

DREAM AND REALITY

Ilkka Niiniluoto

Department of Philosophy

University of Helsinki

Sleeping and Dreaming

The significance of future studies is often advertised by the slogan: future is important, since we shall spend there the rest of our lives. In the same vein, sleep research can be easily motivated by pointing out that we spend in sleep one third of our lives.

The 11th European Congress on Sleep Research – which starts its work today (July 6, 1992) in Helsinki – will certainly give a convincing proof of the theoretical and practical significance of studies in such phenomena as the sleep-wake cycle, pharmacology and sleep regulation, sleep disorders, snoring, sleep apnea syndrome, daytime sleepiness, and narcolepsy. Following the scientific tradition, these studies are based upon objective empirical measurement of such physiological and behavioral factors as body temperature, blood pressure, EEG, eye movements, etc.

A philosopher cannot even try to compete with these physiological and medical investigations. Of course I could claim that I do have a long personal experience and expertise in sleeping: so far I have slept roughly fifteen years of my life. But that alone is blatantly insufficient to open up any philosophically interesting perspective on sleeping.

Rather, like a psychologist, a philosopher is more interested in *dreaming* than *sleeping*. He will replace the external viewpoint of sleep research with a focus on those internal mental processes and experiences that are regularly or frequently conjoined with our sleeping.

This contrast between external and internal aspects of sleeping was highlighted by Andy Warhol's famous – but, for most of us, boring – film *Sleep* (1963). Instead of the rich tradition of poetic dream visions in films, Warhol simply showed a six-hour shot of a person sleeping in bed.

When Sigmund Freud in 1900 started his psychoanalytic study on dreams, he complained that philosophy regards this whole topic as intellectually unworthy and second-rate.¹ A.R. Manser's article 'Dreams' in the prominent *Encyclopedia of Philosophy* in turn asserts bluntly that Freud had "little to say about the nature of dreams which is of interest to the philosopher".² In spite of notable

exceptions, like Norman Malcolm and Paul Ricoeur, it is still true to say that philosophers have devoted surprisingly little attention to dreaming and dreams – at least if compared with the voluminous studies in such related themes as reasoning, knowledge, belief, perception, memory, and imagination. The same seems to be true, at least until now, within the new cognitive science.

Still, dreaming has puzzled philosophers ever since Plato and Aristotle, and there are interesting comments and debates on dreams by major thinkers from Descartes and Leibniz to Wittgenstein and Sartre.

What is dreaming? What are dreams? How are they identified? What is their personal and social role? Is there a language and a logic of dreams? Can we interpret their content? How are dreams distinguished from reality? Questions of this sort lead us directly to some of the most difficult issues in metaphysics, philosophy of mind, epistemology, and philosophy of culture. In this lecture, I try to briefly illustrate why and how dreaming is a most fascinating field of investigation also for a philosopher.

The Nature of Dreams

Let us start with some historical remarks concerning the nature of dreams.

For our prehistorical ancestors, who had waken to self-consciousness and to awareness of their mortality, dreams were a puzzling and frightening phenomenon. Magical and religious explanations were given to the strange visions that fall upon a sleeping man in the darkness of night: Perhaps our soul is able to depart from our body and travel to another reality, where the living and the dead meet each other? Perhaps dreams are messages sent to us by gods and demons who rule our destiny? Such magical and occultist beliefs explain the social power of medicine men and shamans, who are able – by using drugs or self-suggestion techniques – to reach a dream-like trance in the daytime. The fatalist belief in dreams as omens or portents of future events gave also a special social status to those who claimed to be able to interpret the content of dreams (priests, oracles).³ In the ancient world, "dream books" became as popular as another method of divination, astrology.

The Ancient philosophers in Greece favoured a more rational naturalist approach. Plato characterized, in *Timaeus* (46A), dreams as "visions in us, ... which are remembered by us when we are awake, and in the external world". Aristotle defined, in *De somniis* (462a), the dream as "a sort of presentation" (φαντασια, imagination), "more particularly, one which occurs in sleep".⁴

In *De somno et vigilia*, Aristotle argued that sleeping and waking belong necessarily to all animals: sleeping is a privation, but also potentiality, of waking. Dreams occurring in sleep have

natural causes: persisting impressions derived originally by sense-perception from external objects or from causes within the body. In *De divinatione per somnium*, Aristotle further argued that "dreams are not sent by God", nor designed for the purpose of predicting the future. Yet, sometimes dreams may be tokens or causes of future events, if a remembered dream-movement paves the way for a later daytime action.

Plato, who was more imaginative than his always sober pupil Aristotle, was concerned with the shameless nature of dreams. Plato expelled poets from his ideal Republic, since they tell lies, and don't seek genuine knowledge. Similarly, he compared sleepers to madmen: both "think falsely", when they imagine, e.g., that they can fly (*Theaitetos* 158b). More seriously, Plato stated in *Republic* that "in all of us, even the most highly respectable, there is a lawless wild-beast nature, which peers out in sleep" (572b):

"... when the rest of the soul – the reasoning and human and ruling power – is asleep; then the wild beast within us, gorged with meat or drink, starts up and having shaken off sleep goes forth to satisfy his desires; and you know that there is no action which at such a time, when he has parted company with all shame and sense, a man may not be ready to commit; for he does not, in his imagination, shrink from incest with his mother, or from any unnatural union with man, or god, or beast, or from parricide, or the eating of forbidden food. And in a word, no action is too irrational or indecent for him." (571c)⁵

Plato's view anticipates Freud's account of the many-layered structure of human psyche in *The Interpretation of Dreams* (1900) and *Introductory Lectures on Psychoanalysis* (1914). According to Freud, the function of sleep is rest, which would be best achieved in a dreamless sleep. But when the control or "censorship" characteristic to our daytime consciousness ("superego") is relaxed in sleep, our subconscious mental process continue their operation on an "archaic" or infantile level. Dreams are "regressive": they return to a language of visual images, which give expressions to primarily sexual desires. What Freud added to Plato is his theory of "dream-work": dreaming attempts to "guarantee" sleep and "fool the censorship" by revising or transforming the original "latent" dream-content into the disguise of "manifest" dream-content. The aim of *Traumdeutung* is then to decipher or interpret this manifest dream in terms of its latent content in the language of desire.⁶

The Plato–Freud conception of man gains plausibility also from the theory of evolution. As Ernst Cassirer put it, man is *animal symbolicum*. He differs from other animals primarily

through his ability to construct conventional languages, and to think and communicate with such languages. This enables him to develop a conception of himself as a spatio-temporally continuous but finite being and thereby to become self-conscious.

Even though we modern men may in our dreams act in the role of self-conscious agents with linguistic capacities, it seems correct to say that dreams contain archaic features – traces from the earlier, more "primitive" stages of human evolution.

Here the school of Carl G. Jung agrees with Freud, even though Jung believed that dreams express their contents or "messages" directly without disguise. They both claim further that the same patterns of thinking can be found, besides dreams, in myths, religions, works of art, daydreams, jokes, and neuroses. Their main difference is in Jung's thesis that this old primitive "instinctive" mode of thinking is somehow "wiser", more originally "human", better tied with useful and healthy valuations, than the rational soul of the modern enlightened man.⁷

Here Jung seems to return at least partly to a magical conception of dreams. He asserted that dreams may be predictive: our subconsciousness, which operates with "archetypes", may in some cases "know" in advance a future event (e.g., the death of the dreamer), whose later occurrence then "explains" the content of the dream. Where Aristotle appeals to mere coincidences, Jung seeks to find metaphysical significance in the occurrence of causally independent "synchronic" events.

What are Dreams?

Let us next proceed to discuss the ontological issues about the definition and existence of dreams.

The Received View of modern psychology follows the Aristotelean account: dreams are sequences of experiences produced by imagination during sleep.⁸ Thus, to define dreams we need two distinctions, between sleeping and waking, and between imagination and perception (see Fig. 1).

	sleeping	waking
imagination	dream	phantasy daydream hallucination
perception	subliminal perception	veridical perception perceptual illusion

Fig. 1

The borderlines are not always very sharp here: there are transitory states from sleeping to waking or vice versa; a real auditory stimulus (e.g., the ringing of an alarm clock) may enter a dream in a disguise.

Sometimes the context makes it clear that talk about "dreams" really means daydreams or hopes for the future: Bing Crosby singing "I am dreaming about White Christmas"; Martin Luther King reciting "I have a dream".

It is well-known how difficult it is to test by questioning, whether someone is awake or asleep. Any response to the question 'Are you sleeping?' counts as an indicator of waking, but no reply does not distinguish between genuine and pretended sleep.

Even the trick of an old fairy tale does not always work. When one of his friends pretended to sleep, the Rabbit loudly explained that anyone genuinely sleeping raises his left foot and says "Wahoo" – and in the tale, of course, the foot rised with the scream "Wahoo".

However, it seems relatively unproblematic to assume that a sharp dichotomy between sleeping and waking can be drawn by means of external physiological criteria (respiration, EEG, etc.). But, as all sleeping does not include dreaming, it is much more problematic to think that the same could hold for the distinction between dreaming and non-dreaming. As dreaming in the primary sense is a psychological concept, identified by our subjective introspective awareness of these experiences, the attempt to find physiological correlates to dreaming leads us directly to the classical *mind-body problem*.

The success of REM research since the 1950s (Kleitman and Dement) has led to the suggestion that there are neurophysiologically definable periods of dreaming in everybody's sleep every night, but in many cases we don't recall them. This thesis might be construed as a *reductionist type-identity* theory which was fashionable among materialist philosophers in the 1950s (Smart, Armstrong): mental predicates can be explicitly defined by physical predicates. This kind of reductionism was rejected by the *functionalists* (Putnam, Fodor) and the *emergent materialists* (Popper, Davidson): even if each mental event is "token-identical" with a physical brain event, i.e., there is no mental life without a material basis, there is no hope to correlate types of mental states with types of brain states. For example, there is no description in the physiological language of the brain states corresponding to dreaming-that-I-am-travelling-with-my-brother-in-Romania-and-eating-at-a-cocktail-party-and-walking-on-the-street-with-a-map-in-my-hand (to mention my own dream last week). This means that psychology cannot be reduced to neurophysiology – nor dream research to sleep research.

It is important to realize that most contemporary versions of materialism – in agreement with dualism – accept the *reality* of mental phenomena (Popper's "World 2"). A reductionist says that World 2 is in fact a part of the physical World 1, an emergentist claims that World 2 is an evolutionary product of World 1, while a dualist thinks that World 2 has an independent existence as a spiritual substance. A subjective idealist in turn reduces World 1 to World 2. Dualist are either interactionists (mind and body are causally related in two directions), epiphenomenalists (bodily events causally produce mental events which are causally impotent) or parallelist (body and mind are causally independent from each other).

Therefore, most philosophers today would subscribe to the Received View, which takes dreamings to be real mental acts, imaginative experiences in sleep. However, the Received View has also been challenged in three interesting ways.

Norman Malcolm's *Dreaming* (1959) relies on Ludwig Wittgenstein's remarks in *Philosophical Investigations*. Inner processes, like pains or dreams, stand "in need of outward criteria", Wittgenstein says. According to Malcolm, this means that the concept of dreaming is derived from the familiar phenomenon of telling a dream. Even though dreaming and the waking impression that one dreamt are "not one and the same thing", the only criterion of my remembering a dream is in my waking account of the dream. Malcolm concludes that dreams cannot be called experiences, illusions, or workings of the imagination: to say that a person had a thought or feeling in his sleep could only mean that he dreamt that he had one, since otherwise he was awake and not asleep at that moment.⁹

Malcolm's argument is based upon a verificationist theory of meaning, which requires public observational criteria of application for each legitimate term. This view was made popular by logical positivism, pragmatism, and operationalism – and it still has its supporters. But the major trend of analytical philosophy of science since the 1960s, the so-called *scientific realism*, is more liberal in allowing the use of theoretical terms in explanatory theories that are only indirectly testable by observation.¹⁰ Thus, scientific realism mandates the move from psychological behaviorism to cognitive psychology: it is legitimate to postulate a human consciousness (with beliefs, desires, dreams, etc.) which explains manifest bodily and verbal behavior.

The second challenge to the Received View comes from Daniel Dennett. In *Brainstorms* (1981), he points out that this view assumes two processes: the presentation of the dream experiences, and the memory-loading process which allows us to recall (some of) these experiences on waking. Dennett then proposes a "cassette-library theory" which claims that there is no presentation, i.e., no dreams, but only dream recollections derived from our memory banks at the moment of waking.¹¹ Even if this theory does not seem very plausible, Dennett's discussion at least has the merit that it brings forward theoretical alternatives – eventually testable – to the Received View.

The third challenge, clearly the most radical one, comes from the eliminative materialists (Paul and Patricia Churchland). Terms like belief, imagination, experience, desire, and dream belong to our everyday "folk psychology", which will eventually be replaced by scientific neuropsychology. In other words, folk psychology will not be reduced but eliminated by neuropsychology. Terms, which are commonly believed to refer to psychological states or experiences, will disappear from the scientific language like talk about witches, phlogiston, or ether.¹²

Eliminative materialism is an interesting project. But I am doubtful of its prospects in the elimination of such "folk-psychological" language as talk about dreams. It is a fact that we have access to our mental life from an internal, subjective, qualitative perspective. In particular, dreams are not merely neurophysiological processes, but they also have an experienced content.

Living in a Dream?

If there is a physiological distinction between sleeping and waking, it is a third-person criterion, not applicable by *me* as a test of my own state. But without such a first-person test, it might be the case, as far I am able to know, that my present experience is only a dream, not perception of the external world.

World literature contains many touching descriptions of situations where a person feels himself uncertain, whether he is dreaming or not. "We are such stuff as dreams are made on, and our little life is rounded with a sleep", Shakespeare exclaimed in *The Tempest*. In *Hamlet*, he described an alienated outsider, beset with a weakened sense of reality and a melancholic feeling of a shady dream-like existence. This ambiguous mood of mind was expressed by romantic poets of the 19th century in well-known verses – Samuel Taylor Coleridge in *Reality's Dark Dream* (1803):

"I know 'tis but a dream, yet feel more anguish
 Than if 'twere truth. It has often been so:
 Must I die under it? Is no one near?
 Will no one hear these stifled groans and wake me?,

and Edgar Allan Poe (1845):

All that we see or seem
 is but a dream within a dream.

The same theme, treated as an epistemological rather than existential problem, has been discussed by philosophers ever since Plato's dialogue *Theaetetus*. To refute the attempted definition of knowledge as perception, Socrates raises a question "you must often have heard persons to ask":

"How can you determine whether at this moment we are sleeping, and all our thoughts are a dream; or whether we are awake, and talking to one another in the waking state?"

Theaetetus replies:

"Indeed, Socrates, I do not know how it could be determined, for in both cases the facts precisely correspond; and there is no difficulty in supposing that during all this discussion we have been talking to one another in a dream."

This thesis – viz. merely illusory, imagined, or dreamed experiences do not have any internal characteristic that would distinguish them from "real" presentations – has been called the

Theaetetus theorem by the Finnish philosopher Eino Kaila (1958).¹³ Perhaps the most famous formulation of this "theorem" was given by René Descartes in his *Meditations on the First Philosophy* (1641). In exercising his method of universal doubt, Descartes ponders in his chamber:

"However, I must here consider that I am a man, and consequently that I am in the habit of sleeping and of representing to myself in my dreams those same things, or sometimes even less likely things, which insane people do when they are awake. How many times have I dreamt at night that I was in this place, dressed, by the fire, although I was quite naked in my bed? It certainly seems to me at the moment that I am not looking at this paper with my eyes closed; that this head that I shake is not asleep; that I hold out this hand intentionally and deliberately, and that I am aware of it. What happens in sleep does not seem as clear and distinct as all this. But in thinking about it carefully, I recall having often been deceived in sleep by similar illusions, and, reflecting on this circumstance more closely, I see so clearly that there are no conclusive signs by means of which one can distinguish clearly between being awake and being asleep, that I am quite astonished by it; and my astonishment is such that it is almost capable of persuading me that I am asleep now."¹⁴

The *Theaetetus theorem* does not deny that sometimes in dreaming we may strongly feel that "this is only a dream". But Plato and Descartes hoped to find a general criterion which would exclude all doubt about my state. But if a feature F of my experience is proposed as a criterion of waking, it is in each case possible to claim that I only dream that my experience has the property F. For example, the familiar everyday rule "Pinch yourself!" is not conclusive evidence for waking, since I could dream that I pinch myself and feel pain.

On the other hand, the more sophisticated criteria of reality, like the *scientia mensura* principle of the scientific realists, are inapplicable here: I cannot ask and wait for the ultimate consensus of the scientific community to decide whether I am awake or not.

The objections of Margaret Macdonald (1953) are not quite convincing.¹⁵ To say that "the content of dreams do not appear in a context of real objects" begs the question: how do I know that the context is "real"?

Kaila concluded that the *Theaetetus theorem* is valid. However, he argued that this does not lead to scepticism: Descartes failed to distinguish logical doubt from empirical uncertainty.

Even if it is always logically possible to doubt the reality of our impressions, this does not imply that we ought to be actually or empirically uncertain about the reality of our perceptions.¹⁶

Many philosophers, who accept the Theaetetus theorem for momentary experiences, have sought criteria of reality in the interrelations of longer temporal sequences of experiences. In the Sixth Meditation, Descartes concluded that "our memory can never connect our dreams with one another and with the general course of our lives, as it is in the habit of connecting the things which happen to us when we are awake".¹⁷ This consistency requirement is hardly so conclusive as Descartes implied, since sometimes a single dream at least seems to cover a whole life.¹⁸

In his *New Essays on Human Understanding* (written in 1704), G.W. Leibniz admitted that "it is not impossible, metaphysically speaking, for a dream to be as coherent and prolonged as a man's life". But he added that this is highly improbable.

"Consequently I believe that where objects of the sense are concerned the true criterion is the linking together of phenomena, i.e., the connectedness of what happens at different times and places and in the experience of different men."¹⁹

In works published in the 1930s, Eino Kaila elaborated Leibniz's discussion: invariance, regularity, lawlikeness, and predictability are defining characters of reality. As these features are matters of degree, Kaila proposed that "degrees of reality" can be defined by degrees of invariance. He distinguished three different types of things in the order of increasing invariance: first, perceptual experiences and objects (ranging from elusive ones, like after images, to more constant perceptual objects), secondly, everyday physical objects (trees, tables), and thirdly objects postulated by scientific theories.²⁰ Dream experiences have typically a low degree of invariance and regularity, so that they belong to the first levels of Kaila's hierarchy, and the worlds of our everyday life and scientific cognition have higher degrees of reality than the world of dreams.

Virtual Reality and Hyperreality: Dreaming Awake

Irregularity, unpredictability, and space-time-discontinuity (lack of invariance in Kaila's sense) give dreams a strange charm which has always attracted romantic poets and artists. Another fascinating aspect is the symbolism which seems to be common to dreams and primitive art, as Freud and Jung have argued in detail. These features or analogies of dreams (phantasms, hallucinations, myths, absurd) were consciously employed in the theoretical writings and artistic

experiments of the dadaist and surrealist schools, especially by André Breton's manifesto in 1924, and in the film *Un Chien Andalou* (1928) by Louis Buñuel and Salvador Dalí.

In *Feeling and Form* (1953), Susanne Langer presented her famous thesis that film as a poetic art uses "the dream mode". Painting as a visual arts creates on a canvas an artificial or "virtual space" which can be seen but not touched. Cinema is like a dream: by using moving camera, which takes the place of the dreamer, it creates an illusion of reality.²¹

The dramatic character of dreams – without a specific reference to films – was discussed already by Jean-Paul Sartre in *L'Imaginaire* (1940). Sartre argued against Descartes and the Theaetetus theorem that, unlike perceptions, dreams are associated with a special type of "belief" or "fascination without existential assumption": my dreams are adventures like stories in novels, they close on my consciousness in an imaginary world, without presenting themselves as apprehensions of reality:

"The dream is not fiction taken for reality, it is the Odyssey of a consciousness dedicated by itself, and in spite of itself, to build only an unreal world."²²

Sartre's argument is important, since it explains the haunting and often frustrating character of dreams: even if my dreams are authored by *my* subconsciousness, and there is often *me* playing a central role in these stories, dream-events occur to me without my full control, and frequently my dream-plans fail or change in disturbing ways.

In this sense, I have less control on the contents of my dreams than on my daydreams or waken imaginations. But, in compensation, dreams have a much stronger "verisimilitude", illusion of reality.

These observations suggest that the basic Cartesian question of dream vs. reality could be replaced by another question: am I at this moment *dreaming or seeing a film?*

This question has gained new significance in the "postmodern" communication or media society. We live in the middle of neon lights, information channels, TV-screens, movies, and videos – and reality is more and more transformed to a "web" of signs or representations of reality. As these representations can easily be manipulated and distorted by new techniques like "image processing", our control and sense of reality is weakened. The most radical postmodern philosophers are claiming that reality itself has ceased to exist: it is transformed to a *hyperreality* or a *simulacrum*, an apparent copy that is intended to deceive us. In an exaggerated but amusing way, Jean Baudrillard urges that our cultural products or "hyperreal" signs do not any more reflect

a basic existing reality or even mask or pervert it, but rather "mask the absence of reality". Thus, for example,

"Disneyland is there to conceal the fact that it is the 'real' country, all of 'real' America, which *is* Disneyland."²³

(To Baudrillard's delight, a new European Disneyland has been opened near Paris.)

Another successor problem to the dream vs. reality issue is created by the new computer and media technologies that allow us to be immersed in a three-dimensional *virtual reality*. Here we are not any more external observers, but also actors or participants in a synthetic "cyberspace", created by our interaction via data gloves and helmets with a program in the memory of a digital computer.²⁴

Virtual reality brings to a completion the old technological dream of creating a perfect illusion of reality. But as Jaron Lanier, the chief prophet of this technoutopia, remarks, we enter awake this new level of reality. In the most advanced applications, two or several persons may meet each other in the same cyberspace.

So how do we know whether we just now are living *in the real world or in virtual reality*? Is the Leibniz-Kaila criterion of invariance still applicable? At least in the present stage of technology, the answer seems to be clear. The objects of virtual reality are shadowy figments like the "toons" in the Toontown of *Roger Rabbit*: "we" can walk through or fly around "them". In this sense, virtual reality is not "really real", but still has some characteristics of dreams and phantasms.

Conclusion: Why Dreams?

To conclude my lecture, we may still wonder why so many men of modern culture are so much preoccupied with dreams – especially with artificially constructed daydreams. Why is not our faculty and activity of "nightdreaming" in sleep enough? And what's wrong with our ordinary reality, as we wish to construct artificial copies of it?

I think the answer has to be sought from two different directions.

First, it is obvious that both nocturnal and daytime products of our imaginative faculty satisfy a vital human need, and are indispensable for the health of our mental life. Where such escapism is consumed in moderation, it gives us strength and insight in our "normal" lives.

But – here as elsewhere – an overdose of a good medicine may be fatal. This is illustrated by the tragic hero Jim Morrison (1944–1971), the leader of the rock band The Doors. With the hint

from the mystic poet William Blake, Morrison wished to be a shaman and to open the "door" for his followers who "break on through to the other side". However, the belief that this "other side" is a transcendent reality, whose denizens could deliver us supernatural powers, turns out to be false: the door leads only to a dark corner of World 2, to a rear chamber of our own mind, to a river of no return, to self-destruction.

Secondly, the motive for constructing virtual realities may be partly aesthetic (interactive media art is indeed an avant garde movement), but primarily it springs up from the most basic ambition of human technology: to master or dominate nature. But here "nature" is a peculiar combination of external reality and our own internal "nature". Thus, the ultimate desire is to control reality and our dreams at the same time.

But again an overdose is unhealthy: man's fervent passion to dominate nature has led to an ecological crisis – and may result also in an egological catastrophe. So I am inclined – with the Finnish philosopher Georg Henrik von Wright – to take a moderately pessimistic outlook on technological utopias.²⁵ Science should teach us to understand nature and to live in harmony with it. Therefore, perhaps we should let dreams be dreams, and not strive to make all of our dreams real.

NOTES

A lecture presented at the opening of the 11th European Congress on Sleep Research, Helsinki, July 6, 1992. A Finnish translation 'Uni ja todellisuus' has appeared in *Mielenterveys* 32:1 (1993), 11-18.

1 See S. Freud, *The Interpretation of Dreams*, Allen & Unwin, London, 1951; *Introductory Lectures on Psychoanalysis*, Penguin Books, Harmondsworth, 1973.

2 See A.R. Manser, 'Dreams', in P. Edwards (ed.), *The Encyclopedia of Philosophy*, vol. 2, Collier and Macmillan, London, 1967, pp. 414–417.

3 Remember also Joseph's interpretation of the Pharaoh's dream.

4 Aristotle's writings on dreams are a part of his *Parva naturalia*. See W.D. Ross (ed.), *The Works of Aristotle*, vol. III, Clarendon Press, Oxford, 1931.

5 See Plato, *The Collected Dialogues*, Princeton University Press, Princeton, 1961, p. 571.

6 See P. Ricoeur, *Freud and Philosophy: An Essay on Interpretation*, Yale University Press, New Haven and London, 1970.

7 See C.G. Jung, *Man and his Symbols*, Aldus, London, 1979.

8 Cf. D. Dennett, 'Are Dreams Experiences?', in *Brainstorms: Philosophical Essays on Mind and Psychology*, Harvester Press, Brighton, 1981, pp. 129–148.

9 See N. Malcolm, *Dreaming*, Humanities Press, New York, 1959; D. Pears, 'Dreaming', in D.F. Gustafson (ed.), *Essays in Philosophical Psychology*, Macmillan, London, 1967, pp. 277–298.

10 See, e.g., R. Tuomela, *Human Action and its Explanation*, D. Reidel, Dordrecht, 1977; P.M. Churchland, *Matter and Consciousness*, Rev. ed., The MIT Press, Cambridge, MA, 1988; I. Niiniluoto, *Critical Scientific Realism*, Oxford University Press, Oxford, 1999.

- 11 See Dennett, *op. cit.* (note 8).
- 12 See P.S. Churchland, *Neurophilosophy: Toward a Unified Understanding of the Mind/Brain*, The MIT Press, Cambridge, MA, 1986.
- 13 See E. Kaila, *Reality and Experience*, D. Reidel, Dordrecht, 1979, p. 261.
- 14 See R. Descartes, *Discourse on Method and The Meditations*, Penguin Books, Harmondsworth, 1968, pp. 96–97.
- 15 See M. Macdonald, 'Sleeping and Waking', in Gustafson, *op. cit.* (note 9), pp. 248–264.
- 16 See Kaila, *op. cit.* (note 13), p. 262.
- 17 See Descartes, *op. cit.* (note 14), p. 168.
- 18 This is what happens in the dream of Jesus in Martin Scorsese's *The Last Temptation of Christ* (1988). The film is based on the novel by Nikos Kazantzakis.
- 19 See G.W. Leibniz, *New Essays on Human Understanding*, Abridged Edition, Cambridge University Press, Cambridge, 1982, p. 374.
- 20 See Kaila, *op. cit.* (note 13), pp. 274–278.
- 21 See S.K. Langer, *Feeling and Form*, Routledge and Kegan Paul, London, 1953, pp. 411–415.
- 22 See J.-P. Sartre, *The Psychology of Imagination*, Methuen, London, 1972, p. 206.
- 23 See J. Baudrillard, 'The Precession of Simulacra', in B. Wallis (ed.), *Art after Modernism: Rethinking Representation*, The New Museum of Contemporary Art, New York, 1984, p. 262.
- 24 See H. Rheingold, *Virtual Reality*, Summit Books, New York, 1991. [A recent film playing with this issue is *The Matrix* (2000).]
- 25 See G.H. von Wright, 'Wissenschaft und Vernunft', *Rechtstheorie* 18 (1987), 15–33.