

Altered Consciousness in Philosophy

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Altered consciousness (AC) or altered states of consciousness (ASC) have been discussed throughout the history of philosophy and in different philosophical subdisciplines. This chapter is an introduction to some of the major philosophical problems raised by AC. My discussion of these problems is selective rather than exhaustive, both in terms of the types of alterations discussed and the questions asked, with a focus on Western philosophy and specifically epistemology, philosophy of perception, philosophy of mind, and the history of ideas. My aim is mainly descriptive, explaining the various philosophical problems related to AC and the solutions proposed in the literature, illustrating their strengths and weaknesses, and pointing out their interconnections as well as directions for future research. I will also illustrate my own position on these matters.

Because the concept of ASC has already been discussed in this volume [see Cardena, this volume], I do not develop my own definition here. The examples discussed in this chapter range from those typically regarded as ASC such as dreams, out-of-body experiences (OBEs), mystical experiences, and meditative states, to illusions and hallucinations, which according to some researchers should not be regarded as ASC (Revonsuo, Kallio, & Sikka, 2009). I include these examples in my discussion because their comparison with standard wakefulness is philosophically informative, especially in the philosophical discussion on perception (see section 2). Finally, pathological ASC are often similar to spontaneous or experimentally induced ASC in important respects. Therefore, my discussion of ASC includes both pathological and nonpathological cases.

Epistemology: Does Altered Consciousness Present a Threat to Knowledge?

ASC has given rise to two sorts of epistemological problems. The first is whether they are a source of knowledge, for instance, by providing insights that are not accessible during standard states of wakefulness (section 4). The second is whether ASC present a threat to knowledge and support skepticism about the external world and certain types of self-knowledge.

The best-known version of the second problem is dream skepticism as formulated by René Descartes in the *Meditations*. Aiming to establish a secure foundation of knowledge based on rational enquiry (Williams, 1978), Descartes begins by critically examining all of his opinions to determine whether their truth can be doubted. Considering familiar cases of sensory illusions, he realizes that they are not sufficient to justify the more far-reaching form of doubt he has in mind, because there remain enough other cases in which it is “manifestly impossible to doubt” the evidence presented by sensory perception (Descartes, 1996, I.4). An example of such a “best-case scenario” of sensory perception (Stroud, 1984), which apparently leaves no room for doubt, is his experience of sitting by the fire in his dressing gown and holding a piece of paper in his hands (Descartes, 1996, I.5). Unless Descartes took himself to be mad—an assumption that would contradict the very project of purely rational enquiry (Frankfurt, 1970)—such best-case scenarios of sensory perception seem immune to the deceptive threat posed by illusions. At this point Descartes turns his attention to dreams:

Though this be true, I must nevertheless here consider that I am a man, and that, consequently, I am in the habit of sleeping, and representing to myself in dreams those same things, or even sometimes others less probable, which the insane think are presented to them in their waking moments. How often have I dreamt that I was in these familiar circumstances, that I was dressed, and occupied this place by the fire, when I was lying undressed in bed? At the present moment, however, I certainly look upon this paper with eyes wide awake; the head which I now move is not asleep; I extend this hand consciously and with express purpose, and I perceive it; the occurrences in sleep are not so distinct as all this. But I cannot forget that, at other times I have been deceived in sleep by similar illusions; and, attentively considering those cases, I perceive so clearly that there exist no certain marks by which the state of waking can ever be distinguished from sleep, that I feel greatly astonished; and in amazement I almost persuade myself that I am now dreaming. (Descartes, 1996, I.5)

If even one’s realistic experience of sitting by the fire could be a dream, then we can never rule out the possibility that we are dreaming at any

given moment. This allows Descartes to apply his radical doubt to all beliefs derived from sensory perception, including his beliefs about the external world as well as his own body.

The dream problem recurs in the *Sixth Meditation*, where Descartes employs two strategies to reconcile the possibility of knowledge with the deceptive nature of dreams. First, he now realizes that there is indeed a considerable difference between dreaming and wakefulness: Dreams are not connected to the events of waking life and are prone to sudden changes. He concludes that he

ought to reject all the doubts of those bygone days, as hyperbolic and ridiculous, especially the general uncertainty respecting sleep, which I could not distinguish from the waking state: for I now find a very marked difference between the two states. (Descartes 1996, VI.24).

Many of Descartes's contemporaries reacted to his exposition of dream skepticism incredulously. Hobbes, for example, conceded the truth of the *First Meditation* but thought it "a pity that such a distinguished originator of fresh ideas should come out with this old stuff" (Hobbes, 1975–1999). To Descartes's solution of dream skepticism, he responded by asking

Whether it is certain that, if you dream that you are wondering whether you are dreaming or not, you cannot dream that your dream coheres with ideas of past events succeeding each other in a long chain. If this is a possibility, then things which seem to you in your dream to be events belonging to your past life can equally well be deemed genuine, no less than if you are awake. (Hobbes, 1975–1999).

This points to a deeper problem for Cartesian dream skepticism, namely that cognition itself may be corrupted in the dream state. Descartes' second strategy for resolving the dream problem in the *Fifth* and *Sixth Meditations* can be summed up by saying that although attempts at rational thought are typically lacking in dreams, they are nonetheless reliable when they are based on clear and distinct ideas (see also Grundmann, 2002). "But although, in truth, I should be dreaming, the rule still holds that all which is clearly presented to my intellect is indisputably true" (Descartes, 1996, V.15).¹

¹Descartes's concession to Hobbes that "a dreamer cannot *really* connect the contents of their dream with the ideas of past events, although they can *dream* that they are making the connection" (Hobbes, 1975–1999) contradicts this point, as this would mean that rational thought is not, after all, recognizable in the dream state.

Early dream research supported the view that dreams are typically single-minded and lack attempts at rational thought (Rechtschaffen, 1978). However, it is becoming increasingly clear that cognitive activities such as thinking and speaking occur relatively frequently not only in lucid dreams (in which the dreamer knows that she is currently dreaming and can often voluntarily control the dream; see LaBerge & Gackenbach, 2000) but also in nonlucid ones (Kahn & Hobson, 2005; Meier, 1993). Prelucid dreams, in which the dreamer wonders whether she is dreaming but concludes that she is not, are particularly interesting because they present evidence that reasoning itself can go astray in dreams (Brooks & Vogelsson, 1999; for a philosophical discussion, see Windt & Metzinger, 2007). In dreams, one can have the impression of engaging in rational thought or remembering something about one's waking life and be completely wrong. Just as genuine instances of reasoning and remembering occur in dreams, so do instances of mock reasoning and mock memories, in which the dreamer merely has the impression of being rational. The phenomenology of knowing, thinking, and remembering seems to be particularly vulnerable to this type of corruption in the dream state, showing that the mere availability of cognitive capacities says nothing about their reliability. In many dreams, the "evidence of reason" is mere phenomenal evidence, without epistemic value. This, in turn, invites a deeper epistemological problem: Even though rational thought is possible in dreams, it may not be recognizable. If this analysis is correct, this presents an additional obstacle against solving the problem of dream skepticism and suggests that the threat posed by dreaming may be more extensive than Descartes believed. If we cannot distinguish between real reasoning and mock reasoning, we once more cannot rule out that we are dreaming at any given moment. Moreover, dreaming would not only render sensory knowledge of the external world dubitable but would also question one's ability to recognize whether one's current reasoning is reliable.²

In sum, the problem appears to be that once one takes the possibility of dream deception seriously, it becomes virtually insoluble, and indeed Descartes's exposition of the problem has proven to be much more influential than his proposed solution. One thing that makes Cartesian dream skepticism so compelling is its appeal to everyday experience. This is a type of deception most people have experienced and thus can identify

²One could attempt to deflate this by saying that if one only dreams that one reasons, one also only dreams that one is deceived; see for instance Sosa, 2007. However, this still means that one can't tell the difference between real and dream reasoning and so does not solve the problem.

with. Indeed, Descartes's theoretical position about dreaming in the *Meditations* may have been inspired by several dreams he had himself as a young man (Hacking, 2002). False awakenings (realistic dreams of waking up) are another example of how dreams can give rise to feelings of confusion and uncertainty to the point of generating philosophical doubt. Bertrand Russell (1948, p. 186) wrote that

It may be said that, though when dreaming I may *think* that I am awake, when I wake up I *know* that I am awake. But I do not see how we are to have any such certainty; I have frequently dreamt that I woke up; in fact once, after ether, I dreamt it about a hundred times in the course of one dream. [...] I do not believe that I am now dreaming, but I cannot prove that I am not.

This shows that the classical philosophical problem of dream skepticism is much more than an armchair exercise of purely theoretical doubt. False awakenings, more so than other types of dreams, may actually be the paradigm example of vividly experienced doubt and tangible dream deception. It also shows why skeptical arguments relying on actual ASC, and dreams in particular, are more compelling than ones using thought experiments such as the *brain in a vat* (Putnam, 1981) or *matrix*-style scenarios in which subjects are kept in a state of permanent deception by evil scientists or computer programs (Grau, 2005). Although such examples may even be nomologically possible (it is not inconceivable that future neuroscientists might be able to appropriately stimulate a disembodied brain in a vat), they do not have everyday experience on their side. In contrast, it is the appeal to everyone's commonplace experience that makes dream skepticism so compelling.

Philosophy of Perception: Why Altered Consciousness Presents a Problem for Philosophical Theories of Perception

Illusions, hallucinations, and dreams not only give rise to the epistemological problem of external-world skepticism but also threaten our common-sense understanding of perception. Intuitively, perception is characterized by its openness to the world, because it seemingly puts us in immediate contact with mind-independent objects in the external world and provides direct access to reality (Crane, 2005). This position is often called direct or naïve realism. The possibility of hallucinations that are subjectively indistinguishable from genuine perception, however, presents an important challenge for our commonplace understanding of perception. Consequently, a philosophical theory of perception has to

account both for the occurrence of hallucinations and the seeming openness of perception. Crane (2005) reconstructs the argument from hallucination as follows (see also Smith, 2002):

- i. It seems possible for someone to have an experience—a hallucination—which is subjectively indistinguishable from a genuine perception but where there is no mind-independent object being perceived.
- ii. The perception and the subjectively indistinguishable hallucination are experiences of essentially the same kind.
- iii. Therefore it cannot be that the essence of the perception depends on the objects being experienced, since essentially the same kind of experience can occur in the absence of the objects.
- iv. Therefore the ordinary conception of perceptual experience—which treats experience as dependent on the mind-independent objects around us—cannot be correct.

Four main solutions to the resulting problem of perception have been proposed. For reasons of space, I do not discuss sense-datum and adverbial theory here, as they are no longer widely discussed in the current literature (see Crane, 2005, for details).

The Intentionalist or Representationalist Theory

Intentionalism or representationalism holds that mental states are characterized by being directed at or representing something in the world (Brentano, 1874). In perception, we do not have direct access to the world but experience the content of inner representations. The phenomenal content, or the qualitative character of conscious experience, can be described in terms of intentional or representational content. In this respect, there is no difference between beliefs and perceptual states, and some philosophers hold that the latter can be described as propositional attitudes (Byrne, 2001) or a form of belief (Armstrong, 1968). One problem for this view, however, is that illusions, pseudohallucinations, or lucid dreams do not involve the belief that what is being experienced actually exists. Therefore, the phenomenal content of such states cannot be described in terms of false beliefs. To address this problem, Armstrong (1968) suggested that pseudohallucinations are more adequately described as the acquisition of potential rather than actual beliefs. However, one would still have to explain in exactly what sense lucid dreamers can be said to hold the potential belief that they are experiencing the real world, even though they

currently realize that they are dreaming and are able to use this knowledge to engage in dream control.

There are several problems for intentionalist theories of perception. First, there is the question of how to explain the possibility of misrepresentation. To understand how representation is possible, we first have to understand how misrepresentation is possible. According to Dretske (1994), for instance, interesting cases of misrepresentation stem from the nonderived representational capacities of the system in question and require a certain threshold of complexity.

Another problem for representational theories is that it is controversial whether the qualitative aspects of phenomenal states can really be captured in terms of representational content. For pain experiences, for instance, there may be something over and above that which the pain sensation is directed at, namely the sheer *ickiness* of pain. Many philosophers think this is something for which no representational analysis is available (Block, 1997; Peacocke, 1983; Shoemaker, 1990; but see Tye, 2000).

A more general objection is that intentionalism fails to explain the apparent openness of perception (McDowell, 1987). If the phenomenal character of perception is determined by representational content, how does this explain the subjective experience of having direct and unmediated perceptual access to the world? Presentational content (Metzinger, 2003) may be a solution to this problem. Perceptual presence itself can be described as a representational property by representing the object of perception *as present*. From the third-person perspective, this representational property says nothing about the actual presence of such mind-independent objects: The experience could also be a hallucination. The third premise of the argument from hallucination equivocates phenomenal and epistemological readings of experience: Phenomenal sameness is not sufficient for sameness on the third-person, epistemological level of description, and in this latter sense, hallucination and genuine perception are not the same kinds of experience. Presentational content thus provides a new way of conceptualizing the difference between perceptual and belief states in terms of different forms of representational content. Beliefs are experienced as representations. In thinking, you are always aware of the construction process and know that your thoughts are not constrained by the actual state of the environment but could be wrong. Unlike thoughts, perceptual states have not only representational but also presentational content. This is why perceptual states, unlike belief states, are experienced as providing immediate access to the world even when they do not, as in hallucination and dreams.

Disjunctivism

Unlike the intentional or representational theory, disjunctivism tries to uphold the commonplace, naïve realistic view of perception (Byrne & Logue, 2009). To do so, it denies the “common kind assumption” (Martin, 2004), according to which hallucinations and genuine perception are fundamentally the same kind of mental event. The disjunctivist will argue, first, that subjective indistinguishability does not suffice for belonging to the same common kind. Subjective indistinguishability is *all* that hallucinations and genuine perception have in common. Their most fundamental common description is merely disjunctive: My experience of seeing the ocean is *either* a genuine perception of the ocean *or* a hallucination of the ocean. Nonetheless, each disjunct belongs to a more fundamental kind, namely perception or hallucination, and there is no more fundamental way of describing what they have in common.

What the disjunctivist has to explain, then, is the subjective indistinguishability between hallucinations and genuine perception. Martin (2009) does this by introducing the distinction between how things seem epistemically and how they seem phenomenally. Hallucinations and perceptions are epistemically indistinguishable, because the person undergoing them is unable to tell whether he is hallucinating or perceiving. But it does not follow that hallucinations and genuine perception also have the same phenomenal character. Whereas the phenomenal character of genuine perception is determined by the perceptible properties of mind-independent objects, no such characterization is available for hallucinations, because no such objects exist. Hence, the two can be regarded as radically different types of states that are merely “yoked together” by the subjective report and their epistemic indistinguishability (Martin, 2009, p. 96).

A central advantage of this view is the claim that perception is exactly what it naively and pretheoretically seems to be, namely a way of gaining direct access to the objects of perception. A positive account of hallucinations, however, is not the main goal of disjunctivism, and most disjunctivists focus on saying what hallucinations are not rather than what they are (Dancy, 1995). Some disjunctivists even claim that it is not like *anything* to hallucinate, a view that contradicts the commonplace view of hallucination (Smith, 2002).

However, there are exceptions. Fish (2008, 2009) attempts to give a positive account of hallucinations that integrates empirical findings on hallucinations. Fish (2008) explains hallucinations by saying that they seem to feel the same as genuine perception because they are epistemically

indistinguishable, even though they do not have the same phenomenal character. By contrast, Siegel (2008) claims that the epistemic account proposed by Martin and Fish fails because it cannot explain the positive facts of hallucinations, such as why one hallucination feels different from another. Another objection is voiced by Nudds (2009, p. 344), who argues that no positive account of the phenomenal character of hallucinations can be given within the framework of naïve realism or disjunctivism and that the attempt to ground indistinguishability in phenomenal similarity is misguided.

In sum, both intentionalism and disjunctivism are confronted with serious problems in trying to accommodate hallucinations within a theory of perception. My own position is that intentionalism is the more promising approach, in particular if an account of hallucinations can be defended that can plausibly explain the difference between perceptual states and beliefs, for instance by making use of the notion of presentational content. The main problem for intentionalism is not so much to explain hallucinations as to explain the phenomenal character of perceptual states in general. Once a general account of misrepresentation is available, there remains no special problem for hallucinations. There are convincing proposals for representational accounts of consciousness and self-consciousness (see next section) that integrate empirical evidence from various neuropsychological syndromes, indicating that the content of experience results from complex information processing in the brain. In the face of this evidence, the intuitive plausibility of naïve realism is weakened considerably. This also means that the main advantage of disjunctivism turns out to be an important shortcoming. Also, the failure of disjunctivism to give a positive account of hallucinations and its denial that hallucinations can have the same phenomenal character as genuine perception is unsatisfying.

Finally, it is important to point out that the discussion of hallucinations in the philosophy of perception mostly focuses on the *logical* possibility of hallucinations that are subjectively indistinguishable from genuine instances of perception. Logical possibility is not the same as nomological possibility, as it does not yet show that such subjectively indistinguishable hallucinations actually do occur or that the majority of hallucinations can be described in this manner. Researching this question in detail is an important desideratum for future theoretical and empirical work on hallucinations. If there were good reasons to believe that real-world hallucinations typically do not resemble genuine perception in terms of their phenomenal character, the challenge posed to theories of perception by real-world hallucinations could be minimized and some of

the discomfort involved in accepting that perception can go amiss would be dissolved.³ For an empirically plausible philosophical theory of perception—a goal that is becoming increasingly important in interdisciplinary consciousness research—such findings would, therefore, be relevant. Nonetheless, as long as subjectively indistinguishable hallucinations are at least logically possible, both the epistemological problem of dream skepticism and the problem of perception will persist.

Philosophy of Mind: What Can Altered Consciousness Tell Us about Consciousness and the Self?

In recent years, philosophy of mind has been increasingly characterized by its interdisciplinary focus, and one consequence is that both ASC and pathological wake states are frequently discussed in the philosophical literature, especially in the context of self-consciousness. Here ASC typically serve as a contrast condition. The systematic analysis of ASC and the precise ways in which they differ from standard wake states can help identify unquestioned intuitions and background assumptions about consciousness and lead to theoretical insights and empirical predictions about potential dissociations between different dimensions of self-consciousness.

The self-model theory of subjectivity (SMT) proposed by Metzinger (2003, 2004, 2009) is an example of such a strategy. Its central claim is that the folk-phenomenological notion of what it means to be or have a self should be rejected. SMT integrates findings from psychology and the cognitive neurosciences and formulates a number of conceptual constraints for a theory of self-consciousness. Instead of a self that is substantially distinct from the body, we have a self-model, which results from complex information-processing mechanisms and representational processes in the central nervous system. Ultimately, the self-model depends on processes inside the brain; it is a virtual simulation rather than something that could exist independently of such processes. The phenomenal self or the experience of selfhood is the content of the self-model, a representational entity that we fail to recognize as a model because it is

³Of course, empirical research results supporting the phenomenal similarity between hallucinations and perception could also increase the bite of the problem. This would be the case if all or even some dreams can be conceptualized as global, multimodal hallucinations with the same phenomenal character as waking experience. It is interesting to note, however, that dreams are not typically discussed in the context of the problem of perception.

phenomenally transparent. In standard situations, we only experience the content of the self-model but do not have access to the construction process and thus fail to experience its virtual character.

The assumption that the phenomenal self, including the experience of being an embodied self, is a virtual simulation is supported by a number of ASC. A first example can be found in phantom limbs, or the experience that the missing limb is still present following amputation. Sometimes, patients also describe feeling pain in their phantom limb or complain that it is paralyzed and frozen in an uncomfortable position (Brugger, 2006; Ramachandran & Hirstein, 1998; for details on alterations of bodily consciousness, see Dieguez & Blanke, Volume 2).

In healthy individuals, the virtual character of the bodily self can be demonstrated through a number of experimental manipulations. In the rubber-hand illusion (RHI; Botvinick & Cohen, 1998; Tsakiris & Haggard, 2005), a fake rubber hand is placed in front of the participants while one of their real hands is concealed from view. The experimenter then strokes both the rubber hand and the concealed real hand simultaneously with a probe. As the seen strokes in the rubber hand are aligned with the felt strokes in the real hand, many participants report the sensation that the rubber hand is actually their own, sometimes including the sensation of a virtual arm connecting it with their shoulder. There are also behavioral measures of the illusion: When asked to close their eyes and point to the location of their hand, participants tend to mislocalize it toward the rubber hand (Botvinick & Cohen, 1998).

RHI is interesting because it shows that the sense of ownership (an automatic form of self-attribution that allows one to experience one's body as one's own) can be experimentally manipulated through conflicting visual and tactile input (Metzinger, 2009). When the location at which one visually observes the strokes is different from the location of tactile input, the sense of ownership shifts to the source of visual stimulation, giving rise to the sense of ownership for the rubber hand. According to SMT, this means that the rubber hand is transiently integrated into the phenomenal self-model, thus becoming part of the currently experienced bodily self.

An analogue of RHI can also be created for the whole body (Ehrsson, 2007; Lenggenhager et al., 2007). Through a head-mounted display, participants are presented with a visual image of themselves as seen from the back, which is projected to a point in virtual space in front of them. The experience is that of seeing oneself from behind. When participants are stroked on their backs and simultaneously see these strokes on the visual image of their own back in front of them, they often report the strange sensation of suddenly identifying with the virtual body and feeling that their

location has shifted toward the observed strokes (Lenggenhager et al., 2007). When asked to return to the spot where they were standing during the illusion with their eyes closed, participants tend to drift toward the position of the virtual body. This suggests that the experiment targets two dimensions of subjective experience, namely self-identification or ownership for a body as a whole and self-location within a spatial frame of reference (Blanke & Metzinger, 2009). These can be dissociated from the origin of the visuospatial first-person perspective (1PP), or the position from which the person sees the virtual image of her body from behind. Again, conflicting visual and tactile information can lead one to mislocalize oneself in space and identify with a virtual body image. The position from which I visually observe the world can be dissociated from the position at which I feel myself to be, and I can feel a sense of ownership for a virtual body that is distinct from my real physical body.

The conceptual distinction between self-identification, self-localization, and the visual 1PP may also be crucial for understanding the minimal conditions for the experience of selfhood (Blanke & Metzinger, 2009). Here, three types of full-body illusions are particularly interesting (Blanke & Mohr, 2005; Blanke et al., 2005): In out-of-body experiences (OBEs), the person has the experience of having left her body, and a visual image of the physical body is often observed from an elevated perspective. Some individuals report having a phantom body during their OBEs, while others report feeling like a disembodied point in space. OBEs can occur spontaneously, for instance during sleep onset, epileptic seizures, or stressful situations, such as after an accident or during an operation, but can also be induced through electrical stimulation at the temporo-parietal junction (TPJ). In autoscopic hallucination, the subject still feels localized in her own body but sees a virtual double of herself standing in front of her. In heautoscopy, there is also a visual double, but here, subjects report switching back and forth between their real and the illusory body [see also Cardena, Volume 2].

These three types of full-body illusions present different dissociations between the visual 1PP, self-localization, and self-identification. Blanke and Metzinger (2009, p. 12) conclude that, taken together, they show that global ownership—“functionally defined as availability of an integrated, transparent and global representation of the spatiotemporally situated body—is the simplest form of self-consciousness.” In contrast, agency, or the phenomenal-functional property of being able to control and experience oneself as the author of one’s thoughts and actions, is not necessary for self-consciousness [see also Granqvist, Reijman, & Cardena, Volume 2]. The core of our experience of selfhood, which is sufficient for minimal

phenomenal selfhood, may be the “passive, multisensory and globalized experience of ‘owning’ a body,” and this can arise for one’s physical body or for a virtual one (Blanke & Metzinger, 2009, p. 12).

The conceptual distinction between ownership and agency can also be applied to the theoretical analysis of hallucinations. The positive symptoms of schizophrenia are particularly interesting in this respect. They involve auditory hallucinations, typically of hearing voices, as well as thought insertion, in which patients report that someone else’s thoughts have been inserted into their mind, and thought control, in which patients report that an external agent has taken control of their thoughts (for a philosophical analysis, see Stephens & Graham, 2000). Although the phenomenon of thought control can be described as resulting from a disturbed sense of agency for one’s thoughts, thought insertion involves the additional loss of the sense of ownership for one’s thoughts, leading the patient to deny that her thoughts are her own. Auditory hallucinations of voices may result from a similar process of disturbances to the sense of ownership and agency for one’s cognitive processes, specifically inner speech. Many different theoretical models of auditory hallucinations have been suggested, ranging from disturbances in perceptual processing to higher-level cognitive disturbances in source monitoring and performing self-other distinctions (Stephens & Graham, 2000).

Dreams are another example of how ASC can contribute to an empirically informed philosophical theory of self-consciousness. Most contemporary philosophers working on dreams (see for instance Ichikawa, 2009; Metzinger, 2003, 2009; Revonsuo, 2006) agree that dreams are conscious experiences because they are phenomenal states: There is something it is like to dream, and (contra Dennett, 1976; Malcolm, 1956, 1959) dreams give rise to consciously experienced imagery during sleep.⁴ According to SMT (Metzinger, 2003, 2009; Windt & Metzinger, 2007), most nonlucid dreams lack important layers of waking self-consciousness and thus should only be regarded as subjective experiences in a conceptually weak sense related to the cognitive IPP, agency, and the narrative or autobiographical self: Nonlucid dreamers cannot form a stable cognitive relation to the dream world and often entertain delusional beliefs; they lack control over volition and attention and cannot remember important facts about their waking lives (Hobson, Pace-Schott, & Stickgold, 2000). False awakenings are a good counterexample because they show a strong degree of coherence with the

⁴However, philosophers disagree as to whether dreams involve complex hallucinations or should rather be regarded as imaginative states comparable to daydreaming and waking fantasy (Ichikawa, 2009; McGinn, 2004; Sosa, 2007).

autobiographical self experienced in wakefulness. Lucid dreams are another, and at least fully lucid dreams afford a vastly different interpretation in terms of self-consciousness (Metzinger, 2003, 2009; Windt & Metzinger, 2007). Lucid dreamers, especially in lucid control dreams, are attentional, cognitive, and behavioral agents in a much stronger sense than nonlucid ones, related both to the phenomenology of agency and its functional profile. This is related to a stable 1PP and the ability to form a conscious cognitive model of one's current relation to the dream world, enabling both the insight that one is currently dreaming and the ability to engage in dream control. Mnemonic processing is also enhanced compared to nonlucid dreams. All of this supports the view that fully lucid dreams are subjective experiences in a stronger sense than most nonlucid ones, in some cases even approaching the type of self-consciousness characteristic of standard wakefulness. Nonetheless, the contrast between lucid and nonlucid dreams should be considered as continuous rather than exclusive, and the degree to which a given nonlucid dream should be considered as a subjective experience will depend on the degree to which the phenomenal-functional properties of agency and the 1PP are instantiated and on its integration with the autobiographical self experienced in standard wakefulness. Distinguishing different elements of dream lucidity may help understand the gradual transitions between lucid and nonlucid dreams as well as the different types of self-related processing involved (Noreika, Windt, Lenggenhager, & Karim, 2010; Windt & Metzinger, 2007).

Another point that makes both lucid and nonlucid dreams interesting for self-consciousness has to do with the bodily self. Dreams provide an example of a rich and complex form of consciousness arising in a state of near-complete functional disembodiment. Rapid eye movement (REM) sleep, in which the most vivid dreams occur, is characterized by the sensory input and motor output blockade (Hobson et al., 2000). As a result, the sleeping body is both paralyzed and deafferented during the dream state, meaning that internally experienced behavior is not enacted in the physical body (with the exception of patients with REM-sleep behavior disorder (RBD) who literally act out their dreams; see Schenck, 2005) and stimuli from the environment and the body are typically not integrated into the dream narrative. An interesting question is whether dreams nonetheless give rise to the experience of having a body. Movement sensations are frequent in the dream state, but touch, pain, and thermal sensations are extremely rare (Hobson, 1988). The general conclusion that the dream self is not only functionally disembodied with relation to the physical body, but also only phenomenally embodied in a weak sense seems

plausible (Windt, 2010). If it is true that dreams often lack a detailed body representation including body parts, this may help elucidate the relationship between bodily experiences and their functional and neurophysiological correlates. It also suggests that the experience of fully embodied selfhood can be dissociated from other levels of self-related processing such as cognition, as in lucid dreams.

Finally, Revonsuo's (2000, 2006) work on consciousness gives a particularly prominent role to dreams. Going beyond the contrastive analysis between dreaming and standard waking consciousness (Windt & Noreika, in press), he suggests that dreaming "reveals consciousness in a very special, pure, and isolated form" (Revonsuo, 2006, p. 75) and thus can be used as a theoretical and research model of consciousness. Dreaming "depicts consciousness first and foremost as a subjective world-*for-me*" (Revonsuo, 2006, p. 75) and may not only reveal the universal features of conscious experience but also help investigate the neural correlates of consciousness independently of the potentially confounding factors of sensory input and motor output. Moreover, because dreams can be seen as offline simulations of waking consciousness, this means that consciousness itself is essentially a process of simulation: "[...] not only are dreams experiences but, in a way, all experiences are dreams" (Revonsuo, 2006, p. 55). Dreaming thus gives rise to the virtual reality metaphor of conscious experience.

The modeling approach is controversial, and other researchers have suggested that dreaming can be regarded as a model of the positive symptoms of psychosis, both on the phenomenal and the neurophysiological levels of description, and differs in important ways from standard wakefulness (Hobson, 1999; see Windt & Noreika, in press, for a critical discussion). Nonetheless, Revonsuo's approach is interesting, because it not only shows how ASC can be used to inform a philosophical theory of consciousness and the self but also suggests that the use of altered consciousness as a model of standard wake states might lead to testable predictions.

Another theme that has been discussed in the context of pure consciousness is meditative states. Neurophenomenology (Lutz & Thompson, 2003; Varela, 1996) attempts to bring together aspects of Husserlian phenomenology with cognitive neuroscience. By training participants in introspective practice, the precision of first-person reports is supposed to be enhanced and their integration with empirical research results thereby facilitated (Thompson, 2006). A core idea is that meditative practice, which has a long tradition in Eastern culture, exemplifies such a disciplined first-person approach (for a review of meditative practices from a neuroscience perspective, see Lutz, Slagter, Dunne, & Davidson, 2008).

The interesting point here is that trained meditators are seen as experts regarding not just meditative states but conscious experience itself and are considered as scientific collaborators rather than only experimental participants. As in the discussion on dreaming as a model of waking consciousness, however, it is an open question whether insights from meditation research can actually be generalized to standard waking consciousness [see Shear, this volume].

Mystical Experiences and the History of Ideas: From Altered Consciousness as a Source of Knowledge to a Naturalized Account of Religious Beliefs, Myths, and the Concept of the Soul

An old theme in both the philosophical and the popular discussion on ASC is whether they enable insights that cannot be accessed in standard wake states. In his introduction to the *Perennial Philosophy*, Aldous Huxley (2004, p. vii) writes that “knowledge is a function of being. When there is a change in the being of the knower, there is a corresponding change in the nature and amount of knowing.”

As Huxley suggests, the insights conveyed by AC might be related to alterations in cognitive functioning or in the style of reasoning characteristic of AC. Indeed, before the 19th century, hallucinations were termed apparitions or visions, suggesting a close relationship to higher sorts of insight (Aleman & Larøi, 2008). Interestingly, there was no clear distinction between nocturnal dreams and visions in antiquity, and they were seen as tangible visits from the gods: Dreaming was the passive experience of seeing, or being shown, a dream. Dreams play an important role in initiating religious insights in the Bible and the Talmud, as well as in Indian tradition (Van de Castle, 1994). In ancient Greece, the practice of dream prophecy played a prominent role in religious life, in particular at the Aesculap shrines, as well as for medical practice [see Ustinova, and Geels and, this volume].

An even stronger variant of the notion that ASC provide access to deeper forms of knowledge has to do with perennial philosophy. This idea, formulated by the 16th-century Italian monk Augustinus Steuchus and later taken up by Leibniz, says that the same eternal truths are discovered by the mystics of all times and all cultures (Horgan, 2003; Huxley, 2004). These truths transcend time, place, culture, and personal identity and are only accessible during mystical experience [see Beaugregard, Volume 2].

James (2003, p. 335) described mystical experience as the experience of intellectual enlightenment, elation, and joy. He also noted that in

mystical experience, the eternal truths are apprehended in immediate experience rather than as a result of rational deliberation. A related point is that they are incommunicable, and according to James (2003):

This incommunicableness of the transport is the keynote of all mysticism. Mystical truth exists for the individual who has the transport, but for no one else. In this, as I have said, it resembles the knowledge given to us in sensations more than that given by conceptual thought. (p. 341)

The idea that ASC could be a source of knowledge and insight nicely complements the epistemological problem of dream skepticism discussed above, and there is a tension in the literature on altered consciousness between viewing ASC as higher states of consciousness or, conversely, as pathological conditions, the latter point predominating in the psychological literature since the 19th century (Aleman & Larøi, 2008) [see Lukoff, Volume 2]. Rather than viewing them as opposites, the close conceptual relationship between madness, deeper forms of insight, and prophecies of divine origin was already highlighted by Plato in the *Phaedrus*. At the same time, the popular notion of ASC as conveying heightened insight has always provoked philosophical skepticism. Aristotle (2008) criticized the widespread trust of his contemporaries in prophetic dreams, commenting that the only way in which dreams could foretell future events was by coincidence and that this type of experience was most likely to befall “commonplace persons and not the most intelligent” [cf. Luke, Volume 2].

This theme was taken up by Locke in the *Essay Concerning Human Understanding*. The main goal of his chapter on enthusiasm is to show that revelation, by itself, is not reliable, as one can never be sure that it is a genuine revelation rather than a product of enthusiasm:

Immediate revelation being a much easier way for men to establish their opinions, and regulate their conduct, than the tedious and not always successful labour of strict reasoning, it is no wonder, that some have been very apt to pretend to revelation [. . .]. Their minds being thus prepared, whatever groundless opinion comes to settle itself strongly upon their fancies is an illumination from the spirit of God, and presently of divine authority [. . .]. (Locke, 1997, IV. XIX, 5, 6)

The point is that the mere strength of one’s persuasions is not enough to justify revelation; without outward signs to convince one of the truth of one’s persuasions, or without their withstanding the test of reason,

revelation is not to be had, or at least cannot be recognized (Locke, 1997, IV. XIX, 14, 15). Once more, phenomenal certainty—the experience of persuasion or knowing—is not the same as epistemic justification.

However, if James's comment on the incommunicableness of such mystical experiences is correct, the attempt to evaluate such insights in rational terms may itself be misguided. If they can only be justified through first-person experience and cannot be disproved through rational argument (James, 2003), such insights would lie outside the scope of epistemology, which focuses on rationally justifiable knowledge claims. From the perspective of rational inquiry, one would then have to remain silent on questions concerning the epistemic status of such insights. Whether or not they actually give rise to a deeper form of knowledge may be an unanswerable question.

This is not to deny that ASC can be a meaningful source of personal insight. For instance, dreams and the practice of dream interpretation can certainly be personally meaningful in this way (Flanagan, 2000), even if they do not have intrinsic meaning, and the same could be true for many ASC. Even so, my aim here is more limited. Even if one does allow that certain ASC are a source of knowledge, saying that such insights are epistemically justified in terms of their phenomenal character alone is problematic, because it rests on a category mistake (Ryle, 2000). Also, it may be impossible to distinguish genuine insight during ASC from mere feelings of knowing, such as in delusional states. If at all, such insights present a completely different form of knowledge, and one that requires a separate explanation of its own.

Aside from questions about the epistemological status of ASC, there is another tradition in philosophy that has to do with investigating the beliefs they have given rise to in the history of ideas. Commenting on the reality of the unseen, James (2003) remarked that the belief in objects that cannot be experienced with any of the senses is the foundation of many religious beliefs. Our natural tendency toward abstraction provides us with an "ontological imagination," allowing us to experience such "unpicturable beings [. . .] with an intensity almost like that of an hallucination" (James, 2003, p. 63). Importantly, this type of experience is not unique to mystical or religious experience. Felt presence (FP), in which the person has the strong feeling of an agent being located in her immediate vicinity and which can arise independently of modality-specific hallucinations (Nielsen, 2007; but see Cheyne & Girard, 2007), is perhaps the best example for what James calls an undifferentiated "sense of reality, a feeling of objective presence, a perception of what we may call 'something there,' more deep and more general than any of the special and particular 'senses'" (James, 2003, p. 51).

FP often occurs during sleep–wake transitions and sleep paralysis (SP; the experience of waking up and being unable to move, commonly explained by the persistence of REM-sleep muscular atonia after awakening; see Hishikawa & Shimizu, 1995). FP has also been associated with a number of conditions independently of sleep, including epileptic seizures and lesions, especially in the temporoparietal areas; it can be induced experimentally through electrical stimulation (Arzy et al., 2006) and occurs spontaneously in periods of heightened stress and emotional arousal (bereavement, accidents, post-partum, prolonged isolation, etc.; see Nielsen, 2007). It is very interesting, because it may allow researchers to investigate the neural correlates of such experiences and suggests a link between mystical experiences and hallucinatory phenomena. Independently of their epistemological status, an analysis of these examples can help give a naturalized account of why ASC have often been regarded as a source of knowledge in the history of ideas.

Aside from FP, a number of other ASC are informative for the history of ideas. Again, the hypnagogic state between sleeping and wakefulness is particularly interesting. Cheyne (2003; Cheyne, Rueffer, & Newby-Clark, 1999) found that reports of hallucinatory experiences during SP are consistently grouped into three clusters: (1) vestibular-motor hallucinations, including sensations of floating, flying, falling, as well as auto-scopy and out-of-body feelings; (2) intruder experiences, involving the sense of presence as well as visual, auditory, and tactile hallucinations; and (3) incubus experiences, in which people have the feeling of being choked by an incubus or an “old hag” sitting on their chest and experience trouble breathing, pressure, and sometimes pain. This last cluster may result from a sudden awareness of the shallow and rapid breathing pattern associated with REM sleep, giving rise to the impression of being choked. Reports of incubus and old hag attacks can be found in many different cultures and from many different times, and their highly stereotyped pattern suggests that this is a culturally invariant form of experience. Linking the phenomenological features of such experiences to REM sleep physiology thus may allow for a naturalistic explanation of myths and legends about alien abductions or evil witches coming in through the bedroom window at night to attack their sleeping victims. Such beliefs in supernatural beings might indeed have been fed and informed by such very real experiences of SP on the verge of sleep.

A similar strategy is proposed by Metzinger (2005, 2009) in relation to OBEs. He suggests that OBEs are a highly stereotyped and culturally invariant type of experience and may be a neuroanthropological constant, or an experience that can be shared by all humans under certain

conditions. The experience of leaving one's body in OBEs, which is often described as highly realistic, may have given rise to a "protoconcept" of the mind, according to which the mind is separable from the body and may continue to live after death. This folk-phenomenological concept of a soul may also explain the intuitive attractiveness of the theoretical position of mind–body dualism:

Taken as an ontological metaphor, the phenomenology of OBEs inevitably leads to dualism, and to the concrete idea of an invisible, weightless, but spatially extended *second body*. This, then, may actually be the folk-phenomenological ancestor of the soul, and of the philosophical proto-concept of mind. (Metzinger, 2005, p. 81)

In addition to OBEs, the notion of the separability of mind and body may have also been fed by nocturnal dreams. Although dreams often lack the strong emotional impact and extremely realistic quality of OBEs, it may be this more pedestrian character that commends them for the widespread belief in the soul. Though often more impressive and impactful, OBEs are comparatively rare, whereas most people are at least occasionally able to recall dreams. This means that the protoconcept of the soul can truly appeal to everyone's first-person experience of having glimpsed a world beyond the real one and having left their physical body behind during sleep.

Of course, it is important to point out that such theories about the origin of beliefs in old hags or theoretical positions such as mind–body dualism say nothing about the epistemological status of these beliefs, nor do they support any ontological conclusions. They explain the intuitive appeal of such beliefs and maybe even our proneness to develop corresponding philosophical theories. At the same time, showing that such experiences as OBEs can be explained in neurophysiological terms and can even be induced experimentally through electrical stimulation cannot, from a strictly logical point of view, disconfirm the existence of a soul that is separable from the body (see Metzinger, 2005). But of course, having an experience of a certain type, no matter how convincing, also does not support ontological statements about the actual existence of a soul, as little as it licenses one to infer the actual existence of old hags or vicious incubi.

Conclusions: Studying Altered Consciousness—Altering Consciousness Research?

As the above discussion has shown, ASC is a particularly good example of a topic that can profit from a multidisciplinary approach and reflects the

ways in which consciousness research has in fact already been altered to include the perspectives of different disciplines. Analytic philosophy of mind in particular can offer a clarification of the concepts involved in such a project, help identify the implicit background assumptions, formulate research questions, and illustrate the broader theoretical implications of research results. At the same time, philosophical subdisciplines such as epistemology and philosophy of mind can integrate empirical research results and the philosophical discussion is marked by an increasing willingness to take such findings into account. In this way, the discussion of ASC may further the interdisciplinary integration between philosophy, psychology, and the cognitive neurosciences and shows how these disciplines can be mutually informative.

This requires openness not only toward the findings from other disciplines but also an integrative approach towards altered consciousness. In particular, the comparison not only between standard states of wakefulness and ASC but also between pathological and nonpathological ASC is of interest. Particularly good examples are the comparison between schizophrenic hallucinations and those occurring during drug intoxication or spontaneously during sleep or at sleep onset, as well as OBEs, which can occur spontaneously, following brain stimulation, during epileptic seizures, and so on. As recently suggested in a study conducted by Hohwy and Paton (2010), it may also be possible to use experimentally induced ASC such as RHI to investigate the role of experience in delusion formation. The comparative study of pathological and nonpathological AC raises many interesting questions and may lead to a better understanding of both these alterations and standard states of wakefulness, as well as, possibly, new therapeutic interventions. In this way, the study of AC may itself be altered and broadened to a more integrative approach.

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