Dreaming and Imagination*

Jonathan Ichikawa
ichikawa@gmail.com

Forthcoming in *Mind & Language*. Please refer to published version.

Abstract: I argue, on philosophical, psychological, and neurophysiological grounds, that contrary to an orthodox view, dreams do not typically involve misleading sensations and false beliefs. I am thus in partial agreement with Colin McGinn, who has argued that we do not have misleading sensory experience while dreaming, and partially in agreement with Ernest Sosa, who has argued that we do not form false beliefs while dreaming. Rather, on my view, dreams involve mental imagery and propositional imagination. I defend the imagination model of dreaming from some objections.

1. The Orthodox View of Dreaming

It is widely assumed, among philosophers, psychologists, and the folk, that dreams sometimes deceive us: that sometimes, we falsely believe that *p* because we have misleading sensory experiences as of *p*, because we are dreaming that *p*. This is why Descartes thinks that the possibility that he is dreaming undermines knowledge of the world around him. 'How often,' Descartes writes, 'does my evening slumber persuade me of such ordinary things as these: that I am here, clothed in my dressing gown, seated next to the fireplace—when in fact I am lying undressed in bed!' (1986, p. 105) We naturally read 'persuasion' here to involve belief. Contemporary dream psychologist J. Allen Hobson is explicit:

> What is the difference between my dreams and madness? What is the difference between my dream experience and the waking experience of someone who is psychotic, demented, or just plain crazy? In terms of the nature of the experience, there is none. In my New Orleans dream I hallucinated: I saw and heard things that weren't in my bedroom. I was deluded: I believed that the dream actions were real despite gross internal inconsistencies. I was disoriented: I believed that I was in an old hotel in New Orleans when I was actually in a house in Ogunquit. (1999, p. 5)

I take Hobson's approach to be orthodoxy. The orthodox view is helpfully considered, for my purposes, as involving two views, *percepts* and *beliefs*.

Percepts: Dreaming involves percepts—sensory experiences of the sort we experience during our waking interaction with the world. These percepts are typically misleading; they give

* This paper owes much of its development to many helpful conversations, for which I am grateful. I particularly thank Tamar Szabó Gendler, Alvin Goldman, Allan Hazlett, Benjamin Jarvis, Kelby Mason, Al Mele, Joshua Schechter, Eric Schwitzgebel, David Sosa, Ernest Sosa, Jim Stone, Jason Turner, John Turri, Neil Van Leeuwen, Brian Weatherson, and Dean Zimmerman.

us the experience as of perceiving something that is not there.

Beliefs: Dreaming involves beliefs—typically false ones. When we dream that *p*, we believe that *p*. Since in many such cases, *p* is false, dreaming often involves false beliefs.

The role of these two assumptions in standard arguments for dream skepticism should be obvious.

Note that to adopt *percepts* and *beliefs* is not yet to commit to any particular explanation of how it is that percepts and beliefs arise from dreams; Hobson's own view is that they are the product of spontaneous, random activity in the brain stem, but the orthodox picture, as I am specifying it, is also consistent with a more Freudean picture, according to which the percepts and beliefs we experience arise during dreams as the result of higher-level mental activity. The conjunction of *percepts* and *beliefs* do not fully constitute the orthodox view; it may be that on the orthodox view, for instance, the beliefs are *caused* by percepts in the usual ways. But the orthodox view at least entails *percepts* and *beliefs*.

There is room to question the orthodoxy from a philosophical point of view. Kendall Walton (1990, p. 49-50) mentions in passing the possibility that dreams are imaginative exercises, and may not involve false beliefs.

> Dreams are beginning to look more and more like games of make-believe, and dream experiences like representational works of art and other props. … Perhaps [the dreamer] doesn't even realize that the propositions in question are *merely* fictional…. Perhaps (as Descartes assumes) dreamers believe what is only fictional in their dreams, as well as imagining it. We needn't decide.

Recently, more explicit philosophical challenges have been raised against the orthodox view. Colin McGinn rejects *percepts*; Ernest Sosa rejects *beliefs*. (McGinn explicitly endorses *beliefs*; Sosa does not commit one way or the other with regard to *percepts*, but has indicated in conversation that he finds the orthodox picture plausible here.) My project here is to deny both *percepts* and *beliefs*. I will defend a strong version of the *imagination model of dreaming*, according to which dreams typically involve neither misleading percepts nor false beliefs, but instead involve imaginative experiences. My defense will involve a synthesis of philosophical and scientific considerations.

2. Percept and Imagery

McGinn, Sosa, and I all take it for granted that dreams involve experiences, so I will not attempt to deny *percepts* by denying that there is something it is like to dream.[1] I must instead argue that although dreams do involve experiences, they do not involve percepts—the kinds of sensory experiences we experience when engaging with the world around us. Instead, I will argue that they involve mental *imagery*. Call this view *imagery*. Visual imagery is the kind of experience one undergoes when imagining what something looks like. Visual imagery is in some sense

[1] I am thus rejecting the approach of Malcolm 1959.

similar to visual sensation, but it is a different kind of experience. Likewise for auditory, tactile, olfactory, and gustatory imagery. Imagery involves the *simulation* of percept.

2.1. 'The Imagery Debate'

There is something called the 'imagery debate' in cognitive science; it is characterized paradigmatically by the many contributions from two of its principal players, Stephen Kosslyn and Zenon Pylyshnyn. Nothing I say in this paper bears on that controversy. The commitments I take on in my discussion of imagery are minimal: there is a kind of mental experience called imagery, usefully thought of as the simulation of percept. It is not identical to percept, but it is in important respects similar to it. At issue in the Kosslyn-Pylyshyn debate is whether the experience of visual images involves the inspection of a picture-like entity in the head—a question I need take no position on. Even Pylyshnyn, the staunch anti-pictorialist, is happy to admit that the processing of visual imagery involves many of the same cognitive mechanisms as does visual perception, a conclusion Kosslyn has emphasized with compelling neuroscientific data. Pylyshnyn's main concern seems to be a rejection of a 'Cartesian theater' approach to visual imagery. Indeed, Pylyshnyn 2002 can be read as presupposing the similarity of visual perception and visual imagery when he complains that '[d]espite the widespread questions of the intuitive picture [Cartesian theater] view in visual perception, this view remains very nearly universal in the study of mental imagery.' (p. 157) In the abstract to the same piece, Pylyshnyn admits that 'it is arguably the case that imagery and vision involve some of the same mechanisms,' while hastening to add that 'this tells us very little about the nature of mental imagery and does not support claims about the pictorial nature of mental images.' In his 1999, he writes that subjects engaging with imagery 'make the same thing happen in their imagining' that they do when visually scanning a field that is before them. (p. 18)

My minimal conception of imagery carries no commitment to picture-like underlying realizations of images (although it is consistent with such realizations). I assume only that there is a genuine experience of visual imagery, and that it incorporates many of the same processing systems as does visual experience. This is uncontroversial. Alvin Goldman, 2006, provides an effective survey of some of the cognitive scientific bases for this claim. (pp. 152-57) For instance, Michael Spivey et. al., 2000, has demonstrated that subjects who generate visual images produce saccadic eye movements corresponding to the movements they would make if they were visually examining the real scene corresponding to the imagined one. In a classic study, confirmed by later experiments, Perky 1910, demonstrated that visual perception and visual imagery can interfere with one another. Bisiach and Luzzatti 1978 demonstrated that patients with 'hemispatial neglect'—a tendency to ignore half of one's visual field in perception—ignore, or fail to generate, the corresponding region in their mental imagery. Neuroscientific evidence also confirms that similar processes are at work in vision and visual imagery (see Goldman 2006, pp. 154-55).

This similarity should be unsurprising for conceptual reasons: imaginative states *simulate* non-imaginative states; the *point* of visual imagery is to be able to enter into an experience similar to the experience of visual perception.

2.2. Images are not percepts.

Is an image different in kind from a percept? Hume, notoriously, thought not—'impressions' and 'ideas' differ only in degree of *vivacity*. Hume, 1978, I §1 ¶5, writes: 'That idea of red, which we form in the dark, and that impression, which strikes our eyes in sun-shine, differ only in degree, not in nature.' As many authors have observed, this simple picture is surely wrong—vivid images can be more vivid than are faint percepts. But what of the more general suggestion that images differ from percepts only in superficial ways, and not in kind? This is David Sosa's view. Sosa writes (2006, pp. 315, 317) that '[i]mages and percepts are deeply alike; their differences, such as they may be, are inessential to their basic character,' and later characterizes difference between them as 'like the difference between words written in pencil and those written in pen.' Sosa is responding to McGinn, who defends a deeper distinction. McGinn offers a number of characteristic differences between images and percepts; Sosa is arguing that none of the elements in question reflect interesting distinguishing features.

I agree with Sosa that many of the characteristics McGinn lists as typical of images and not percepts are not clear cases of essential qualities of images that are inconsistent with percepthood; nevertheless, I believe that there are sufficient differences to justify treating them as separate categories. At least one element on McGinn's list, I think, captures such differences: the one McGinn calls 'the will'. Imagery, unlike sensation, McGinn suggests, is *subject to the will*. This is not a new idea. Wittgenstein, whom McGinn cites, writes:

> We do not 'banish' visual impressions, as we do images. And we don't say of the former, either, that we might *not* banish them.
>
> And:
>
> The concept of imagining is rather like one of doing than receiving. Imagining might be called a creative act. (And is of course so called.) (1967, §§621, 633)

Sartre makes essentially the same point in his opus on the imagination:

> A perceptual consciousness appears to itself as being passive. An imaginative consciousness, on the contrary, presents itself to itself as an imaginative consciousness, that is, as a spontaneity which produces and holds on to the object as an image. … It is due to this vague and fugitive quality that the image-consciousness is not at all like a piece of wood floating on the sea, but like a wave among waves. (1948, pp. 18-19)

I believe that the idea behind these remarks is correct, and that it does mark an important distinction between percept and image. To imagine is to act—our imagery is in some important sense under our control; this is not so with percepts. David Sosa disagrees—he points out that we do exercise some control over what perceptual experiences we have, since we can choose what to attend to. And imagery, Sosa says, is not always voluntary; sometimes we are frustrated by imagery we'd rather not be experiencing. I may be haunted by a face, or unable to get an annoying tune out of my head.

Sosa is surely right about these possibilities of particular cases, but I do not think that this shows that imagery isn't the product of the will. On the first point, although we do have some control over our perceptual experiences, any such control is indirect; we can take action that we

know will result in a changed perceptual experience, but we cannot change our perceptual experience directly. Given the positions we are in, we can no more choose our perceptual experiences than can Sartre's log choose where to be tossed by the river. On Sosa's second point, the fact that sometimes we imagine things we'd rather not be imagining does not show that imagining is not an action and subject to the will. Unwelcome imagery is more like an unwelcome habit or addiction than an unwelcome set of chains. Wittgenstein's first remark above is particularly apt here—even when our imagery is unwelcome and we cannot banish it, we can *try* to banish it; we know what it is to banish it. We are failing to perform an act. Not so with percepts. The instruction, 'stop having the auditory experience of my voice,' or 'start having the visual experience as of a red square' is a confused one.

I therefore proceed on the assumption that images and percepts are different in kind.

To establish *imagery*, then, is to establish that the percept-like experiences of dreams are not percepts, but rather images. I have a dream about a kitten. The kitten is gray, and has large green eyes. On *percepts*, the orthodox view, I am having visual color percepts—the same sort of experience I have when I actually see grey kittens with green eyes. According to *imagery*, my sensations are actually of a different sort; they're color *imagery*, the same sort of sensory-like experience I have when I close my eyes and imagine what a gray kitten looks like. (I have experiences corresponding to other sensory modalities, too; if in the dream I am holding the kitten, then I will have the tactile imagery of holding something warm, soft, and slightly shaking.)

3. Considerations Favoring **Imagery**

The orthodox view is, after all, orthodox. Why adopt *imagery* against tradition? In this section, I highlight a number of considerations in its favor. None provide, I think, deductively valid proofs of *imagery*, but collectively, I take them to suggest a preponderance of evidence in favor of *imagery* over *percept*.

3.1 Dreams Don't Wake Us Up.[2]

When I am asleep, a loud noise will typically wake me up. My phone rings, and my sleep is interrupted. The obvious explanation for the causal power of that phone is that it causes auditory experiences—percepts—and those percepts cause me to wake up. Now suppose that I am having a dream in which my phone rings. According to *percepts*, I have the same sort of auditory percept experience that I have when my phone really rings. But if this is the case, we should expect that experience to wake me up. But this is not typically the case; very often, we dream about loud sounds without having our dreams interrupted; usually, actually experiencing loud sounds interrupts our dreams. The proponent of *percepts* owes us an explanation here—she must claim either that it is not the percept but something else that wakes me up when my phone really rings, or she must explain why although such percepts usually wake me, they usually do not when they are the results of dreams. Perhaps she will suggest that it is not my auditory

[2] I borrow this point from (McGinn, 2004).

experience that wakes me, but the sound waves hitting my ear. Such alternate explanations do not strike me as particularly plausible, but I recognize this as an empirical issue.

3.2 Considerations of Color Favor the Imagination Model.

Eric Schwitzgebel has remarked on the philosophical significance of color reports of dreams. (2002) Almost all modern Americans report dreaming in color. In the 1940s and '50s, most people believed that visual experience in dreams was a primarily black-and-white phenomenon. This is a difficult discrepancy for *percepts* to accommodate. Did our dreams suddenly become colorized in the late 1950s? What could explain this shift? Schwitzgebel suggests that attributions of dream color track the dominant media in the film industry—people who watch black and white movies describe themselves as dreaming in black and white. It would, I submit, be surprising to learn that the experience of watching movies—something that occupies only a small proportion of even the enthusiastic moviegoer's life—should have such a dramatic and widespread effect on the nature of visual experience in dreams. (In the '40s and '50s, dreaming in color was thought to be a sign of insanity!) The alternative response on behalf of the orthodox theorist will be to attribute systematic errors to one group or the other. But if we're really so prone to error about fundamental questions about our dream experiences, we begin to lose our grip on why we were tempted by the orthodox theory in the first place.

The imagination theorist need not confront this worry. In visual *imagery*, we can have *indeterminate* color. We can, and often do, call up visual images that have no associated color. This is a difference between images and percepts, and, I suggest, it helps the imagination theorist to explain the color data. Indeed, Schwitzgebel makes something much like this suggestion. (2002 pp. 655-56) If our actual experiences in dreams are of indeterminate color, much as the experiences we often experience while imagining fictions are, then it shouldn't perhaps be too surprising if, after the fact, we turn to our common experiences with visual experience in fiction-based, imaginative contexts, to describe our experiences. Those of us who are used to imagining along with color stories, because we see them on television and film, will describe our dreams as colored. So, at least, could go a plausible explanation. So the imagination model may provide the best explanation for disagreement about color sensation in dreams.

These considerations suggest a potentially fruitful line of empirical investigation about the experience of color in dreams—a topic that, as far as I can tell, has received relatively little attention in recent decades.

3.3 Dreaming Among Children Appears to Emerge Along with Imaginative Capacities.

Studies by dream psychologist David Foulkes (1999) suggest that, contrary to widespread scientific and folk assumptions, dreaming is a relatively sophisticated cognitive activity that emerges relatively late in human development. Foulkes's study of children suggests to him that children under the age of five dream much less frequently, and much less actively, than do adults. (Just how much less frequently is difficult to determine, since Foulkes finds reason to believe that young children often over-report dreams by confabulating, to please their adult questioners.) Furthermore, dreams develop gradually, beginning with simple, static images and only slowly increasing in complexity. More compelling still is the fact that performance in waking imagery tests is a good predictor of dream development in children, and of dream

frequency in adults. The children in his studies who dreamt the least often—and in the least developed ways—were also the ones who performed worst on tests of imaginative ability, even though they had average memory and verbal skills. Foulkes comes to conclusions that are very friendly to the imagination model:

> From all my data, the suggestion is that dreaming best reflects the development of a specific cognitive competence, indexed by certain kinds of tests of visual-spatial imagination, leading to the conclusion that such imagination must be a critical skill in dream-making. (1999, p. 90)

And:

> To dream, it isn't enough to be able to *see*. You have to be able to *think* in a certain way. Specifically, you have to be able, in your mind's eye, to simulate, at first momentarily and later in more extended episodes, a conscious reality that is not supported by current sense data and that you've never even experienced before. (1999, p. 117)

There is a strong correlation between imagery development and ability and dreaming; *images* might best explain such a correlation. This is admittedly speculative, but I find it suggestive in favor of the imagination model, and worthy of further future study. (This may generalize to provide support for *imagination* as well.)

3.4 Adult Case Studies Confirm Connections Between Dreaming and Imaginative Ability.

The connections between dream prevalence and imagination appear to continue into adult life. Here, the work of Mark Solms is particularly relevant. Solms's work suggests that the neurological mechanisms necessary for dreaming are not the same ones necessary for sensory experience -– rather, they're those needed for imagining. Solms and Turnbull, 2002, describe activity in the occipito-temporo-parietal junction as essential for dreaming. 'The occipito-temporal-parietal junction is heavily implicated in the generation of visuospatial imagery,' they write, citing Kosslyn (1994), 'and it is therefore no surprise that it should be implicated in dreaming -- which is, after all, a special type of visuospatial imagery.' (p. 203) Solms (1997, pp. 4-19) surveys historical case studies in which brain trauma resulted in both imagery deficits and cessation of dreaming. Summarizing generalizations drawn from case studies, he writes that 'the most robust finding of the present study was the observation that cessation or restriction of visual dream-imagery is invariably associated with a precisely analogous deficit in waking imagery.' (p. 131)

The neurophysiological connections between dreaming and imagination run deeper. Solms and Turnbull (pp. 209-211) highlight the apparent structural parallel between dream processing and image processing, with regards to the relationship of each to normal vision.

Visual processing in normal humans occurs in three zones. The first, the primary visual cortex, is connected most directly to the retina, and provides the input into the visual system. Damage to the primary visual cortex results in cortical blindness. However, it does not impair a subject's ability to generate mental imagery; neither does it interfere with dreaming.

The second zone in normal visual processing involves a number of specialized processing tasks, such as color and motion processing and object and face recognition. Damage to this zone results in specific sorts of visual deficiencies, such as impaired color perception or prosopagnosia (the inability to recognize faces). These parallels are also present in visual imagery. (See, for instance, Kosslyn 2006, p. 196-97.)

The third zone, the occipito-temporo-parietal junction, handles higher-level, abstract visual reasoning. Damage to this zone results in 'more abstract disorders that transcend concrete perception: acalclia (inability to calculate), agraphia (inability to write), constructional apraxia (inability to construct), and hemispatial neglect (inability to attend to one side of space).' (Solms and Turnbull 210) Brain damage to this area eliminates dreaming and also can result in an elimination of visual imagery.

I believe that considerations collectively render *imagery* preferable to *percepts*. At least, it should be considered a plausible alternative to the orthodox view. I will address apparent reasons to think the contrary in §5 below. I begin with the case against *beliefs*.

4. Belief and Imagination

As there is a real distinction between images and percepts, so is there likewise a real distinction between beliefs and imaginings. This fact is widely recognized, and I trust it needs no defense here. The challenge to the orthodox view of dreaming here is parallel to the one above—*beliefs* is rejected in favor of *imaginings*, the view that the belief-like states we take toward the contents of our dreams while dreaming are not beliefs, but rather imaginings.

It is worthwhile to be careful with terminology: *In my dream*, I have many beliefs: *in my dream*, I believe that I am holding the kitten, and I believe that the kitten is purring, and I believe that holding the kitten is the way to attract the attention of my celebrity crush. This alone does not entail *beliefs*; all parties grant that *in the dream* I believe these things; in dispute is whether *in fact* I believe them. The *in the dream* operator should be thought of as analogous to the *in the fiction* operator that is used to explain truths about fictional events. Compare: *in the dream* I am holding a kitten; it does not follow that in fact I am doing so. Depending on how the dream goes, it may or may not be true in the dream that I'm right to think that holding the kitten will make me attractive to my celebrity crush—but whether that is true *in the dream* is independent of whether it is in fact true. We may therefore understand *beliefs* as the claim that my dreaming that *p* entails my believing that *p*. *Imaginings* will have it that dreams are much more like fictions—according to *imaginings*, when I dream that *p*, I do not in general believe that *p*; instead, I imagine that *p*.

Call the belief-like states we experience while dreaming *dream beliefs*; the question before us is whether dream beliefs are beliefs. I will argue that they are not beliefs, but imaginings. Following are several arguments for this thesis.

4.1 The Orthodox View Faces a Dilemma About Consistency.

I believe that I am a philosopher, and I've had that belief for some years. Suppose I go to bed tonight and dream that I am an opera singer (who is not also a philosopher). According to *beliefs*,

during the half-hour or so in which I am experiencing that dream, I believe that I am not a philosopher. What of my longstanding belief? It seems the orthodox theorist has two choices here. He may admit that I continue to have the longstanding belief, and temporarily acquire an additional, logically inconsistent belief. He must admit, then, that during my dream I am experiencing a kind of epistemic irrationality, which I'm only able to detect and resolve upon waking. This seems an undesirable view for at least two reasons: first, dreaming does not seem fundamentally to be an intellectually irrational activity. (I am here in apparent disagreement with (Hobson, 1999, and McGinn, 2004, p. 113).) After all, agents interested in their own positive epistemic status do not thereby have to avoid dreaming, or to take steps, even if there were such possible steps, to dream only truths. The point is not that it is *impossible* to have contradictory beliefs – it's that what we do while dreaming does not seem to have the model of, for example, instances of self-deception in which subjects might be said to have contradictory beliefs.

Second, the posited resolution upon waking does not seem to match our actual experiences; I do not, upon waking up from my opera dream, introspect and recognize my belief that I am a philosopher, see tension between that belief and the belief that I am an opera singer, and reject the latter belief. When I wake, my dream is over, and my dream beliefs are already finished; I do not have to reject the false beliefs I've acquired. (Note that this is not to deny the familiar experience of uncertainty as to whether an apparent memory is from a dream or real experience. When I introspect and discover an apparent memory that *p*, I may, if the apparent memory is a misleading one, come newly to believe that *p*.)

The problem is not that it is impossible to have contradictory beliefs – it is plausible that in some cases we do – the problem is that dreaming does not fit this model.

The other horn of the orthodox theorist's dilemma is to suggest that during my dream, longstanding beliefs that are inconsistent with my new dream beliefs are temporarily abandoned; on this approach, it is not the case that, at 6:00 a.m. this morning, I believed, even tacitly, that I was a philosopher, supposing that I was then dreaming that I wasn't one. I had this belief immediately before bed, and again immediately after waking—these are Moorean facts—but I do not have this belief during the time that I am dreaming.

If the orthodox theorist defends *beliefs* by suggesting that during my dream, I cease to believe that I am a philosopher, that people can't fly, that I am insignificant to Angelina Jolie, etc., then he faces the challenge of explaining this odd fact. We don't typically revise our beliefs drastically and wholesale. Suppose I dream that academic philosophy is, and always has been, a front for an elaborate government conspiracy. Under ordinary circumstances, were I to acquire a belief with that content, it would come gradually in response to mounting evidence; there would be a period where I came to question my long-standing beliefs to the contrary. I'd eventually reject those beliefs in favor of the conspiracy theory. But there is no such transition in dreams. When I dream that philosophers are government conspirators, I do not always, at the beginning of that dream, confront evidence to that effect, leading me to question and overturn my earlier beliefs. I might have a dream like that—a dream in which I gradually discovered the shocking secret of worldwide philosophy departments; but I might just dream this to be the case, without dreaming about myself being confronted by compelling evidence to that effect. Indeed, I might dream that I'd always known about the conspiracy, and was an integral part of it. So if dream beliefs are beliefs, and contradictory longstanding beliefs temporarily disappear, then we have a

nightly cases of belief revision that are wildly different from the standard models we encounter in waking life; the orthodox theorist owes us an explanation for such unusual patterns.

On either horn, we see that *beliefs* implies that we have beliefs while dreaming that interact with our longstanding beliefs in very unusual ways, relative to the patterns of waking beliefs.

4.2 Dream Beliefs Seem Relevantly Like Other Dreamt States that Do Not Entail Their Waking Correlates.

Ernest Sosa (2007, pp. 6-7) invites us to consider an analogy to intentions. Is it the case that when one dreams that she intends that *p*, she thereby intends that *p*? A normative argument, inspired by St. Augustine (1999, book 10, ch. 30), suggests not: it is morally reprehensible to intend to do evil, but it is not morally reprehensible merely to dream to intend to do evil; therefore, to dream to intend to do evil is not thereby to intend to do evil. That a person dreams that she intends that *p* may reveal facts about her psychology and her attitude toward *p*, and it may in some cases constitute *evidence* for the claim that she intends that *p*, but it does not itself constitute or entail that intention.

If we agree with Sosa (and Augustine) that dreaming to intend, say, to seduce one's neighbor's wife doesn't imply actually so to intend, then we should find something odd about the idea that the dreamer really believes herself to be seducing her neighbor's wife; the believing and the intending seem to be on a par; to deny that one generates a real truth about the sleeping subject while affirming the other seems *ad hoc*.

If we accept Augustine's normative argument about intention, the burden is on the orthodox theorist to establish why we should understand belief to be importantly different.

4.3 Dream Experience is Sometimes Continuous with Imagination Experience.

According to the imagination model, the experiences in dreams are different only in kind from our waking imagistic experiences. The imagination model is supported by the occasional occurrence of experiences that gradually transition from one to the other. Two sorts of cases come to mind. First, consider dreams that develop out of deliberate daydreams. A deliberate daydream is a prototypically imaginative experience—we do not typically believe our waking fantasies to be true. Sometimes, we fall asleep while daydreaming, and the content of the daydream becomes the content of the dream. Insofar as there is a smooth experiential transition between the waking daydream and the sleeping dream, this provides support for the imagination model.

A similar sort of experience sometimes occurs upon waking. If a particularly interesting dream is interrupted, the dreamer might decide to go back to sleep in an attempt to 're-enter' it. When such attempts are successful, there is often a consciously introspectable transitional period in which one experiences the dream with more reflective access than is typical; such experiences can be much like waking imagination.

Admittedly, the considerations raised in this section are anecdotal—I am unaware of any

systematic psychological studies of this phenomenon—but perhaps readers who have had similar experiences will find this sort of consideration compelling.

4.4 Philosophical Considerations Favor the Imagination Model.

One might consider my methodology thus far problematic. Beliefs and imaginings are different kinds of representational mental states, and whether dream beliefs are beliefs or imaginings, one might suggest, is an empirical question in cognitive science. According to this suggestion, it is a mistake from the start to attempt to engage the question of the nature of dreaming from a philosophical approach.

Empirical investigation is certainly relevant to the question of the nature of dreams, and I agree that the question whether dreams involve beliefs or imaginings is in some sense empirical. But I deny the suggestion that a philosopher has nothing of value to contribute here; empirical and conceptual questions are not as distinct as the objection presupposes. The basic neuroscientific facts do not alone settle the question of whether *beliefs* is true; even once the neuroscientific facts about dream beliefs are settled, the question remains whether those states *count as* beliefs. This is a conceptual question, and one for which philosophical methodology is well suited. My suggestion here is that conceptual considerations also favor *imaginings* over *beliefs*. The way fully to develop this point would be to defend a particular theory of belief, then show that dream beliefs do not meet some of the essential features of belief according to that theory. A defense of a theory of belief is here beyond my scope, but I can mount some pressure against *beliefs* by pointing to ways in which the attitudes in question in dreams are incompatible with some attractive requirements on beliefs.

For instance, some philosophers hold that beliefs necessarily play a certain kind of functional role; that what it is for a mental representation to be a belief, rather than some other propositional attitude, is, at least in part, for it to play a distinctive belief-like role in a subject's cognitive economy. Dream beliefs do not appear to play many of the same functional roles as do prototypical beliefs. They are not connected with perceptual experience in the way that typical beliefs are, and they do not seem to motivate action in the way that typical beliefs do. (McGinn makes much of the observation that dream beliefs engage our affective systems much as beliefs do; I respond to this claim below.) Functionalists are of course free to specify *which* cognitive functions are distinctive of belief, but I am skeptical about there being a satisfactory specification of the functional role of belief that includes dream belief, that does not also include obvious non-beliefs, such as prototypical waking imaginings. What difference between prototypical imaginings and dream beliefs could serve to distinguish between the functional roles of belief and imagination? Beliefhood would have to be consistent with a disconnect from both action and perception, in order to let dream beliefs count as beliefs; but then on what basis would prototypical imaginings be excluded as beliefs?

At any rate, I think there is a clear burden on the orthodox theorist to explain why dream beliefs should count as beliefs, in light of their apparently un-belief-like functional role.

Likewise, if one is tempted by an interpretationalist or dispositionalist theory of belief—I have in mind views like those of Daniel Dennett and Donald Davidson—one will have difficulty granting belief status to dream beliefs. If we observe Laura, who is dreaming that she is in

England, on what basis can we ascribe to her the belief that she is in England? She is not behaving as if she is in England—she is not looking to the right before crossing streets. Neither does she give us utterances that are best interpreted as expressions of the belief that she is in England. Indeed, she's exhibiting very little behavior at all, since she is asleep. What is it about Laura in virtue of which she believes she is in England? No answer favoring *beliefs* over *imaginings* seems here to be forthcoming.

I have not argued that there is no plausible theory of belief according to which dream beliefs are beliefs, but I am unaware of one. I believe that the considerations raised here at least put the onus on the orthodox theorist to justify the classification of dream beliefs as beliefs.

Is there a parallel argument against *imaginings*? It is certainly not constitutive of imagining that imaginings be aimed at truth, or that they motivate us in a particular way. What is constitutive of imagination? I suggested in the above discussion of imagery that imagery is in some important sense subject to the will in a way that percepts are not; it is natural to think that imaginings are similarly voluntary. If they are essentially so, this presents a prima facie challenge against *imaginings*, since dreams do not seem to be subject to the will in the way that imaginings are. I turn now to objections to the imagination model, starting with this one.

5. Objections to the Imagination Model

5.1 Dreaming, unlike imagination, is involuntary.

Here is an argument against the imagination model: dream experiences—both belief-like and sensory-like—are not typically under our voluntary control, but imaginings and images are always under our voluntary control. Therefore, dream experiences aren't images and imaginings.

The argument is valid and the first premise is indisputable, so the imagination theorist must deny the second premise. Can I do so, in light of my earlier claim above that a central characteristic of imagination is that it is subject to the will? Yes, because it is possible for something to be subject to the will, and not yet 'under voluntary control' – the annoying song that runs through your head is an example of something like this. It is subject to the will because it makes sense to try to banish it; it is not under your voluntary control because you are unable to succeed. We do not always voluntarily control the things we do; this does not stop them from being things we *do*.

So there is at least conceptual space for the imagination theorist here; he may claim that although dream experiences are not typically under our voluntary control, they are nevertheless subject to the will. But that there is conceptual space for the imagination model is a meager achievement; are there independent reasons to think that dream experiences are subject to the will? I believe there are at least two.

The first reason is that dreams appear to show evidence of design. Random experiences would not be as coherent as dreams are, and dreams experiences can reflect, to some extent, the psychology of the dreamer. (This is no endorsement of any strong Freudianism; that we're more likely to dream about topics that interest us is an instance of this modest claim.) It is natural and reasonable to speak of ourselves as unconsciously *authoring* our dreams; authoring is an active

notion. (This observation is also made in McGinn, 2004, pp. 84-85 and Foulkes, 1999, p. 134.)

The second reason in favor of the suggestion that dream experiences are subject to the will is that sometimes, some people have *lucid* dreams—dreams in which the dreamer, aware that she is dreaming, takes active and conscious control over the content of her dream. Percepts and beliefs are never under our active control, so the orthodox model can certainly not describe lucid dreaming; the imagination model fits the experience well. Insofar as lucid dreaming is similar in character to non-lucid dreaming, this provides reason to adopt the imagination model for dreaming in general. In non-lucid dreaming, dreamers create their dreams without recognizing their own agency. In lucid dreaming, dreamers recognize that they are in control of their dream experiences, and are able consciously to direct their dreams. This suggestion is in line with research on lucid dreaming. Stephen LaBerge writes:

> Strange, marvelous, and even impossible things regularly happen in dreams, but people usually do not realize that the explanation is that they are dreaming. Usually does not mean always and there is a highly significant exception to this generalization. Sometimes, dreamers do correctly realize the explanation for the bizarre happenings they are experiencing, and lucid dreams … are the result. Empowered by the knowledge that the world they are experiencing is a creation of their own imagination, lucid dreamers can consciously influence the outcome of their dreams. (2004, p. 5)

So the relation between imagination and agency poses no objection to the imagination model; indeed, such considerations in conjunction with the imagination model help to explain some interesting features of dreaming.

5.2 The Imagination Model Conflicts with our Introspective Experience.

Another reason one might reject the imagination model is that it is at odds with our introspective access to dream experience. We are all familiar with dream experience, after all, and dream experiences *seem* to be beliefs and percepts; philosophical arguments cannot overturn the facts to which we have straightforward introspective access. After all, in normal circumstances, it is easy to recognize the difference between belief and imagination, and between percepts and imagery. It is a consequence of the imagination model that many people are mistaken about the nature of dream experience; people often confuse beliefs and imagination, and percepts and imagery, at least in retrospect. So goes the objection.

There are two reasons I do not find this consideration particularly worrying. First, although it's true that many people tend to think of dreams as involving percepts and beliefs, I do not believe that this is because they introspectively reject the imagination model; rather, I think that most people who reflect casually on the nature of dreaming have not considered the imagination model as an alternative to the orthodox theory. As the considerations raised so far have demonstrated, there are subtle distinctions at work between the imagination and orthodox model.

Second, there is precedent for failing to recognize products of the imagination. Psychologists have documented cases in which subjects confuse percepts and imagery. In classic example (Perky, 1910), subjects were asked to visualize objects while, unbeknownst to them,

faint images of those objects were being projected in front of them. In many cases, subjects mistook their percepts for images. So it seems that at least under some circumstances, we are prone to mistaking percepts for images. One plausible explanation for this failure in the Perky cases is that subjects' conscious attempts to generate images interfered with their abilities to recognize percepts as such. This fits well with the broader picture we've been working with regarding imagination and agency; perhaps one way we introspectively distinguish images and imaginings from percepts and beliefs is by recognizing our own agency in the generation of the former; subjects in the Perky experiments felt as though they were causing the visual experiences they were having—after all, they were attempting to create such experiences as those experiences occurred—and that's why they mistook those experiences for images. Non-lucid dreamers fail to recognize their own agency in their experiences, which is why they don't always feel like imaginative experiences; lucid dreamers recognize their active roles, and are thereby able consciously to control their experiences. So the imagination theorist has a plausible story to tell as to why dreams do not feel like typical cases of imagination.

(This story, incidentally, fits well with Currie & Ravenscroft's (2002, pp. 161 et seq.) suggestion that some delusions are *wayward imaginings*, rather than beliefs; subjects fail to recognize imaginings as such because they have a general deficit in recognition of agency.)

5.3 Only with Beliefs Could Dreams Be as Emotionally Engaging as They Are.

Colin McGinn accepts *images* but not *imaginings*. He discusses only briefly the suggestion that we 'no more believe our dreams than we believe our daytime reveries.' (McGinn, 2004, p. 97) He rejects it on the grounds that without invoking belief, we cannot explain our emotional involvement with dreams:

> The sure test that dreams are suffused with belief is their ability to generate emotions that are conditional on belief, such as fear and elation—with which dreams are full. (2004, p. 112)

The problem for the imagination model, then, can be stated thus:

(1) When I dream that *p*, I experience fear, elation, and other emotions of a certain type.

(2) Emotions like fear and elation, arising from an attitude that *p*, can only arise from a *belief* that *p*. Therefore,

(3) When I dream that *p*, I believe that *p*.

This argument should not be persuasive. This parallels a puzzle in the philosophy of literature involving emotional responses to fictions. Fictions arouse emotions in us without causing belief; we seem to be happy that *p*, even though we do not believe that *p*. This is what philosophers of literature call the 'Paradox of Fiction,' and it takes the form of an apparently-inconsistent triad:

(1') When I read in a fiction that *p*, I experience fear, elation, and other emotions of a certain type.

(2) Emotions like fear and elation, arising from an attitude that *p*, can only arise from a *belief* that *p*. Therefore,

(3') When I read in a fiction that *p*, I do not believe that *p*.[3]

It is typically accepted that (3') is true, so philosophers of fiction generally agree that it is either (1') or (2) that has to go. We may, with Kendall Walton (1990; 1997), deny that we really experience fear and elation, but rather experience different, similar states, which he calls *quasi-fear* and *quasi-elation*. Or, we may say with Derek Matravers (1997) and others that belief isn't *really* necessary for fear; imagination can also play the role that belief often plays in fear, and likewise for the other emotions. It is clear that one of them must be correct.

If we take the latter option to solve our puzzle about fiction, then we have also directly avoided the problem for the imagination model by denying the shared premise (2). If, on the other hand, we insist that these emotions include a cognitive element, denying instead that fictions *really* generate these emotions, then we may very well ask whether dreams *really* generate them either. It will be, perhaps, more plausible if we qualify our denial of emotional involvement in dreams thus: dreams don't involve emotions, except in the way that fictions do.[4]

6. Conclusion

Nothing I have offered here is a conclusive proof of the imagination model over the orthodox model of dreaming. Nevertheless, I trust that I have at least made plausible the possibility of the imagination model as an alternative. Indeed, I think that the considerations raised here push the weight of evidence into the imagination model's favor. Dreams needn't involve false beliefs and misleading sensory experiences. On the imagination model, dreams are very much like vivid daydreams, entered into deliberately and voluntarily. Lose yourself enough in your daydream, and you will feel, in some sense, as if you are really there. That's not to say you falsely believe the contents of the daydream to be true. Our dreams in sleep are, on the imagination model, *like that*.

This conclusion, I think, independently interesting—it may also have broader philosophical implications. As discussed above, dream beliefs provide a valuable test case for theories of belief; those interested in philosophical psychology and the nature of mental content ought to think about the relations between dream beliefs, ordinary beliefs, and the concept BELIEF. The imagination model may also have interesting consequences in epistemology—if dream skepticism is based in the recognition that our beliefs may be false and caused by dreams, the imagination model implies that the key premise for dream skepticism is false. Ernest Sosa (2007) has argued that it is a consequence of the imagination model that *I am not now dreaming* enjoys a similar epistemic status as does Descartes's *I think*; alternatively, one might think that the moral to draw is that false beliefs are less central to skepticism than is widely understood.

---

[3] See (Radford, 1975) and the papers in (Hjort & Laver, 1997) for presentations of this puzzle.

[4] McGinn also draws a tight connection between dreaming and fiction, and he even suggests that dream belief and emotion is in some sense weaker than the waking versions. See his pp. 110-11. But he insists that dreams do involve belief, as opposed to some other similar state, as quoted above.

Such discussions are beyond my present scope—see my (2007) for a discussion of Sosa's argument and epistemic implications of the imagination model—my point here is merely that the considerations raised in this paper in favor of the imagination model may prove important in other philosophical areas.

References

- Augustine. 1999: *The Confessions of Saint Augustine.* (E. B. Pusey Trans.) New York: Modern Library.
- Bisiach, E., and Luzzatti, C. 1978: Unilateral Neglect of Representational Space. *Cortex* 14: 129-133.
- Currie, G., & Ravenscroft, I. 2002: *Recreative Minds: Imagination in Philosophy and Psychology.* New York: Oxford University Press.
- Descartes, R. 1986: *Meditations on First Philosophy*. New York: Cambridge University Press.
- Foulkes, D. 1999: *Children's Dreaming and the Development of Consciousness.* Cambridge, Mass.: Harvard University Press.
- Goldman, A. I. 2006: *Simulating Minds: The Philosophy, Psychology, and Neuroscience of Mindreading*. New York: Oxford University Press.
- Hjort, M., & Laver, S. 1997: *Emotion and the Arts*. New York: Oxford University Press.
- Hobson, J. A. 1999: *Dreaming as Delirium: How the Brain Goes Out of its Mind.* Cambridge, Mass: The MIT Press.
- Hume, D. 1978: *A Treatise of Human Nature*, P. H. Nidditch & L. A. Selby-Bigge (Eds). New York: Oxford University Press.
- Ichikawa, J. 2007: Scepticism and the Imagination Model of Dreaming. *The Philosophical Quarterly* (OnlineEarly Articles). doi:10.1111/j.1467-9213.2007-546.x.
- Kosslyn, S. 1994: *Image and Brain*. Cambridge, MA: The MIT Press.
- Kosslyn, S., Ganis, G., & Thompson, W. 2006: Mental Imagery and the Human Brain. In Q. Jing., M. R. Rosenzweig, G. d'Ydewalle, H. Zhang, H-C. Chen, & K. Zhang (Eds.), *Progress in Psychological Science Around the World, v. I*. New York: Psychology Press.
- Laberge, S. 2004: *Lucid Dreaming: A Concise Guide to Awakening in Your Dreams and in Your Life.* New York: Sounds True Press.

- Malcolm, N. 1959: *Dreaming*. New York: Humanities Press.
- Matravers, D. 1997: The Paradox of Fiction: The Report versus the Perceptual Model. In M. Hjort & S. Laver (Eds.), *Emotion and the Arts*. New York: Oxford University Press.
- McGinn, C. 2004: *Mindsight: Image, Dream, Meaning*. Cambridge, Mass.: Harvard University Press.
- Perky, C. W. 1910: An Experimental Study of Imagination. *American Journal of Psychology*, 21(4), 422-452.
- Pylyshnyn, Z. 1999: What's in Your Mind? In E. Lepore & Z. Pylyshnyn (Eds.), *What is Cognitive Science?* Malden, MA: Blackwell Publishing.
- Pylyshnyn, Z. 2002: Mental Imagery: In Search of a Theory. *Behavioral and Brain Sciences*, 25, 157-182.
- Radford, C. 1975: How Can we be Moved by the Fate of Anna Karenena? *Proceedings of the Aristotelean Society*, Supplemental Volume 49, 67-80.
- Schwitzgebel, E. 2002: Why did we think we dreamed in black and white? *Studies in History and Philosophy of Science*, 33(4), 649-660.
- Solms, M. 1997: *The Neuropsychology of Dreams*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Solms, M. and Turnbull, O. 2002: *The Brain and the Inner World*. New York: Other Press, LLC.
- Sosa, D. 2006: Scenes Seen. *Philosophical Books*, 47(4), 314-325.
- Sosa, E. 2007: *A Virtue Epistemology, v. I*. New York: Oxford University Press.
- Spivey, M., Tyler, M. Richardson, D., and Young, E. 2000: Eye Movements During Comprehension of Spoken Scene Descriptions. In *Proceedings of the 22nd Annual Conference of the Cognitive Science Society* (487-492). Mahwah, NL: Erlbaum.
- Walton, K. L. 1990: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, Mass.: Harvard University Press.
- Walton, K. L. 1997: Spelunking, Simulation, and Slime: On Being Moved by Fiction. In M. Hjort, & S. Laver (Eds.), *Emotion and the Arts* (pp. 37-49). New York: Oxford University Press.