousness is and have experienced the intellectual excitement which its study can deliver. The problem of consciousness is a difficult one and – like all philosophical problems – it requires rigorous thinking and an open mind. But in return it offers the thrill of engaging with one of life’s big unsolved mysteries.

In writing this book I have benefited greatly from the advice and support of my colleagues on the AA308 course team – in particular Alex Barber, Mike Beaney, Sean Crawford, Carolyn Price, Gerald Schmidt and Peter Wright. Thanks are also due to Gerry Bolton for overseeing the production process and to Peter Carruthers and Maria Kasmirli for their generous comments and advice.

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Introducing Consciousness

Consciousness: The having of perceptions, thoughts, and feelings; awareness. The term is impossible to define except in terms that are unintelligible without a grasp of what consciousness means. ... Consciousness is a fascinating but elusive phenomenon: it is impossible to specify what it is, what it does, or why it evolved. Nothing worth reading has been written about it.

(Sutherland 1995, 95)

Consciousness is at once the most important and most baffling aspect of the mind. It is the very heart of our existence – our ‘self of selves’ as Julian Jaynes puts it – yet it is extraordinarily difficult to describe and explain. This chapter is an introduction to this slippery phenomenon and the problems it presents. It is in three sections. The first explains what contemporary philosophers usually mean when they talk about consciousness; the second examines the phenomenon in more detail and highlights some of its puzzling features; and the third sets out the central philosophical problem surrounding consciousness – the so-called ‘hard problem’ of explaining how it arises and whether it is a physical phenomenon.

Defining consciousness

We use the words ‘conscious’ and ‘consciousness’ in a variety of ways. We talk of losing and regaining consciousness, of being conscious of one’s appearance and of taking conscious decisions. We speak of self-consciousness and class-consciousness, of consciousness-raising activities and consciousness-enhancing drugs. Freuds contrast the conscious mind with the unconscious, gurus seek to promote world consciousness and mystics cultivate pure consciousness. These various uses reflect the history of the words. The original meaning of ‘consciousness’ was awareness or knowledge, either shared or private, and some of our modern uses reflect this. Self-consciousness is awareness of oneself as an individual; class-consciousness is awareness of belonging to a particular socio-economic group; to be conscious of one’s appearance is to be very aware of it; and so on. In the seventeenth century, however, philosophers and other writers began to use the word in a
more specific sense, to refer to our *inner* awareness of our own mental states – our perceptions, sensations, feelings and thoughts. As the philosopher John Locke (1632–1704) put it, ‘Consciousness is the perception of what passes in a Man’s own mind’ (Locke 1961, vol. 1, 87). (Previously ‘conscience’ had been used in a similar way, but that word was coming to be used to refer to an inner moral sense.) Again, some of our modern uses reflect this philosophical usage. The conscious mind is the level of mental activity of which we are aware, in contrast to the repressed unconscious; consciousness-enhancing drugs are ones that alter our mental states in various ways; pure consciousness is mental awareness stripped of all particular content. When contemporary philosophers speak of ‘the problem of consciousness’ they too are using the term in broadly this sense, though with a subtle difference. In this section I shall explain in more detail what they have in mind.

**What it’s like**

Suppose you have just had a dental procedure under general anaesthetic and are coming round. You are aware of a dazzling light above you and of a muffled voice echoing in your ears. There is sickness in your stomach and a sharp metallic taste in your mouth. You feel a moment of panic as you struggle to work out what has happened. Moving your head, you recognize the dentist’s face and realize that he is speaking your name and asking if you want a glass of water. Your remember where you are, sit up shakily and take the glass.

Think about what happened as you regained consciousness. Various bodily processes resumed. Your sense organs started functioning again, registering stimuli and sending signals to your brain. Your brain also resumed its normal activity, processing these incoming signals and responding to them. Various brain centres became active, including ones devoted to visual processing, face recognition, emotion, memory, language and conceptualized thought. Signals flew back and forth from region to region and out to your organs and limbs. But this wasn’t all that happened when you came round. You also started having *conscious experiences* – experiences with a certain *feel* to them. Imagine having the various experiences I described – seeing a dazzling light above you, hearing a muffled voice, having a metallic taste in your mouth, feeling a stab of panic and so on. Focus on what it is *like* to have those experiences – on what it feels like from the inside. Each of them, like every other experience, has its own character, which is instantly recognizable but very difficult to describe.
Philosophers use a variety of terms for this aspect of experience. You will find them speaking of an experience’s ‘qualitative feel’, ‘phenomenal feel’, ‘phenomenal character’, ‘phenomenal content’, ‘phenomenology’ (in some contexts), ‘subjective character’, ‘raw feel’, ‘what-it-is-likeness’ and ‘qualia’ (a Latin plural meaning ‘qualities’; the singular is ‘ quale’). Some of these terms—‘qualia’ in particular—often carry theoretical overtones, but at bottom all refer to the same thing: what a given experience feels like from the inside. When contemporary philosophers speak of consciousness it is usually this to which they are referring.

Another way to home in on the phenomenon of consciousness is to contrast conscious mental states with non-conscious ones. Although some philosophers (Descartes for one) have rejected the idea, it is now widely accepted that we are not aware of all of our mental states and processes. This view has been popular among psychologists since at least the nineteenth century, and everyday life provides plenty of evidence for it. Consider driving, for example. One can drive a car, drawing upon one’s knowledge of the rules of the road and of the car’s controls, without giving any conscious thought to what one is doing. Or think of cases where the solution to a problem pops into one’s head some time after one has given up thinking about it consciously. In these cases it seems, some quite complex mental activity must be going on below the surface.

Many writers also hold that non-conscious perception is possible. At first sight this may seem a bizarre claim. How could we see non-consciously? The idea is not as odd as it sounds, however. One way to illustrate this is to think about a robotic system. Consider Cog. Cog is a robot which is being built by the Humanoid Robotics Group at The Massachusetts Institute of Technology, under the direction of Rodney Brooks (Figure 1). Cog has a mechanical body (only the upper part so far), powered by electric motors and controlled by microprocessors similar to those found in personal computers. It also has a visual system, consisting of two head-mounted video cameras and a network of microprocessors for analysing their signals. (I say ‘it’ because the MIT team deny that Cog has a gender.) This gives Cog some basic visual abilities. It can identify faces and other interesting objects, follow moving objects with its eyes and use visual information to guide its hands. But though Cog has a form of vision, no one seriously thinks that it has conscious visual experiences of the sort we have when we look at the world around us. We might say that it has non-conscious vision: it sees things, but its sight does not have any felt quality to
it. The MIT team are also working to equip Cog with auditory and tactile sensors, but again no one expects these to provide it with conscious experiences of hearing and touch. (For more information about Cog, see Adams et al. 2000; Brooks et al. 1998; Humanoid Robotics Group 2004, online.)

There are times when we seem to perceive things in a Cog-like way. Psychologists have shown that it is possible to influence a person’s behaviour by means of stimuli which are not consciously perceived (Dixon 1971). In a typical experiment a word is displayed for a split second, so that the subject has no conscious awareness of seeing it. In subsequent testing, however, the subject makes word associations which are influenced by the word displayed — revealing that they had in fact perceived it at some level. (This is known as subliminal perception.) A similar phenomenon seems to occur frequently in everyday life. When driving or walking along a busy street, we continually fine-tune our movements in response to visual cues of which we are not consciously aware — adjusting speed and direction to compensate for the movements of those around us. We also respond in this way to signals from our own bodies, shifting position to avoid cramp or to protect an injury, yet
without consciously noticing any discomfort. In these cases, it seems, our brains are registering information and using it to control our behaviour, yet without generating any conscious perceptions or sensations. There are also pathological conditions which seem to involve non-conscious perception. The most famous of these is blindsight (Weiskrantz 1986, 1997). People with this condition have normal eyes but have suffered damage to the visual processing areas of their brains, with the result that they seem to be blind in large areas of their visual field. They say – quite sincerely – that they see nothing in these areas. Yet if presented with an object in the blind area and asked to make a random guess as to its location or orientation, these people usually guess correctly – much to their own surprise when subsequently told the results. It seems that they are visually detecting the objects without any of the felt quality of normal vision.

(You may feel that it is twisting words to talk of non-conscious perceptions. Surely, seeing is by definition a conscious experience? This is really a terminological issue, however. If we use the term ‘perception’ in that way, then there are no non-conscious perceptions, just as there are no married bachelors. But it is compatible with this that there are non-conscious mental states which are very like perceptions in the role they play, and calling them ‘non-conscious perceptions’ is a way of emphasizing this. Some writers also talk of non-conscious sensations and experiences, and the same goes for those terms.)

These reflections on non-conscious mentality should help to clarify what philosophers mean when they talk about consciousness. Their focus is not on the nature of perceptions, sensations and thoughts as such, but rather on what is special about those perceptions, sensations and thoughts that have a feel to them. What exactly is this feel that conscious experiences have? How does it come about and what is its function? Whatever the answers, the phenomenon is surely tremendously important. As the American philosopher Thomas Nagel (b. 1937) puts it, to say that a creature has conscious experiences is to say that it is like something to be that creature – that it has an inner life (Nagel 1974). A non-conscious being such as Cog might be able to perform sophisticated tasks, guided by information from its sensors, but without conscious experience it would have no inner life. It might detect colours and sounds, but it would never know what it was like to see a brilliant blue sky or to hear leaves rustling in the breeze. It might register when it was damaged or running low on energy, and take appropriate action, but it would never feel real pain or
hunger. It might act like us, but it would be dead inside, without any of the conscious experience that accompanies our activities. Life without consciousness would not be life at all as we know it. Indeed, the philosopher Colin McGinn (b. 1950) suggests that the emergence of consciousness was an event of cosmic significance, analogous to the Big Bang. Just as the Big Bang created the physical universe, so the emergence of consciousness—McGinn calls it the ‘Soft Shudder’—created a new dimension of mental reality (McGinn 1999, 15).

**Activity**

Which of the following do you think have conscious experiences in the sense outlined above: apes, dogs, snakes, fish, insects, bacteria, plants, rocks?

**Discussion**

Here is my answer. I find it hard to doubt that apes and dogs have conscious experiences very much like ours. I am not sure what to say about snakes and fish. I am fairly confident that insects do not have conscious experiences and I am certain that bacteria, plants and rocks do not.

Your intuitions may differ from mine of course. You may believe that all animals, even insects, are conscious. (Indeed, as we shall see, some philosophers think that even rocks have a little bit of consciousness!) You may be right, but I think you should at least consider the possibility that you are wrong. The fact that animals behave like us does not prove that they feel like us too. It would be fairly easy to program Cog to detect when it was damaged and issue sounds resembling cries of pain, but it still would not have any conscious pain sensations. And it is possible that animals are the same. In Chapter 4 we shall look at a theory of consciousness which may have the consequence that no non-human animals—except perhaps some apes—possess conscious experiences.

A note on terminology. We are going to need a standard term to refer to the feel of conscious experience. None of the options is unproblematic: ‘feel’ is ambiguous, ‘qualia’ has theoretical overtones, and ‘what-it-is-likeness’ is cumbersome. I shall use ‘phenomenal character’. Although the term may sound technical, remember that it denotes something quite simple—the phenomenal character of an experience is what it is like to have it. I shall also occasionally speak of an experience’s ‘phenomenal properties’; this means the same.