

## DREAMS, SKEPTICISM, AND SCIENTIFIC RESEARCH\*

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The topic of dreaming has received a good deal of attention in recent years, owing in large measure to a provocative paper by Margaret Macdonald<sup>1</sup> and two publications by Norman Malcolm.<sup>2</sup> Both Macdonald and Malcolm argue, from rather different directions, against the historically well-entrenched idea that dream states are sufficiently like waking states that we may mistake one for the other. Their strategy is to try to undermine Cartesian skepticism by arguing that there are radical conceptual disparities between dreaming and waking. If the 'anti-traditionalist' account of Macdonald and Malcolm could be established as correct, it would appear to follow that dream skepticism has no foothold. I shall argue, however, that purely conceptual considerations do not clearly favor the Macdonald-Malcolm theory, and that future experimental studies may refute it.

Much of the critical literature engendered by the aforementioned papers attempts to reinstate the traditional view of dreaming.<sup>3</sup> Yet there is a notable lack of any precise formulation of the view being defended. I hope to repair this deficiency in Part II of the present essay, by suggesting just what the traditional account has looked like; there I shall also discuss its epistemic status. In order to reach that point, however, I shall begin by examining Cartesian dream skepticism along with some standard criticisms that have been leveled against it. My argument in Part I will show that dream skepticism can repel those criticisms, and this in turn will lead us to questions about the nature of dreaming.

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I

Descartes' skeptical argument is essentially as follows:

- (1) On past occasions I have dreamt that I was in front of the fireplace, when in fact I was in bed asleep.
- (2) On some such occasions I was deceived.
- (3) Therefore, although I am at this moment convinced that I am awake and perceiving, I must admit that I may instead be asleep and dreaming.

Attacks on this argument are often aimed at the second premise. In order to evaluate them, however, we must first consider the senses in which dreams might be regarded as deceptive. The famous passage in Meditation II suggests the following formulation: *a* is deceived by dream D about S if (i) *a* is asleep; (ii) as a result of D, it seems to *a* that a certain state of affairs S exists; (iii) S does not exist. This seems to be precisely what G.E. Moore had in mind when he wrote:

It certainly does, however, often happen that we do dream that so-and-so is the case, without at the time thinking that we are only dreaming; and in such cases, I think we may perhaps be said to *think* that what we dream is the case *is* the case, and to be deceived if it is not the case; and therefore also, in such cases, if what we dream to be the case happens also to *be* the case, we may be said to be thinking truly that it is the case, although we certainly do not *know* that it is.<sup>4</sup>

Now, according to both Descartes and Moore, the concept of dreaming seems to make room for the concept of believing (and perhaps other things as well); Moore's position is stronger than Descartes', inasmuch as it supposes that a dream is accompanied by, or consists of, one or more beliefs.<sup>5</sup> It follows from their views that dreams involve beliefs, acquired during sleep. To acquire a false belief in this way is to be 'deceived by a dream'.

Descartes and Moore think that people are sometimes deceived *while* they are asleep. This might be called 'concurrent dream deception' (which I shall abbreviate as CDD). A more conservative claim would be that people are deceived by dreams, but that their false beliefs do not come about before they awaken. This view can be called 'retrospective dream deception' (RDD), and analyzed as follows: *a* is deceived retrospectively by dream D about S if and only if (i) *a* is awake; (ii) while awake, *a* comes to hold a false belief about S; (iii) *a*'s false belief about S is a causal result of D.

There is, I think, no difficulty in acknowledging the possibility of RDD. But it is also clear that RDD provides no basis for Cartesian skepticism; the second premise of Descartes' argument requires something stronger. Thus, we must face the question of whether CDD represents a live possibility. We can say that a person is undergoing CDD, that is, he is deceived concurrently by dream D about S, if and only if (i) he is asleep; (ii) while asleep, he acquires the false belief that some state of affairs S exists; (iii) his belief is a causal result of D.

Although the proposed formula for CDD makes use of the notion of belief, it does not entail a commitment to any special analysis of belief. It should be clear that the proposal is consistent with a purely dispositional account, in the behaviorist tradition. But one may also speak of beliefs as *occurring*, or coming into existence with conscious awareness, during sleep. Without presupposing either analysis of belief, however, some philosophers have held that the impossibility of CDD (and thus the untenability of dream skepticism) could be derived from an appeal to the *concept* of dreaming. I believe this to be a mistake, although a subtle one, given the *prima facie* plausibility of their position. For example, L.E. Thomas claims that

[i]f when I was presumably awake I was in any doubt as to whether I was not really dreaming, then no supplementary observations could help to resolve any doubts one whit. For if I were indeed dreaming then any additional observations would themselves be dream observations.<sup>6</sup>

Margaret Macdonald accepts a view of the same sort:

According to Descartes a dreamer supposes that what he dreams are real objects and incidents and is thus deceived. But this is false. At most a dreamer may dream that he affirms the reality of what he dreams.<sup>7</sup>

And Fred. I. Dretske has recently taken the position that

[s]uch arguments as 'He imagined he saw a rat' of 'He dreamed he saw a dragon' must be understood, not as saying that he visually differentiated a dream dragon but, rather, that he imagined he saw (visually differentiated) a rat or dreamed he saw a dragon (in which case no visual differentiation occurs; hence the existence condition is not appropriately invoked).<sup>8</sup>

These quotations can be boiled down to a formula: if *a* is dreaming, he cannot  $\phi_D$  (believe that *p*, wish that *p*, suppose that *p*,

seem to see that  $\hat{p}$ , etc.); instead, he can only dream that he  $\phi_p$ 's. Is there any reason to accept this view?

I think that a negative answer is justified. In the first place, it is clearly not the case that 'a dreamt that  $p$ ' entails ' $p$ '. (If I dream that Boston is in Massachusetts, it hardly follows that Boston is *not* in Massachusetts.) Nor does the situation change when ' $p$ ' is replaced by a psychological verb. This point is most obvious if ' $p$ ' is replaced by 'dream' ('a dreamt that he dreamt' cannot entail 'a did not dream'), but there seems to be no reason for rejecting it in the case of other psychological verbs either. So far, then, the logic of 'dream' does not force us to conclude that a dreamer is incapable of acquiring a belief, making an observation (Thomas), affirming something to be true (Macdonald), or making visual differentiations (Dretske). There is, to be sure, a crucial difference between (a) dreaming that I believe (observe, affirm, etc.) something, and (b) really believing (observing, affirming, etc.) something while asleep. The point, however, is that the possibility of a state of affairs such as (a) does not preclude the possibility of a state of affairs such as (b).

It is easy to see why philosophers may have been led to think that the possibility of (a) *does* preclude the possibility of (b). Suppose that while sleeping, a person met with certain beliefs and thoughts. It would be difficult to maintain that only *some* of these were dream items, for we have no clear criterion for sorting out mental processes during sleep in this way. It seems to follow, therefore, that beliefs acquired during sleep are dream-beliefs; thoughts occurring during sleep are dream-thoughts, etc. But this terminology can easily lead to a mistake, for a 'dream-belief' could be either a belief I only dreamt I held, or an actual belief acquired while I was asleep. Anyone who fails to see the latter interpretation might then think it true that a belief which I acquire during my sleep is a belief which I only dream that I hold, i.e., that there is no difference between acquiring a belief while asleep, and acquiring a belief in a dream. In the absence of independent arguments, however, this conclusion is simply an *ignoratio elenchi*.<sup>9</sup>

The formula for CDD required that (i) the person is asleep; (ii) he acquires a false belief during sleep; and (iii) the false belief is a causal result of his dream. However, Leonard Linsky claims that

... a man who is dreaming does not have a false belief that he is, e.g., flying by flapping his wings, any more than the man

who is watching himself on the screen in the cinema has a false belief that he is riding a horse in Arizona and not sitting in the cinema. And notice that the dream and the movie can be frightening nevertheless. It would be as wrong to argue that because I am frightened by my dream, I must believe that the things I dream about are really happening as it would be to argue that because the movie frightened me, I must have believed that the things I saw on the screen were really occurring (whatever *that* means). And yet we might comfort the frightened child by saying 'It's only a movie' just as we might say to him, 'It *was* only a dream'.<sup>10</sup>

There is some truth in Linsky's position, inasmuch as 'a dreamt that p' does not entail 'a believed that p'. It seems to me, however, that there is an important difference between the dream case and the cinema case. We cease to be frightened by the dream once we realize that it *was* a dream; this suggests that the dream involved a false belief which is eradicated by waking experience. But adults do not cease to be frightened by a film simply in virtue of an analogous 'post-cinematic' realization. So I agree that adults who are frightened by a film are not necessarily acquiring false beliefs; perhaps Coleridge's phrase 'willing suspension of disbelief' is a more apt description of their situation. Nonetheless, we can comfort a frightened adult (or a frightened child) by saying 'It was only a dream', just as we might comfort a frightened child by saying 'It's only a movie'. And in all of these cases we have presumably shown the person that what he thought to be real is not; i.e., we have induced him to give up a false belief.

The case where we wake up frightened seems to provide some evidence for CDD. But the formula for CDD allows for non-frightening false beliefs to be acquired during sleep. If it is admitted that fear-producing beliefs can be acquired in sleep, then these other beliefs would seem admissible as well. We are not compelled, of course, to say that any beliefs are acquired during sleep; one *could* hold that they come about as we awaken. I shall suggest later on that future physiological discoveries may help to adjudicate between these alternatives (and even our present knowledge points toward the first). But this is only to say what I have already admitted — that the issue cannot be resolved by a simple appeal to a concept of dreaming. Certainly there is some support for the view that CDD may occur. In any case, I have argued that a standard reason for rejecting this view is inadequate.

It is true, I think, that in everyday life CDD is of little

interest. Furthermore, if a person acquires a false belief during sleep, but one which vanishes when he awakens, it is not likely to be manifested in behavior. But CDD does assume a prominent theoretical role, for Descartes' dream argument could not have arisen without it.

This last point is perhaps not obvious; one might be inclined to suppose that Descartes' dream problem could be formulated even if there existed no possibility of acquiring beliefs during sleep. For it could *still* be the case that people dream. And my present musing (so the argument would go), instead of being real, would only be dreamt. If so, it would follow that I am deceived.<sup>11</sup>

But what does 'only dreamt' come to now? The proponent of this argument is treating 'dream' as an irreducible predicate; i.e., it is never the case, on his view, that we may replace 'I dreamt that p' by 'During sleep I came to believe that p', etc. But then how does he know that in cases where I 'only dream' it follows that I am deceived? For all we know, this irreducible predicate ('dreams') behaves like 'imagines' rather than 'falsely believes'.<sup>12</sup> If this is true, dreaming does not entail deception, and the possibility that I might now 'only be dreaming' provides no Cartesian worry whatever. The only escape would be to stipulate that '-p & a dreamt that p' entails 'a was deceived'. This procedure is wholly indefensible, however. In the first place it does not fit with our usual notion of dreaming, according to which dreams are at least very often like fictions which we do not take seriously. Secondly, if 'dreams that' does not at least entail 'believes that' or 'thinks that', the proposed stipulation seems unintelligible.

The connection which philosophers have seen between dream skepticism and the problem of acquiring beliefs during sleep may be summed up as follows. Suppose it is granted that Descartes' skeptical conclusion does follow from his two premisses. Furthermore, his first premise seems unexceptionable. His second premise, which requires that sleepers can be deceived, presupposes that a sleeper can acquire false beliefs. Thus, the question of whether the dream argument is sound reduces to the question of whether sleepers can acquire false beliefs (CDD).

## II

I have been arguing that Cartesian skepticism can be defended against some common sorts of criticism, and I have mentioned considerations which lend *prima facie* plausibility to CDD. But since any defense of traditional dream skepticism appears to rest

squarely on the claim that a sleeper may acquire false beliefs from his dream, we must inquire further into the status of that claim.

It will be useful to begin by suggesting a fairly precise account of what dreaming is:

$a$  is dreaming about  $X$ , if and only if  $a$  is asleep, and at least one of the following conditions is met:

(i) while asleep,  $a$  comes to  $\phi$  about (of, for)  $X$ , where ' $\phi$ ' is replaced by an intentional<sup>13</sup> verb;

(ii) while asleep,  $a$  comes to seem to  $\psi$   $X$ , where ' $\psi$ ' is replaced by a perception verb;

(iii) while asleep  $a$  comes to be in emotional state  $\theta$  directed toward  $X$ .

This approach, I believe, is consonant with a traditional approach to dreaming, although it could be interpreted either mentalistically or behavioristically (via EEG patterns, galvanic skin responses, waking past-tense reports, etc.). Now, it is possible that something further should be added, or that one of the conditions should be expunged. But I do not want to argue that here. The more important question is whether the occurrence of psychological states referred to in (i) – (iii) (and most important, the acquisition of belief) is compatible with a sleeping state.

I do not believe that we can conclusively derive either an affirmative or a negative answer from the concept of dreaming. Thus, in one clear sense, no answer is available at present. But this is mainly because we do not have the equipment to ascertain the content of anyone's mental life, waking or sleeping. One might think of the electroencephalograph, but it has severely restricted applications. The EEG machine can be used as an indicator *that* someone's mental life is ongoing; *what* that content is lies largely outside the machine's diagnostic capabilities. From this point of view, it would appear possible (à la Malcolm) that dreaming is an irreducible psychological attitude, nevertheless (contra Malcolm) contingently associated with mental states such as judgments or beliefs. What we need, of course, is a machine capable of giving physiological criteria of subjectively distinguishable states: thought, sensations, etc. But such a 'cerebroscope' at present exists only in the imaginations of philosophers.

Even though the EEG machine cannot vindicate the traditional account of dreaming, there are biological reasons for thinking that future scientific developments *might* vindicate it. There are already apparent many interesting biological similarities between Stage I/REM sleep and the waking state, and recent research

indicates 'that in many of its characteristics the D-state bears a much closer resemblance to waking than to S-sleep'.<sup>14</sup>

This, of course, does not prove that the traditional account of dreaming is true. But what would count as a proof? Let us suppose that we did have the ideal brain machine, described two paragraphs back, along with a well-confirmed neurophysiological theory, such that the machine's readings could be regarded as an accurate indicator of a subject's mental life. Granting that it provided a means for determining when a waking subject is having beliefs, thinking discursively, etc., we should have powerful grounds for attributing these states to a sleeping subject if at times during the night his brain activity registered similarly on the machine.<sup>15</sup> Appropriate dream reports would confirm these attributions.

Such a result would count very heavily in favor of the traditional view of dreaming. But other cases are surely *possible*. Suppose that the physiological states associated with waking beliefs and images were found *not* to be present when people reported having had beliefs etc. during sleep. Would this prove that sleepers do not acquire beliefs? Not necessarily, I think. We might then look to see whether a different physiological state (i.e., during sleep) could consistently be associated with reports of beliefs acquired during sleep. So, if a subject reported that just prior to awakening, he had been in a particular belief state, and if a prior physiological state (during sleep) could be consistently associated with this kind of report, then we could perhaps still reasonably conclude that beliefs occur in sleep. We could also then regard the physiological states associated with sleeping beliefs as functionally equivalent to the physiological states associated with waking beliefs. But at this point other possibilities begin to emerge. It could be, for example, that the measured physiological states during sleep are (unexperienced) causes of beliefs which occur as we awaken. A decision here would perhaps require appeal to additional physiological data concerning experiences in general, together with an evaluation of the explanatory power of rival theories.<sup>16</sup> The important point, however, is that the concept of dreaming cannot by itself yield a solution.

A final experimental result may be envisaged for the sake of completeness. If the brain machine gave accurate results for waking life, and failed to indicate the presence of beliefs, etc. when applied to sleepers, and if no consistent physiological states could be discovered to correlate with the beliefs, etc. which a subject claimed to have had during sleep — then we ought to



conclude that in fact he did not come to be in those psychological states during sleep. Needless to say, I seriously doubt that this would happen, since our present EEG studies already *suggest* the presence of psychological states during sleep. But such a situation is at least logically possible. And if it did occur, an investigation might search for neuro-physiological events occurring during the moments of awakening – events which would explain the subject's false belief that he had been in certain states while asleep. It is hardly conceivable, I think, that this inquiry also would produce a negative result.

If the final solution (just envisaged) came to pass, the traditional view of dreaming would call for radical revision. But it seems to me that this is a possibility which must be countenanced, as can be seen from reflection upon the fate of many of our earlier theories (witches and phlogiston are but two examples). Conditions (i) – (iii) (given at the beginning of this section), therefore, constitute an analysis of dreaming, insofar as they indicate what the traditional concept of dreaming has looked like. But this should not be taken to indicate that the concept is immune to revision. The discovery that beliefs, etc. can be acquired during sleep, I have suggested, would call for *no* conceptual revisions; but I have imagined other discoveries which would alter our concept of dreaming. In any case, it is folly to attempt to secure through analysis those conclusions to which experiment is clearly relevant.

I conclude that CDD, and with it Cartesian skepticism, is a possibility so far as our present concept of dreaming is concerned; conceptual considerations have failed to rule it out. It is also a possibility given our present scientific knowledge about dreaming. Thus, contrary to both the traditional view and the anti-traditional view, I am maintaining that questions concerning the nature of dreaming cannot be settled on purely *a priori* grounds. Nonetheless, if my position is correct, it has been established *a priori* that *either* the traditional view or the Macdonald-Malcolm view may turn out to be true.

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## NOTES

- <sup>1</sup> 'Sleeping and Waking', *Mind*, LXII (1953), pp. 202-215.
- <sup>2</sup> 'Dreaming and Skepticism', *The Philosophical Review*, (1956), pp. 14-37; *Dreaming* (London, 1962).
- <sup>3</sup> Some examples: A.J. Ayer, 'Professor Malcolm on Dreams', *The Journal of Philosophy*, LVII (1960), pp. 517-535; V.C. Chappell, 'The Concept of Dreaming', *The Philosophical Quarterly*, 52 (1963), pp. 193-213; Charles S. Chihara, 'What Dreams are Made On', *Theoria*, 31 (1965), pp. 145-158; H.D. Lewis, *Dreaming and Experience* (London, 1968); Don Locke, *Myself and Others* (Oxford, 1968), esp. pp. 124-131; H. Putnam, 'Dreaming and "Depth Grammar"', in R.J. Butler (ed.), *Analytical Philosophy, First Series* (Oxford, 1966), pp. 211-235; R.M. Yost, Jr., 'Professor Malcolm on Dreaming and Scepticism', *The Philosophical Quarterly*, 9 (1959), pp. 142-151 and 231-243; R.M. Yost, Jr. and Donald Kalish, 'Miss Macdonald on Sleeping and Waking', *The Philosophical Quarterly*, V (1955), pp. 109-124.
- <sup>4</sup> 'Certainty', *Philosophical Papers* (Woking and London, 1959), p.246.
- <sup>5</sup> According to Moore, if I dream that *p* without thinking that I am dreaming, then I think that *p*. Presumably, if I dream that *p* while thinking that I am dreaming, then I do not think that *p*. But in both cases dreaming involves some thought or other. And while thinking may not be the same as believing, thinking that *p* seems indistinguishable from believing that *p*. See Zeno Vendler, *Linguistics in Philosophy* (Ithaca, 1967), p. 111.
- <sup>6</sup> 'Waking and Dreaming', *Analysis*, XIII (1953), pp. 123-124.
- <sup>7</sup> 'Sleeping and Waking', p. 208. Macdonald's concluding remarks on p. 215 are also subject to the criticism I am about to offer.
- <sup>8</sup> *Seeing and Knowing* (New York and London, 1969), p. 46n.
- <sup>9</sup> Norman Malcolm has offered an argument that might appear to rule out the possibility of actual (vs. 'dreamt') beliefs during sleep. The main principle is that 'if a person is in any state of consciousness it logically follows that he is not sound asleep' ('Dreaming and Skepticism', *The Philosophical Review*, LXV (1956), p. 22). Two comments are in order here. First, this claim rests on the questionable assumption (cf. *Dreaming*, p. 12) that 'asleep' and 'conscious' are contradictory terms. Second, Malcolm's position, even if correct, does not eliminate the acquisition of *dispositional* beliefs during sleep. Thus, the possibility of false beliefs during sleep remains, and dream skepticism is not yet defeated. (Malcolm has a further, little noticed argument against dream skepticism, which I have discussed in my "Performatives and Dream Skepticism", *Philosophical Studies*, 25 (1974), pp. 295-297.)
- <sup>10</sup> 'Deception', *Inquiry*, VI (1963), p. 165.
- <sup>11</sup> Malcolm mentions this argument, which he attributes to Geoffrey Warnock, in *Dreaming*, pp. 117-118.
- <sup>12</sup> 'Imagines' can mean 'believes'. But there is another sense of 'imagine', brought out by the request 'Imagine that you are a millionaire'. The latter is the one that my discussion presupposes. See Stanley Munsat, *The Concept of Memory* (New York, 1967), pp. 89-90.
- <sup>13</sup> I am using 'intentional' in a fairly well entrenched sense; for marks of intentionality, see Roderick M. Chisholm, *Perceiving: A Philosophical Study* (Ithaca, 1957), Chapter 11, and G.E.M. Anscombe, 'The In-

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- tentionality' of Sensation: A Grammatical Feature', in R.J. Butler (ed.), *Analytical Philosophy, Second Series* (Oxford, 1968), p. 161.
- <sup>14</sup> Ernest Hartmann, *The Biology of Dreaming* (Springfield, Illinois, 1967), p. 147. 'S-sleep' refers to periods of sleep not associated with dreaming.
- <sup>15</sup> Malcolm, of course, would deny this. For a defense of the point, see Charles Landesman, 'Dreams: Two Types of Explanations', *Philosophical Studies*, XV (1964), p. 18. Cf. Putnam, *op.cit.*, esp. pp. 223-227.
- <sup>16</sup> This point is developed by Daniel C. Dennett in his article, 'Are Dreams Experiences?', *The Philosophical Review*, LXXXV (1976), pp. 151-171.