

CONSCIOUSNESS

The term, 'consciousness', applies to several distinct phenomena, each pertaining to aspects of the mental functioning of people or other creatures. We describe people and other creatures as conscious when they are awake and sentient, as against being asleep, knocked out, or comatose. We also use the word 'conscious' to describe a creature as being conscious or aware of something. And we describe thoughts, feelings, desires, and perceptions as being conscious in contrast with unconscious states of those sorts. All these phenomena have all been the subject of extensive recent investigation in philosophy, experimental psychology, and neuroscience, and subject also of some heated debate in those fields. This entry will discuss these types of consciousness and the major approaches to understanding them.

Awakeness and Awareness

An individual's being conscious, as against being asleep, anaesthetized, and so forth, consists in that individual's being awake and receptive to sensory input, and perhaps also having the ability to engage in voluntary, purposive movement.

Investigation this type of consciousness primarily concerns what aspect of neural functioning determines whether an individual is conscious or not. Understanding the neurological difference between conscious and unconscious conditions is important for

determining the effects of various methods of anesthesia and for the clinical evaluation of patients in an apparent vegetative state, who have no discernible voluntary control of movement.

An individual when conscious has at least the ability to sense things and to have desires or intentions. Some argue that no creature is conscious in this way unless it actually senses or perceives, and perhaps such sensations or perceptions must be conscious states. But psychologically primitive creatures, such as snakes, may sometimes be awake and have the ability to sense things even when no actual sensing is taking place. It is likely that the conditions for a creature's being conscious cannot be settled except by appeal to reliable neurological correlates for such consciousness, established by appeal to uncontroversial cases.

Being conscious or aware of something often consists in an individual's sensing or perceiving that thing. If a person sees, hears, or smells an object, the person is conscious of that object. But even if one does not sense or perceive something, having a thought about that thing is also a way of being conscious of it, at least if one thinks about the thing as being present. It is less natural to describe somebody as conscious of something if the thought represents the object as distant in time or space.

There are cases in which a person perceives something subliminally, that is, without being aware of perceiving it. Subliminal perception is perception that is below the threshold of conscious awareness. There is dispute about the correct way to describe such cases, but it is natural to think that in subliminal perception one is aware of the stimulus, but not consciously aware of it. Such cases have been extensively investigated in experimental psychology, mainly by presenting individuals with stimuli

that are degraded in some way, e.g., very brief or faint, or stimuli that occur just before or after another stimulus that blocks conscious awareness of the target. The stimulus that does the blocking in such cases is said to be a mask.

Participants in these experiments report consciously seeing the mask but not the masked stimulus, though when the mask does not occur participants do report consciously seeing that stimulus. But despite participants' denial that they see such masked stimuli, there is evidence that they do see it, since masked stimuli often have an effect, known as a priming effect, on subsequent psychological processing. Thus participants may make a subsequent choice or have a faster reaction time in ways that reflect the character of the masked stimulus, despite claiming to be unaware of it.

Mental States and Consciousness

Despite evidence that perceptions occur in these subliminal cases, individuals report being unaware of any such perceptions, and deny having them. So it is natural to describe those perceptions themselves as not being conscious. A conscious mental state, by contrast, is then a state an individual is aware of being in and can under ordinary circumstances report.

Subliminal perception is not the only case of mental states that individuals are unaware of. The best explanation for people's behavior is sometimes they have acted on beliefs and intentions they deny having; experimental psychologists in these cases may posit unconscious beliefs and intentions. There is even evidence from social psychology that people sometimes do not have the beliefs and desires they claim

explains their behavior. Rather, people confabulate having beliefs and desires that make sense of their behavior or fit with others' expectations or preconceptions.

There is also neuropsychological evidence that the neural events thought to correspond to decisions to do things occur before people are aware of making those decisions, at least one-third of a second and perhaps significantly more in advance. This suggests that decisions occur and exert their causal influence in guiding behavior before one comes to be aware of the decision, that is, before the decision becomes conscious.

These findings show that mental states of all sorts occur without being conscious. So they encourage the view that a mental state's being conscious requires that one be aware of that state, and that if one is not so aware the state is not conscious. This view of what it is for a thought, feeling, or perception to be conscious fits well, moreover, with our everyday understanding about mental states' being conscious. We sometimes take ourselves to see that another person thinks or wants something or feels a particular way even though that person is unaware of doing so; those thoughts, desires, and feelings are unconscious.

Holding that a mental state is conscious only if one is aware of it also fits comfortably with psychoanalytic theory. The unconscious states that Freudian theory and its descendants posit are states there is clinical reason to believe an individual is in despite the individual's being unaware of them. It is reasonable also to see the actions performed under post-hypnotic suggestion as due to volitions that the individual is again unaware of.

The idea that a mental state's being conscious requires that one be aware of that state is reflected in what psychologists call a subjective measure of consciousness,

which holds that mental state is conscious if it seems subjectively to one that one is in it. Some psychologists operate instead with an objective measure of consciousness, on which a state to be conscious only if there is evidence, independent of any subjective impression, that the state occurs. On this measure, an individual consciously perceives something only if that individual behaves in ways that reflect such perceiving. It is unclear, however, that an objective measure can take accommodate the occurrence of perceiving that is not conscious, since that would likely result in the same behavior as conscious perceiving. Another difficulty with the objective measure is that we can perceive things peripherally and also consciously though such perceiving may have no measurable effect on behavior.

Qualitative Consciousness

It is reasonably natural to see people as having thoughts and volitions that are not conscious; actual and likely behavior points to their occurrence. But many profess difficulty in understanding how sensations, perceptions, and other states that exhibit qualitative character could occur without being conscious. Partly that may be because an inference from behavior to qualitative states seems less compelling. But many theorists also regard qualitative states and having a special tie to consciousness; indeed, the term 'consciousness' is sometimes used simply to refer to conscious qualitative states.

In this spirit, Ned Block has posited a type of consciousness distinctive of qualitative states, which Block calls phenomenal consciousness. Phenomenal consciousness occurs when there is something it is like to be in a mental state, as with

conscious perceptions, bodily sensations, and emotions. Block distinguishes this from what he calls access consciousness, which consists in the representational content of a mental state's being available for the control of action, speech, and rational thought. When an individual cannot report being in a qualitative state, Block argues, that shows only that the state lacks access consciousness, not that it lacks phenomenal consciousness as well.

Some in philosophy have urged that special problems affect our understanding of conscious qualitative states. Even if we had accurate correlations of particular types of mental quality with types of neural state, we might be unable to explain why one type of neural state should occur in connection with a particular type of mental quality, or indeed any mental quality at all. Such an explanatory gap would presumably occur only for qualitative states that are conscious; if qualitative states can occur without being conscious, nothing would impede explaining such correlations.

It is also held by some in philosophy that there is no way to tell whether the mental quality that characterizes one person's seeing a red object is the same as the mental quality that occurs when another person sees such an object. Perhaps one person's mental quality is the same as another person has on seeing a green object. This concern stems from thinking of mental qualities as fixed solely by the way they present themselves to conscious awareness; otherwise we could tell in some objective way whether such interpersonal quality inversion occurs. So this concern also pertains only to qualitative states as they occur consciously.

Perceiving *prima facie* involves mental states with mental quality. So evidence for subliminal perception puts pressure on the denial that qualitative states must always be conscious. Theorists who deny that qualitative states can occur without being

conscious might urge that subliminal perceptual states never fail altogether to be conscious; they might maintain, e.g., that subliminal states lack only access consciousness, but not phenomenal consciousness. But it is arguable that subliminal perceptions also lack phenomenal consciousness, since there is nothing it is like for one to be in a state that one is wholly unaware of.

Instead of denying that subliminal perceptions fail to be conscious, a theorist who holds that qualitative states are always conscious can instead deny that subliminal states involve qualitative character. Perhaps they are simply neural states, and not mental at all. But that is unlikely. Subliminal perceptions affect subsequent psychological processing in ways that appear to reflect differences in qualitative character, indeed, much as conscious perceptions do. It is natural to conclude that subliminal states have qualitative character, and so qualitative states are not invariably conscious. Phenomenal consciousness is simply the special case of mental states' being conscious in which the states exhibit mental qualities.

The insistence that qualitative mental states are always conscious stems from the view that the very nature of mental qualities is determined solely by how they present themselves to conscious awareness. This insistence is captured vividly in Frank Jackson's famed thought experiment of somebody's knowing everything about neural function and color perception, but having never seen red and so not knowing what it is like to see red. But knowing what it is like to see red is simply consciously having that experience. So the thought experiment gives no independent reason to hold that the nature of mental qualities is solely a matter of how they present themselves to conscious awareness. And subliminal perception shows that we know about mental qualities not just by way of consciousness, but also by the role they play in

perceiving; mental qualities are the mental properties in virtue of which we sense and perceive things. Since we perceive both consciously and subliminally, there is no mystery about the occurrence of qualitative mental states that are not conscious.

Theories of Consciousness

Those impressed by evidence that mental states without being conscious tend to favor a theoretical approach that can explain the difference between mental states that are conscious and those that are not. One widely adopted approach builds on the idea that a mental state one is wholly unaware of is not a conscious state. A state is conscious, on this approach, only if one is aware of that state; theories that explain in this way what it is for a state to be conscious are known as higher-order theories. An apparent problem with such theories is that we seldom seem subjectively to be aware of our conscious mental states. Higher-order theorists usually argue that this is because the higher-order states in virtue of which we are aware of conscious states are seldom conscious states; so we are seldom aware of those higher-order states.

Another type of theory explains how conscious states differ from unconscious mental states by appeal to the effect conscious states can have on psychological processing, but unconscious states cannot. On these global-workspace theories, as with Block's notion of access consciousness, a state's being conscious does not involve any awareness of the state; rather, a state is conscious if it is accessible to many significant types of psychological processing. And as with Block's notion of access consciousness, such theories face a difficulty similar to that which faces objective measures of consciousness, that peripheral perceptions can be conscious but have no

significant effect on psychological processing. It may also be that repressed mental states, though not conscious, often do have a significant effect on psychological processing.

Theories like global-workspace theories, on which a state's being conscious does not involve any awareness of the states, are first-order theories. Other first-order theories maintain that a state's being conscious consists simply in its making one aware of something; on still others, a state is conscious if it involves attention; in neither case does a state's being conscious require awareness of the state itself. Unlike global-workspace theory, it is unclear that these types of first-order theory can accommodate mental states that are not conscious, as in subliminal perception. And it has been shown experimentally that states that are not conscious can involve attention, and that attention is lacking in many conscious states, e.g., conscious peripheral perceptions.

There are several versions of higher-order theory, which differ principally about what kind of higher-order awareness figures in states' being conscious. The theory prevalent in traditional philosophy is the inner-sense theory, on which a state is conscious if one is aware of it by sensing or perceiving it. Since none of the ordinary sense modalities can figure in such higher-order perceiving, a special inner sense is posited. Inner sense explains the apparent immediacy of our awareness of our conscious states, since perceiving and sensing always seem unmediated. But it is doubtful that any sense modality could make us aware of all the types of mental state that occur consciously, including perceptual states of different sense modalities. Nor is it clear what mental qualities could characterize such an all-purpose modality of inner sense.

On an alternative theory, we are aware of conscious states by having thoughts

about those states. This avoids the problems facing inner sense, since thoughts can be about mental states of whatever kind and thoughts involve no mental qualities. This higher-order-thought theory explains the apparent immediacy of the way we are aware of conscious states by hypothesizing that higher-order thoughts occur without any conscious mediation, e.g., without relying on conscious inference or observation.

Another type of higher-order theory seeks to accommodate the considerations that motivate first-order theories by positing that the higher-order awareness in virtue of which mental states are conscious is internal to the conscious states themselves. Such theories must give an independently motivated way of individuating mental states on which such higher-order awareness is internal to the states we are aware of. It is unclear that any method of individuation that had that result could square with the finding that many mental states at least occur measurably in advance of our becoming aware of them.

A theory of consciousness should address what function there is for a creature's mental states to be conscious. It is natural to expect that there is some utility to a mental state's being conscious, since so many mental states are conscious. But we must distinguish the utility of a state's being conscious from the utility of states that happen to be conscious. When a conscious state has utility, that utility might be due not to the state's being conscious but to its other mental properties, such as what it represents or causes independent of its being conscious. So care must be taken in determining whether there is significant utility for mental states' being conscious.

David Rosenthal
Graduate Center, City University of New York
Philosophy and Cognitive Science
Email: davidrosenthal@nyu.edu

See also Agency, Experimental Psychology, Intentionality, Psychoanalysis, Philosophical Issues in, Self, Philosophical Theories of, Self and Essential Indexicality, Self-Knowledge, Unconscious

FURTHER READINGS

Block, N. (1995). On a confusion about a function of consciousness. *The Behavioral and Brain Sciences*, 18, 227-247.

Breitmeyer, B. G. & Öğmen, H. (2006). *Visual masking: Time slices through conscious and unconscious vision*, New York: Oxford University Press.

Chalmers, D. J. (1996). *The Conscious Mind: In Search of a Fundamental Theory*. New York: Oxford University Press.

Dehaene, S., & Naccache, L. (2001). Towards a cognitive neuroscience of consciousness: Basic evidence and a workshop framework, *Cognition*, 79, 1-37.

Dienes, Z., & Seth, A. (2010). The conscious and the unconscious. In G. F. Koob, M. Le Moal, & R. F. Thompson (Eds), *Encyclopedia of Behavioral Neuroscience* (vol. 1, pp. 322–327). Oxford: Academic Press.

Dretske, F. (2000). *Perception, Knowledge, and Belief: Selected Essays*. Cambridge: Cambridge University Press.

Freud, S. (1915). The unconscious. In J. Stachey (Ed.), *The complete psychological works of Sigmund Freud* (vol. 14, pp. 166-215). London: The Hogarth Press, 1966-74.

- Gennaro, R. (Ed.). (2004). *Higher-order theories of consciousness*. Philadelphia: John Benjamins.
- Hassin, R. R., Uleman, J. S., & Bargh, J. A. (Eds.). (2005). *The new unconscious*. New York: Oxford University Press.
- Jackson, F. (1998). *Mind, method, and conditionals: Selected essays*. London: Routledge.
- Levine, J. (2001). *Purple haze: The puzzle of consciousness*. New York: Oxford University Press.
- Libet, B. (2004). *Mind time: The temporal factor in consciousness*. Cambridge: Harvard University Press.
- Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84, 231-259.
- Rosenthal, D. (2005). *Consciousness and mind*. Oxford: Clarendon Press.