Lucid Dreams and Dream Skepticism

By

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Summary of the thesis

The overall goal of the thesis is to offer a new way of responding to dream skepticism. This goal is to be achieved in four steps, corresponding to the four chapters of the thesis. Chapter I starts off by outlining a scientific approach to the problem of dream skepticism. First, I try to provide a scientific understanding of dreams with emphasis on how we are deceived in dreams. I also discuss various competing theories within contemporary dream science to show that the understanding of dreams I use can be accepted by any of them. As a result of scientific findings, lucid dreams, phenomena that have some feature of dreams and some feature of waking consciousness, emerge. I provide a brief scientific account of lucid dreams. Lucid dreams are dreams in which a dreamer knows that she is dreaming. The first chapter, hopefully, provides us with a proper understanding of dreams: in dreams we are deluded due to impaired cognitive capacities such as reflective thought and memory, but this situation can be improved by learning to dream lucidly. How exactly the situation can be improved and whether it can help us to fight dream skepticism will be answered in chapters 3 and 4. Recent interest in the nature of dreams inspired the philosophical debate between proponents of the imagination and the hallucination model of dreaming and that debate is also discussed in this chapter. Chapter I ends by a discussion of the reliability of dream reports that are a starting point of dream science.

The goal of Chapter 2 is to show the specific character of dream skepticism in comparison with arguments using other types of skeptical scenarios such as the brain-in-a-vat (BIV), and the Matrix. The first half of Chapter 2 is dedicated to the discussion of the similarities and differences of different skeptical scenarios.

For each of these scenarios two types of skeptical arguments could be devised. I call them A-type and B-type arguments. These are ideal type of skeptical arguments, and at the end of Chapter 2, I

demonstrate how they are employed in some well-known reconstructions of dream skepticism. The distinguishing features of A-type arguments could be summarized as follows:

It can be applied to every proposition as long as knowledge of that proposition depends on evidence based on perceptual experience; it does not explicitly rely on the epistemic principles of closure and the KK principle; and in its general form, it strongly relies on an internalist conception of knowledge and evidence.

The B type argument essentially goes as follows:

      i.I can't know whether I am in a Bad Case

      ii.Closure based premise – if I can't know whether I am in Bad Case, then I can't know p

      iii. I can't know p.

I will compare how this argument works with different skeptical scenarios. If a skeptical argument uses the BIV scenario as a Bad Case, premise 2 follows from the closure principle and the construction of the BIV scenario. However, the same is not true of the dream scenario, because dreams are not logically incompatible with the truth of all of ours beliefs about the external world. Hence the dream skeptical argument will need some extra assumptions. The conclusion of Chapter 2 will be the identification of the premises of the skeptical arguments which can be questioned if we have a proper understanding of dreams.

Both traditional skeptics and modern anti-skeptics agree that in dreams we lack knowledge. But the lack of knowledge in dreams need not be an obstacle in fighting dream skepticism. Some strategies insist that as long as one can know that one is not dreaming while awake, it is irrelevant whether one can know that one is dreaming while dreaming. Chapter 3 explores two of these strategies by Bernard Williams and Ernest Sosa, as well as the attempt that probably inspired them - the strategy argued by Descartes at the end of Sixth Meditation.

Descartes tries to fight the dream skeptic by using the coherence criterion: Dreams are never linked by memory with all the other actions of life as waking experiences are. We can know that we are awake and not dreaming iff (1) the experience appear coherent; and (2) there is a clear and distinct recognition of the causal source of the experience.

Bernard Williams argues that the source of the dream skepticism is a false conviction that if one is to know that one is not dreaming one should know both conjuncts of the following conjunction: One has to be able to tell that one is awake when one is awake and one has to be able to tell that one is dreaming when one is dreaming. This was the case because of the misconception of the nature of dreams - in dreams, according to Williams, we cannot judge and rationally decide and because of that, we cannot perform tests for deciding if we are dreaming or not. This, however does not prevent us from deciding that we are awake while awake.

Sosa offers a two-step strategy. In the negative part, along the lines first offered by Williams, he argues that the fact that while we are dreaming we are unable to distinguish whether we are dreaming or awake does not imply that we are unable to do that while we are awake. Like Williams, he compares it with being dead or being unconscious. I know that I am not unconscious, even though if I were unconscious I would not know that. So dreams are distinguishable from waking experiences if we can tell that we are awake (and not dreaming) while we are awake. The fact that we cannot distinguish these states when we are dreaming does not threaten the knowledge we have when we are awake. In the positive part Sosa tries to show how we can know that we are awake while we are awake by arguing that the proposition 'I am awake" as well as the proposition "I am" has a special a priori status in a way that it is impossible for any of them to be affirmed falsely, because, if the imagination model of dreaming is correct, then in dreams we do not really affirm or assent anything.

All three strategies are vulnerable to what I call "Hobbes' objection", following the argument which was originally presented as a response to the Meditations by Hobbes. According to this line of reasoning, dreams can offer the illusion of coherence, rational decision or assenting to propositions: they can *seem* every bit as well ordered and well-connected within the dream world, as waking experience is in the real world. As long as these dreams are allowed, the proponents of these strategies will be unable to decide if they are really affirming, rationally judging or applying the coherence criterion, or just suffering an illusion of doing so.

In the last chapter I start with establishing that although in lucid dreams, like in non-lucid dreams we do not have perceptual knowledge, there is still some knowledge that we can have. We can know in lucid dreams that we are dreaming and that our ongoing experiences are not caused by the external world. Although this knowledge does not defeat dream skepticism, I argue that it can serve as an important step in a broader anti-skeptical strategy.

Descartes's, Williams's, and Sosa's strategies can be summarized as follows: we test an experience for coherence, and since the illusion of coherence in dreams is possible, we mistakenly declare the presence of coherence. I propose a way to avoid this mistake. There is an additional procedure that can be applied in order to exclude cases of illusion of coherence. A lucid dreamer can determine whether she has the dreams of the kind Hobbes is talking about by trying to do something that would be impossible to do, were she awake. Since the dream world is not subject to the laws of physics, the lucid dreamer can try to levitate, for example. If she is successful, then she knows that she is dreaming. Or she can try to perform some of the actions that can be performed only in waking life. If she is successful, that would indicate was awake and Hobbes' objection would fail. If she cannot successfully perform this action that would again indicate that she is dreaming. The full response to dream skepticism requires the possibility of effectively distinguishing dreams and waking experiences. This is possible for a lucid dreamer.

The final sections of the thesis are dedicated to responses to the objections to the approach I suggested. The main objection could be formulated like this: is it necessary for everyone to learn how to dream lucidly in order to know any proposition about the external world? Hopefully, answers to this objection will give us some interesting insights into the nature of our knowledge of the external world.

This dissertation contains no materials accepted for any other degrees in any other institutions;

This dissertation contains no materials previously written and/or published by another person, except where appropriate acknowledgment is made in the form of bibliographical reference.

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CHAPTER 1

1.1. Introduction

The problem

"Yes, Your Honor, I saw this man last night, stabbing Mr. Jones several times and crying he finally gave "that bastard" (his words, not mine) what he deserved, and that he is not sorry at all because of what he did."

"Yes, I am positive that it was him because he was standing under the street lamp no more than three meters far from me. I was standing hidden in the shadow so that he was unable to see me."

"Could you repeat the question, because I thought that you asked me how I know that I was not merely dreaming that I saw the defendant stabbing the victim?"[1]

In most of courtrooms this question would be discharged as inappropriate if there is no reason to suppose that I was dreaming. Socrates (at least as presented in Plato's Theaetetus) thought that he would be in serious trouble if a judge had asked him the same question. He thought that there is no way for him to tell that he has really witnessed any situation instead of just dreaming it. Almost 2000 years after Socrates, René Descartes had a similar problem. He is in his room resting in his armchair. In the corner of the room is a fireplace. Fire glows in it and casts light on the armchair. He feels the warmth of the fire, he hears the cracking of burned wood, he sees the fireplace, and he touches the back of the armchair. But, it would be possible that he has all the experiences he actually has and yet no object he thinks he perceives is there, since it often happens that he has all these experiences and

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[1] The point of this example is to show that we do not question the assumption that we are awake even in very important situations. Although the same example could be used to help devising skeptical arguments against our knowledge of our memories, those will not be in the focus of this thesis.

afterward realizes that he was just dreaming. Descartes thought that since dream experiences and waking experiences are indistinguishable, it is impossible to tell if he is dreaming or not on the basis of experience.

The dream scenario has always held interest for philosophers as a threat to our knowledge. Because I dream often, this is not a distant possibility. In the so-called "brain in a vat" scenario, we are considered to be just brains in vats fed with misleading sensations by a neuroscientist. In "The Matrix" scenario humans are thought to live in the future wasteland of a world with fields for breeding humans whose brain are plugged into the Matrix who fill them with the data in such a way that they believe that the world still exist in the same way it existed at the end of the twentieth century. These scenarios and the distant possibilities they raise are going to be discussed in detail in the Chapter 2. For now, I am just going to note that, unlike them, the dream scenario suggests that the world could be the way it actually is, the world in which people are like they actually are, going to beds and having dreams, and yet we could not know majority of things we think we know.

Prima facie, the way the skeptical argument from the dream scenario could be developed is really simple. When I am awake, well rested, under sufficient light, being at optimal distance from my computer and looking at it, I usually take myself to know that there is a computer in front of me. If I were just dreaming that I was looking at my computer from optimal distance in good light, I would not know that there was a computer in front of me. In order for the skeptical argument to work, the skeptic has to claim that my epistemic situation with respect to my knowledge of the external world (if there is a computer in front of me) is the same in both described situations. One way to do this is to claim that my evidence for claiming that I know that there is a computer in front of me is compatible with the evidence I would have if I were dreaming that there is a computer in front of me. This argument could further rely on the thesis that the content of my experience is phenomenally the same in those situations. Since there are "no clear and distinct marks" (Descartes, 2005) by which it is

possible to distinguish dreams from waking experiences, I could not know if I am dreaming, and consequently I could not know if there is computer in front of me.

The following chapters will provide detailed discussion of different types of dream arguments and of the ways in which the possibility of dreaming jeopardizes our knowledge of the external world. In this chapter I am going to do the following. The overall goal of this chapter is to provide us with a satisfactory characterization of the nature of dreams. To that end, firstly, I am going to provide an overview of a method and competing theories within dream science. Since the dream scenario is going to be in the focus throughout the entire thesis, it will be important to have a proper understanding of the nature of dreams. Contemporary dream science, in my opinion, can provide us with that understanding. To that end, in section 1.2 I will present the scientific method of dream science (1.2.1), present results of the analysis of dream content (12.2 and 1.2.3) and lay down some of the leading theories of dream science (1.2.4). In section 1.3. I am going to explore how these findings affect the problem of dream skepticism and to point at a phenomenon of lucid dreaming, an extraordinary state that is going to play very important part in an anti-skeptical strategy I intend to propose by the end of the thesis. Section 1.4 is dedicated to a contemporary philosophical debate inspired by the findings of dream science. The discussions between the imagination model of dreaming and the hallucination (traditional) model of dreaming will be examined in this section. Some proponents of the imagination model of dreaming basically claimed that the reason why dream skepticism poses a threat lies in the more or less generally accepted misconception of dreams given by the traditional model of dreaming. For the support for their claim they cite various philosophical and scientific reasons. In section 1.5 I am going to address some criticism provided against the method of dream science provided by Norman Malcolm, Daniel Dennett and Eric Schwitzgebel. I will try to dispel doubts raised by these philosophers. Section 1.6 provides concluding remarks of Chapter 1.

1.2. Scientific approach to dreams. The methods of dream science. Theories.

1.2.1. Dream science

Dream science is the systematic exploration of dreams. Its methods are the following:

1) Dream science starts with collecting and analyzing subjective reports of dreams.

2) These data are correlated with physiological recording data in a sleep lab or at home using portable devices. These data can be correlated with polygraph sleep data and inferences made about human physiology that might explain the observed differences in psychology that characterize waking, sleeping, and dreaming.

3) Brain imaging can be used to detect regional activation patterns associated with sleep physiology and dream psychology.

As already said, dream science is a systematic exploration of dreams. But before a systematic exploration, we have to see what should be understood when in dream science the word 'dream' is used. 'Dream' can refer to an experience during sleep or what a dreamer remembers upon awakening or what she reports. In science, these meanings are known as an experienced dream, a remembered dream and a reported dream. The characterization I am using here is taken from G. William Domhoff (Domhoff 1996). The only way to have an insight into what people dreamt is via dream reports. So, for dream science, the only dream that has objective or public evidence is dream report. This way of approaching dreaming has its problems. For example, there is no guarantee that some subjects do not alter details of what they actually remembered. These possibilities do not alarm dream scientists. Dream reports used in scientific analysis are taken from volunteers who are given the same

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instructions on how to formulate dream reports. Furthermore, in order to eliminate the influence of the fabrication of some dreams and alterations of some details, scientific findings are based on very large number of dream reports. However, what is sufficient for scientists, sometimes is not satisfactory for philosophers. Utilization of dream reports for determining the nature of dream experiences is one of these cases. We are going to see why some philosophers are dissatisfied with this approach. For the time being we are going to look more closely into the method and examine scientific theories using this method.

1.2.2. The analysis of dream content

There are at least two ways within dream science to analyze the described dream: the interpretative approach and the mental content approach. The interpretative approach seeks to understand the dream in terms of its autobiographical psychodynamic significance. Why am I dreaming about this particular café? Is it because it reminds me of happier times when I did not have so many things to do? Why do I dream that I drink coffee and not red wine? Why is this dream so boring? Questions about what contents are characteristic of dreams have always been interesting and relevant for the philosophical investigation of dream skepticism. These questions are given the proper consideration within dream science, but scientific interest in dream skepticism is not exhausted by these questions. Dream science attempts to provide a better account of the nature of dreams and that account, I am going to argue, can help us against dream skepticism by clarifying why we are deceived by dreams.

As opposed to this interpretative approach, Alan Hobson proposes the formal analysis of dream content or what he calls the mental status approach (Hobson 2009, pp. 11-12). The difference between these accounts could best be explained by the following analogy, also taken from Hobson. Let us consider a case of a person suffering from Alzheimer's disease. Her autobiographical history consists of situations when she was lost in familiar surroundings, forgot the names and faces of familiar people and so on. On the other hand: "The mental status exam revealed disorientation (especially for time and place but also for persons), memory loss (especially for recent events), and confabulation (making

up stories to cover the holes in her memory)" (Hobson 2009, p. 12). Biological facts about her brain, namely degeneration of her brain cells, determined her history. Hobson proposes that we should do a similar thing with the content analysis of dreams. We should be able, he claims, to discover a brain state responsible for each of our dreams. The mental status exam reveals the following 12 features of dreams: General appearance and behavior, Stream of talk, Clarity versus Clouding of Consciousness, Intellectual functions, Orientation to Time, Place and Person, Mental content, Dream Memory, Dream Emotion, Dream Thinking, Insight and Judgment, Abstraction versus Concreteness (Hobson 2009, pp. 12-41).

In **Table I** some findings of dream content analysis are illustrated. The research was conducted in the Laboratory of Neurophysiology in three phases in the period of 1980 till now. I will try to say something about some of these features which I find the most important for the claim I intend to defend – that the reason why we are deluded by our dreams lies in our inability to tell the difference between waking and dreaming experiences and not in the fact that these experiences are indistinguishable in their nature. I would like here to contrast the situation in which we cannot tell experiences from one another because they are phenomenally the same with the situation where the experiences are not phenomenally the same, but we are unable to tell that they are not the same. Phenomenal sameness is not the same as the inability to distinguish (as shown for example by the phenomenal sorites), but "indistinguishable" is sometimes used to refer to both.

Table I

Some formal properties of dream consciousness of relevance to neurobiology. These studies were all performed in the Laboratory of Neurophysiology

Phase I (1980-1994): Laboratory and Unmonitored Home Reports

Perception   Vision and sense of movement predominate; pain and taste are rare.

Bizarre cognition   Times, places, and persons change without notice; (bizarreness is measured as plot discontinuity and incongruity)

Fantasy   Chimeric characters are common in dreaming but absent in fantasy

Children   Adult type dreaming begins ~ age 5

Emotion   Anxiety (fear), elation, and anger predominate; sadness, guilt, and depressed affect are rare.

Plot sequence   Gradual loss of orientation within scenes; radical loss of orientation across scenes

Splicing   Judges cannot recognize continuity across scenes

Phase II (1995-2004): Home Dreams with Physiological Monitoring

Report length   REM reports 7x longer than NREM reports

Sensation of movement   More common in REM than NREM reports

Character recognition   Unreliable in REM but dreamer does not notice errors

Thinking   Highest in waking, lowest in REM; reciprocal with hallucinating across states

Memory source   Identified in only 20% of dream incidents (80% of dream events synthesized de novo)

Phase III (1995-present): Home Dreams with Physiological Monitoring - Focus on Secondary Consciousness (Metacognition)

Theory of Mind	Dreamer recognizes mental process of other dream characters
Logic	Some dream thinking is rational; most dream thinking is non – rational
Authorship	Dream reports incorrectly grouped by judges
Schizophrenia	Patients and controls have equally bizarre dreams.

Table I is taken from (Hobson 2009, pp. 21-22)

1.2.3. Sensory modalities in dreams

According to many studies, for example (Snyder 1970, here cited after Hobson 2009), all sensory modalities are present in our dreams, and approximately to the same extent as in our waking reality. Most dreams include visual experiences, and auditory experiences are very frequent. Bodily sensations are less frequent, while smell, taste and pain experiences are rare. These later are less frequent in our waking life in comparison with visual and auditory experiences. In 1992 A. Rechtschaffen and C. Buchignani conducted an interesting experiment in order to explore the visual qualities of dream experiences. (Rechtschaffen and Buchignani 1992, here cited after Hobson 2009).The experimenters had a selection of more than 100 photographs in which the visual features (for example, chromaticity, saturation, and illumination) had been altered. Immediately after awakening the subjects in a laboratory, the participants selected a photograph that most accurately matched the visual quality of their dream. The most often picked photograph was the one that had not been altered in any way, and the next ones chosen presented only slight variations from normal. They also noticed that most dreams are perceived in color, while 20% of dreams are perceived achromatically. The overview of these features of dreams that I am going to lay down draws significantly on Katja Valli's analysis in (Valli 2008).

The dream self

We experience our dreams from the embodied first person perspective, in a similar way that we experience our waking reality. "The dream self most often possesses a body-image much like the one we have while awake. Although sometimes we can observe the dream and even ourselves from a third person's point-of-view, usually we are positioned in the center of the dream world, actively taking a part in the dream events" (Valli 2008, p.28).

The difference between the dream self and the waking self is in memory lapses, confabulation and lack of reflection the dream self suffers from. The dream self usually does not preserve many memories about the waking self. While the dreamer may remember some facts concerning her life correctly when dreaming, often the dreamer loses the ability to contemplate whether the events, persons, places, or objects in the dreams are possible. But the dream self tries to make up for that and make sense of the occurring events by confabulation of the events and persons that never occurred or existed in waking life. "In fact, the dream self is often totally unable to reflect upon the credibility of his or her beliefs within the dream" (Valli 2008, op. cit.).

Bizarreness

Our brain generates dreams by combining dream elements. The result of this combining is sometimes highly improbable or even impossible to happen in the waking realm. These peculiarities of dreams are called bizarreness. There are three forms of dream bizarreness: incongruity, discontinuity and vagueness. Incongruity is combining of elements which are improbable or impossible to happen together, as meeting someone famous or absent or dead in my apartment in Budapest. Discontinuity refers to sudden appearance or disappearance of some of the dream elements (places and characters). Vagueness refers to ambiguities of some of the dream elements, as for instance to situations where we recognize a dream character as a familiar person but we are not able to specify who exactly the person is (Valli 2008, p. 31).

Dream memories

Waking consciousness has access to many memories about past knowledge and experience. Memories can be explicit and semantic (when they convey facts and knowledge) or implicit and procedural (when they underlie skills and know-how) (Hobson 2009, p.23). In dreams, however, memory source is identified in only 20% of dreams as showed in Table I. This is related to the occurrence of dream plot discontinuity and incongruity as well as to my failure to recognize these peculiarities when I dream.

1.2.4. Competing theories within dream science

There are many competing explanations for dreaming in cognitive neuroscience and psychology, such as random activation theories, the continuity hypothesis, and the psychological, cognitive and neurocognitive theories. Now, I am going to outline some of them. I have chosen these particular theories in the first place because they more or less cover the most interesting directions dream science took in the last 40 years. The second reason I am going to outline these theories lies in the fact that they are opposed to each other. The purpose of their somewhat brief examination is an attempt to grasp what might be called a minimal conception of dreams, a conception of dreams that could be accepted without the following of any particular theory. Detailed overview of the competing theories within dream science can be found in *Valli 2008,* and my presentation of these theories draws significantly on that study.

Random activation theory

Random activation theory (RAT) can be described as the mainstream theory of dreams. According to this account, dreaming is a side effect of the neurophysiological processes going on during REM sleep. This formulation of RAT is from (Hobson and all 2000), although other similar formulations could be found in (Hobson and McCarley, R. W. 1977). A good overview of the theory is given in Valli (2011) and lot of my views on RAT that will be considered here strongly rely on that paper. The

mechanisms that actively generate the sleep state are located in the brainstem, and "the sleep related activation leaks over to the emotional and memory networks, resulting in the random activation of these systems" (Valli 2011, p. 1086). This random activation is then bound into dream narratives by the forebrain, as it is trying to interpret the brain activation as it normally does while awake. This theory has some advantages over competing theories. First, as the most recent memory traces encoded into the long term memory are high in saliency, and thus primed in the network, the random activation of the networks leads to the activation of most recent memories. Therefore, what happens preceding days is more often represented in dreams than events long past. Second, unlike in waking life, in dreams we usually do not question our predicament even when very unusual things begin to happen, as for example when we just found ourselves at some places without remembering or even wondering how we came there. The random activation seems to have an explanation for this bizarreness. As memories are randomly activated, the forebrain has difficulties in making sense of the mixed material and making a coherent narrative.

According to Hobson, the nature of experience involved in dreams is of the same kind as the experience of some psychotic patients.

> 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 (Hobson 1999, p.5).

From this quote Jonathan Ichikawa and Ernest Sosa conclude that Hobson is a proponent of the hallucination model of dreaming (Ichikawa 2007, Sosa 2007). We are going to talk about the debate between the imagination and the hallucination model of dreaming later in this chapter. For now let us

just note the following. In philosophy, 'hallucination' usually refers to a 'philosophical' hallucination, that is, to an experience that is subjectively the same as a veridical perception. In contrast, Hobson has in mind real life hallucinations, which are quite different. Actual psychotic hallucinations are probably phenomenologically very different from veridical perceptions. Dreams, according to Hobson, are hallucinations in the sense that they are delusional experiences. The other reason why Ichikawa and Sosa classify Hobson as a proponent of the traditional model of dreaming might be the fact that Hobson uses the following sentences when describing his dream experiences: 'I believed that the dream actions were real' or 'I believed that I was in an old hotel'. As we shall see in the section 1.4, the claim that in dreams we form genuine beliefs is one of two main postulates of the traditional theory. On the other hand, it is worth noting that according to Hobson, the reason that we are deluded in dreams is similar to the reason a lunatic is deluded. A sick mind or a mind deprived of some of its cognitive powers lead to a delusion in both cases. This point will be explored in detail in Chapters 3 and 4.

Antti Revonsuo criticized this theory. (Revonsuo1999, pp173-185). His criticism is well summarized in (Valli 2008). Dream content has a well-organized form that consists of a realistic looking world full of objects, persons and events that interact with each other and with the dream self. "The production of such an organized conscious experience requires coordinated interaction between several cognitive modules in the brain that are in charge of orientation to three dimensional environment, emotion processing, motor coordination, as well as perception of objects, faces, places, and motion" (Valli 2008, p. 38). Brain activation studies confirm that multiple brain areas involved in such functions are active during REM sleep (Valli 2008, op. cit.). In contrast, "other forms of random brain activation, as epileptic seizures, migraine and random artificial brain stimulation, do not cause complexly structured, organized and coherent subjective experiences, but result in reports of random phenomenology". If dreams are like these other random brain activations the following question might be asked: Why would the brain try to make sense of random activations during sleep by trying to connect them in a complex whole, but no try to do the same with random activations

while it is awake? According to Valli, because in the case of dreams the brain activation is not random (Valli 2008, op. cit.).

 The other kind of criticism attacks the overemphasis with which RAT considers bizarreness in dreams. Only 20% of dreams deviate from or contradict with waking perception (Revonsuo, & Salmivalli 1995). As Katja Valli noted: "Thus, even though bizarreness is a regular feature of dreams, it is a mild deviation from otherwise well-organized experience. Consequently, RAT can explain the bizarre nature of dreams as a consequence of random activation, but fail to explain the well-organized and coherent nature of dreaming" (Valli 2008, p. 39).

The cognitive theory of dreaming

As advocated by David Foulkes (Foulkes 1999) this theory claims that dreaming is brought about by random memory activation. "First, a variety of different memory elements are activated from long term memory in a random or semi-random manner. Second, a specific dream production system organizes the activated memory elements into a comprehensible, coherent dream narrative" (Valli 2008, p.40). Foulkes's model is compatible with RAT in the sense that dream content is constructed from randomly activated memories. Foulkes' theory implies that children's dreaming is different from adults' dreaming, because it is dependent on memory and thought processes which develop with age (Valli 2008, p.41). The theory's conclusions indicate developmental trends in dreaming. Younger children remembered fewer dreams than older children and they provided shorter dream reports. Second, as the children matured, their dreams became more complex. "Self-involvement, activity and emotional content became more frequent. Memory, thought and language processes affect how organized and frequent dream experiences are" (Valli 2008, p. 41).

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. (Foulkes 1999a, 117)

This passage, together with many others from Foulkes' book, emphasizes that our ability to dream develops gradually with our ability to simulate or to imagine conscious reality which is not supported by sense data. These findings suggest that dream experiences are, in their nature, more similar to images, which, as we shall see in section 1.4, is in accordance with the imagination model of dreaming.

The cognitive theory of dreaming is subject to the same criticism as random activation theories. The criticism is well summarized in Domhoff 2010. If memory elements are activated in a random or semi-random manner, how does a coherent dream narrative follow? Furthermore, why are some autobiographical memory elements, such as misfortunes, more frequently selected from long term memory than other types of events?

The neurocognitive theory

The neurocognitive theory has its origin in The Continuity Hypothesis whose main advocate is William C. Domhoff (Domhoff 2003). He claims that there is a continuum between dreams and waking experiences in a way that dreams reflect waking experiences. The most general form of CH seems to predict that the frequency and nature of any real events will be correlated with the frequency and nature of similar dream events in subsequent dream content. As CH assumes a direct relationship between waking and dreaming experiences, it runs into difficulties in failing to explain why certain elements frequently present in waking life are mainly absent from dreams, such as reading, writing and using a computer. Furthermore, CH cannot explain the negativity of dream emotion. Negative emotions are more frequent than positive emotions in dreams, but in waking life, the ratio of positive and negative emotions has been reported to be exactly the opposite. Similarly, as pointed out by

Deirdre Barrett (Barrett 2001), the continuity hypothesis cannot explain why incorporation of infrequent life events, such as trauma, occurs repetitively in dreams.

This kind of criticism leads Domhoff to review the continuity hypothesis (Domhoff 2010). This model presents a revision of previously discussed theories. It states that dreaming occurs when specific neural networks and associative area of the forebrain, are activated in the absence of external stimuli. This activation is not random. Dream content is constructed from the same memory systems as waking thoughts, and dream elements are continuous with waking experiences. The neurocognitive model also acknowledges that dreaming is a cognitive achievement that is gradually attained during ontogeny. The downside of the neurocognitive theory is that no new, complete theory is actually formulated (Valli 2008, p. 42). "Consequently, no specific predictions are outlined, and no new experiments are described to test them. The neurocognitive model is rather a description of where dream research stands at the moment, a demonstration of the shortcomings of previous theories, and a suggestion how a neurocognitive perspective should be incorporated into future theories" (Valli 2008, p. 43).

1.3. Dream science and dream skepticism

I think that the following description of how dreams are generated can safely be accepted by any of the previous theories. When we are awake, our brain is activated by stimuli from the external world. From these stimuli, the brain generates our perceptions. The activation of the brain does not stop when we are asleep. "The brain never turns off. It continues to work all the time that we sleep. No wonder we are sometimes quite conscious in our sleep. No wonder that we often dream" (Hobson 2009, p.42) The reason why we do not wake up when our brain is activated is that, in REM sleep, when dreaming is most intense, the brain closes all inputs and outputs for the external stimuli. "A notable exception to the quelling of motor output is the occurrence of rapid eye movements that give REM its name but which do not wake us up. In other words, brain actively inhibits the external stimuli which are an important shaper of waking consciousness; it also actively inhibits the motor output

which accompanies waking behavior" (Hobson 2009, pp. 42-43). The stimuli for brain activation then come from the brain itself. "Since there is no sensory input, as prevail in waking, this internally generated data is read as if it were coming from the outside world. The brain's model of the outside world is thus both activated and stimulated. As far as the brain knows, it is awake because it is activated and stimulated" (Hobson 2009, p. 43).

However, not all dreaming happens during the REM sleep and other dream scientists have different conceptions of dreams. For instance Frederick Snyder (Snyder 1970) stated that: "dreaming refers to the subjective conscious experiences during sleep, and it consists of complex and organized mental images that show temporal progression or change" (Valli 2008, p.23). Dreams are, according to this theory, like stories. Revonsuo, on the other hand, suggested (Revonsuo 2006) that dreaming should be considered as a continuum. "At the one end of the continuum resides full-blown dreaming, defined as complex, organized temporally progressing, multimodal contents of consciousness during sleep that amount to a simulation of the perceptual world, and at the other end there is sleep mentation, that is, simple contents of consciousness during sleep that show a low degree of complexity and organization" (Valli 2008, p.23).

But, even with these reservations, it seems well established that in our dreams our brain confuses signals coming from the rapid eye movement for the stimuli coming from external objects in such a way that we rarely doubt that these signals come from the objects of the external world. The question I would like to address now is why we are deluded in our dreams. Is it because dream experiences are, in their nature, indistinguishable from waking experiences or because our cognitive capacities are impaired and we are unable to tell the difference although dream experiences are in fact different from waking experiences? In my opinion, dream science could help us to see that the latter option is the correct account of our epistemic situation while we are dreaming. In order to do that, let us consider the following dream.

Right now I am in my apartment at in Budapest, sitting in front of my laptop typing these lines. Few nights ago I dreamt that I was in my hometown, sitting in my favorite, long ago closed coffee shop. I am disoriented because I can actually see and feel myself to be in my home town when I am in fact sleeping in my bed in Budapest. And I do not see myself from the third person perspective. The café is closed long ago, and even when it was open it was 400 kilometers from Budapest. This fact did not bother me at all. I did not ask myself what I am doing here in not existing café, drinking coffee while I have so many things to do in Budapest with exams and deadlines so close. Also I do not wonder when they reopened café and how I get here. But besides all these inconsistencies and oddities everything looks normal to me. There is a good reason for that. In dreams, my cognitive powers, such as reflection and memory are impaired. Scientific findings show that these impairments have neurological causes. Dreaming is typically delusional because events and characters are taken for real. Reflective thought is absent or altered in a way that a dreamer easily accepts impossible events, sudden changes in dream scenery, disappearance or sudden appearance of dream characters. Waking consciousness has access to many memories about past knowledge and experience. As already mentioned and showed in Table I, in dreams we identify memory source in only 20% of dreams (Hobson 2009, p21). This is related to my failure to recognize these peculiarities when I dream.

The striking fact about dreams, the one that attracted philosophers to the dream scenario, is that in my dreams I rarely doubt that I am awake. I don't ask myself how it is possible that I am sitting in the long ago closed café. I don't ask when it is reopened or how I get there. This is because my reflective consciousness is missing. By reflective consciousness I mean the ability to focus on some particular aspect of the content of consciousness and make a judgment about it. Earlier it was believed that reflective consciousness is completely missing from dreams, but today this view is changed. The investigations conducted in 1980's showed that in 16% of REM dreams the dreamer noticed some bizarre features of dream. (McCarley and Hoffman 1981, pp. 904-12). The investigations from 1990's showed that self-reflection is not either present or absent in dreams, but can be activated to various degrees during dreaming. D. Kahn and A.J. Hobson divided reflective thinking in dreams into two

distinct components (Kahn and Hobson 2005). The first component - reflecting on the dream event itself - is deficient, and very different from waking. The dream event is taken for granted, and the dream self does not question whether the event is likely in the waking realm. The second cognitive component is thinking and reflecting within the event and it is similar to thinking while awake. So when I dream that I am in long ago closed café in my home town I do not ask myself how it is possible that I am seating in a long ago closed café in my home town (while in reality I am miles away), but I do think what to order.

Pier Carla Cicogna and Mario Bosinelli in their paper "Consciousness during Dreams" considered three types of conscious awareness during dreams. *First* is primary awareness or awareness as the phenomenal experience of objects or of events. This is defined as "the direct experience of percepts and feelings, and thoughts and memories arising in direct response to them. It also includes spontaneously arising memories, thoughts and images, including dreams and day dreams. . . . In primary consciousness you are the subject who does the thinking, feeling and action in regard, mainly, to external objects and events" (Cicogna and Bosinelli, p. 27). *The second* type is meta-awareness which is defined as all forms of reflective meta- cognition on primary awareness. In other words, metaawareness is the awareness of mental life itself, i.e., the awareness of having an awareness of the first type (phenomenal experience that/of: ''I am aware that I have the awareness that/of ''). Meta-awareness has some analogies with reflective consciousness which ''consists of thoughts about one's own conscious experience per se . . . Your own conscious experiences, feelings and actions are the objects of your thoughts' (Cicogna and Bosinelli, p. 27). *The third* type is awareness as *self-awareness,* i.e., the awareness of being oneself.' ((Cicogna and Bosinelli, p. 28). While the first and the third type of consciousness are usually present in dreams, meta-awareness is typically absent from dreams.

"Apart from lucid dreams, we usually lack insight, that is, we take for granted the reality of dreams and fail to understand its hallucinatory characteristic. This may be explained by the specific pattern

of brain activation during REM sleep: the dorsolateral prefrontal cortex (DLPFC) where neurocognitive mechanisms crucial for reflective consciousness and self-awareness are believed to reside is very active during wakefulness, but deactivated in REM sleep" (Valli 2008, p. 23). The reason why dream experiences delude us is because we are unable to activate reflective consciousness.

It seems that the reason why I do not wonder how I ended up in a long-ago closed café does not lie in the fact that what I experience in dreams is the same as what I experience while awake. The reason why I am deluded is caused by the lack of meta-awareness or reflective thought in dreams. If I were able to reflect on my predicament, to activate my memory and to assess my situation in the way I usually do when I am awake, it seems to me that I could figure out that something is wrong with me sitting in the long-ago closed café, miles away from my bed, a few hours after I went to sleep. It would be significant aid in fighting the dream skepticism. There might be a simple way to do this. Through simple exercises a person might be taught to dream lucid dreams. The problem of fighting dream skepticism would cease to be a philosophical problem and become the practical. Whether or not we are dreaming would be a matter of how successfully we mastered lucid dream techniques. We shall see below how this can be achieved.

1.3.1. Lucid dreams

What exactly are lucid dreams? The short answer is: lucid dreams are dreams in which a dreamer is aware that she is dreaming. The lucid dreamer is fully aware of the fact that the phenomenal world she is currently experiencing is not the external physical reality. She is aware of the misrepresentational character of her ongoing state of consciousness. At the same time, she is also freed from many of the other cognitive deficiencies that characterize non-lucid dreams. For instance, the common features of disorientation, confabulatory reasoning, and amnesia are much less present in lucid dreams.

Lucid dreams were not subject of serious scientific investigation till the 70s. In order for them to deserve a title of genuine phenomenon the following question had to be answered. Is lucid dreaming real or is it just imagined? A concise summery can be found in (Hobson 2009a, p. 42)

Stephen LaBerge (LaBerge et al. 1981a and La Berge et al. 1981b) demonstrated that lucidity always arose out of REM sleep and that subjects were able to signal that they were lucid by making a series of voluntary eye movements. This however started the doubt that lucid dreamers signaling that they are in lucid dream might be fully awake. According to Hobson (Hobson 2009a, op. cit.), it appears that LaBerge and his critics were both right. The lucid dreamers' brains seems to show similarities to both wakeful and dreaming states, which makes the phenomenon of lucid dreaming very interesting for the dream science.

But, how can the brain be in two different states at once? According to Hobson, there is a neurological explanation for that. "One part of the brain may be asleep while another is awake. In the case of sleep-walking the gait-generator and navigational system of the brain stem may be fully functional while the cerebral cortex is still in Stage IV of NREM sleep" (Hobson 2009a, op. cit.). A dreamer is both awake and asleep with different parts of the brain in different states at the same time. For Hobson, there is no doubt that lucid dreaming is a hybrid state of consciousness. "Mistakes can be made, of course, and appropriate cautions and safeguards must be taken, but the best proof that lucid dreaming is a hybrid state of consciousness, sandwiched in between waking and non-lucid dreaming is empirical" (Hobson 2009a, op. cit.). And it is fairly easy to enter lucid dreams. All we need is auto suggestion.

EEG studies indicate that both 40 Hz power and fronto-occipital coherence are correlates of waking consciousness (Hobson 2009a, op. cit.). "Brain imaging research has shown that the regional activation pattern in lucid dreaming correlates with those cortical areas known to be more highly developed in humans than in monkeys. To become aware that one is dreaming, it would appear to be important to reach frontal 40 Hz power and coherence in a human brain and thus to turn on a

distributed network that normally mediates waking consciousness. By means of pre-sleep autosuggestion, it could be possible to reactivate the DLPfC enough to support lucidity. This suggests that we may have a handle on insight and its enhancement via suggestion" (Hobson 2009a, op. cit.). If that is so, then, according to Hobson, "lucid dreaming could move from its marginal and tenuous place at the fringe of psychophysiology to center stage in the emerging science of consciousness. Lucid dreaming may, in turn, help consciousness science to effect revolutionary changes in psychology." (Hobson 2009a, p. 43).

At this point we can draw some similarities and differences between lucid dreams on the one hand and non-lucid dreams and waking perception on the other.

According to Stephen LaBerge, when we are awake and when we have non-lucid dreams we usually proceed by assuming that we are awake. During non-lucid dreams our cognitive capacities are diminished and we continue to believe that we are awake. We do not have access to lot of memories from our waking life and our reflection is not nearly as sharp as it is when we are awake. And we are not bothered even when some bizarre events, like encounters with fictional characters, movie stars etc., occur. After waking up we realize that it was really unusual that our favorite celebrity who lives on a different continent had coffee with us, and we even wonder how that question had not bothered us when we had these experiences, but we could not come to these realizations in non-lucid dreams because our cognitive powers, such as memory and reflective power, had been impaired. (LaBerge 2000).

On the other hand, in order to enter a lucid dream a dreamer needs to question if she is awake as many times during her waking hours as possible. This habit will then be transferred in dreams and raise up her dormant cognitive capacities. This will, in turn, help her to realize that her ongoing bizarre experiences are in fact dreams and she will enter lucid dreams. Upon entering lucid dream she will be able to recall details of waking life. A lucid dreamer will be able to assess her ongoing experiences and even to influence and change them. Also, unlike in non-lucid dream, due to her ability to access

her waking life memories, she will be able to establish a continuity between her waking self and her (lucid) dream self (LaBerge 2000).

Lucid dreams, thus have some features of dreams and some features of waking experiences. Most notably, our awareness and reflection are not diminished. The fact that in lucid dreams we can assess our environment and know that our ongoing experiences are part of a dream is going to have a huge part in Chapter 3 and Chapter 4.

1.4. The imagination model of dreaming VS the hallucination model of dreaming

In the last few decades, several philosophers questioned a certain traditional understanding of dreams. Could it be the case that dream skepticism posed a threat because the nature of dreams is misunderstood? In most ordinary dreams, we have experiences. These experiences often mislead us into thinking that we are awake. Although the two models of dreaming I am going to discuss agree that in dreams we are usually deceived by our experiences, they disagree on the nature of these experiences, and on the ways the experiences deceive us. According to the traditional or hallucination model of dreaming, dreams cause non-veridical sensations. While awake we have perceptual experiences (percepts) and we form beliefs on the basis of them. These percepts can be veridical or non-veridical. Veridical percepts are perceptions and non-veridical percepts are illusions or hallucinations. In philosophy, 'hallucination' usually refers to a 'philosophical' hallucination, that is, to an experience that is subjectively the same as veridical perception. Dreams, as described by the hallucination model, give us non-veridical percepts which lead to false beliefs.

With the hallucination model of dreaming we can contrast the imagination model of dreaming as presented in the works of Colin McGinn, Ernest Sosa and Jonathan Ichikawa. According to this model, we do not have perceptual experiences or form beliefs when we dream. When we dream, we experience mental imagery, and imagine things (Ichikawa 2008, pp. 519-527). While dreaming about my cat, I do not have hallucination-like visual experiences of my cat, and come to believe that my cat

talks. Rather I form the mental image of my cat, and imagine that he talks. The imagination model of dreaming comprises two claims:

1. The phenomenal character of dream experience is more like imagery than perception

2. I do not form (genuine) beliefs in dreams; rather I am engaged in some kind of propositional imagination.

These two claims are separate and it is possible to hold one without holding the other. Colin McGinn (McGinn 2004) held that dreams are imagistic and not perceptual experiences and he seems to be indecisive when it comes to the status of dream belief. McGinn regards dream-belief as an extreme case of fictional immersion, and, although it sometimes seems as if McGinn considers dream-beliefs to be genuine belief, it also seems that for him the state induced by fictional immersion is not the same as genuine belief. Ernest Sosa (Sosa 2007) holds that dream experiences are possibly perceptual (he was not arguing for that), but in dreams we do not affirm content of experience or form beliefs. Jonathan Ichikawa (Ichikawa 2008 and Ichikawa 2009) claims that in dreams we have imagistic experiences and we do not form beliefs. My intent here is not to decide among their positions. I will try to characterize the imagination model of dreaming using parts of the analysis they provided.

The following example should clarify what I mean by the claim that dream experiences are more like imagery experiences than percepts. I have a dream about a blue comfortable chair. On the hallucination model of dreaming I have visual color experiences, the same kind I have when I actually see blue. According to the imagination model of dreaming, my dream experience is color imagery. I have the same kind of sensory experience when I close my eyes and imagine what a blue comfortable chair looks like. These two sorts of experiences are different in kind and not only in degree.

I will now offer some support for the claim that dreams are images rather than percepts. The following considerations are originally undertaken in McGinn 2004, but I am going to present them here as they are given by Jonathan Ichikawa (see Ichikawa 2009, pp. 5-8).

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If I am dreaming and a telephone rings next to my bed I will wake up. I have an auditory percept of the ringing and it wakes me. According to the hallucination model of dreaming, if I have a dream in which a telephone rings, I would have the same sort of auditory experience I had when my phone really rang. But why then only the real ringing wakes me up? Although I often dream of hearing loud sounds, my dreams are rarely interrupted by them. If the hallucination model is correct, I should be woken up by the dream ringing.

When I am awake I can just notice something and then turn my head and take a better look at it, or I can, while sitting in the bar, have audio sensations caused by different conversations. I can choose which ones to attend to, and then I can understand them, but I have audio percepts corresponding to all of them. In dreams, however, whatever I attend to is present. I cannot fail to notice a part of my dream. If I fail to notice it is not there.

Eric Schwitzgebel was intrigued by the finding that in the 1950s most people believed that visual experience in dreams was a black and white phenomenon (Schwitzgebel 2002). Schwitzgebel has an explanation of why this happened, which will be discussed later in this chapter. As for now, we are going to see why Ichikawa thinks that that finding can help him make a case for the imagination model of dreaming. If we accept the hallucination model of dreaming, one of three following alternatives must be the case: 1. our dreams become colorized in the late 50s; 2. almost everybody in the 50s was wrong about the visual experiences in dreams; 3. almost everybody today is. There is no similar problem for the imagination model of dreaming. We can have indeterminate colors in visual imagery. Since dream experience consists of images rather than sensations, in dreams we can have indeterminate colors. Besides indeterminate colors, in our dreams, we can also have indeterminate facts in general. I can have a dream about a house without dreaming about it as being white or yellow.

A potential problem for the imagination model of dreaming is the following: one important difference between percepts and images is that imagery is subject to the will. A discussion of this point is found in McGinn 2004. McGinn, in some respects, follows Wittgenstein (Wittgenstein 1967, §§629, 633)

and Sartre (Sartre 1948, p. 18). The idea they all share is that imagination is an activity and under our control. This is not the case with percepts. We can choose what to imagine, but we cannot choose to see a white wall as being green.

David Sosa (Sosa D. 2007) objects to this by pointing out that we have some control over our perceptual experiences, because we can choose what to attend to. I do not think that this remark shows that imagery and percepts are subject to the will in the same way. When Sosa says that we have some control over our perceptual experience, this is not the same kind of control we have over our imagery. I can change my perceptual experience of seeing red to seeing green by turning my eyes from some red object towards a green object. This, however, is not the same kind of control I have when I decide to stop imagining some object as red and start imagining it as green. In the latter case I performed the action that changed my experience directly, while in the former case it was possible only indirectly. Sosa has a further point against the voluntary character of imagery. He proposes that imagery is not always voluntary, because sometimes we cannot get rid of some annoying tune playing in our head or some disturbing picture. This remark is misplaced because even if we cannot banish a disturbing picture, we can still try to banish it. It makes sense to try to banish it; we say that we might banish it, although we fail to banish it. The disturbing picture is more like an unwelcome habit or addiction than an unwelcome chain of events (Ichikawa 2009, p. 5). On the other hand, I can try to concentrate as hard as I might but the color of the wall is not going to change from white to green by sheer power of my will. A command like "Start seeing the green wall instead of white" is a confused command.

In order to establish the imagination model of dreaming, it is necessary to show that dream experiences are not percepts but images. Would this entail that dream experiences are subject to the will in the same way the waking images are? The considerations I will undertake in the following sections will, hopefully show that (at least some) dreams are subject to will. As for now I am going to put this question aside and examine the second important assumption of the imagination model of dreaming.

The other main claim of the imagination model of dreaming is that in dreams we do not form (genuine) beliefs. This claim will be discussed in greater detail when I assess Ernest Sosa's anti-skeptical approach. At this point some preliminary remarks will suffice. Let us consider again my dream about the blue chair. Prima facie, I seem to have many beliefs in that dream. For example, I believe that the chair is blue, I also believe that it is comfortable and that it will provide better support to my back than my old chair. On the hallucination model of dreaming, while I am dreaming, I really have these beliefs. On the imagination model of dreaming defended by Sosa and Ichikawa, the fact that I have these beliefs in my dream does not entail that I actually have them. It entails only that I am actually imagining that the blue chair will be more comfortable than my old chair.

Ichikawa described the following dream. "I have a dream in which I run into my mother in the mall, but she looked just like my former boss. But it was perfectly natural, within the dream, for that to be my mother; it wasn't until I woke up that anything seemed odd about it at all." (Ichikawa 2008, p. 523) When someone tells us a dream like that we usually do not think that he actually dreamed of his boss and somehow confused her with his mother. No, in the dream his mother just looked like his boss. According to the hallucination model of dreaming, the beliefs in dreams are formed on the basis of the percepts. In the described sense it would mean that Ichikawa's belief that he is talking to his mother is ill-formed. If he had these sensory experiences in waking life, he would form the belief that he is talking to his former boss. The imagination model of dreaming has no problem in explaining this fact. It is possible to imagine that one is talking to one's mother and that mother looks like one's former boss.

According to Ichikawa (Ichikawa 2009, p9), if we are to argue in favor of the claim that in our dream we form genuine beliefs, then we have to claim either that during dreams our longstanding beliefs that are inconsistent with our dream beliefs are temporarily abandoned, or we have to claim that we continue to have the longstanding beliefs, and temporarily acquire an additional, logically

inconsistent belief. Either way, Ichikawa claims, we are eventually doomed to reject the claim that we are forming genuine beliefs in dreams.

If I accept that during a dream my longstanding beliefs are abandoned what I have to accept is that it was not the case that, at 3 a.m. this morning, I believed that I was a philosophy student, if I was then dreaming that I was not one. I had this belief before I went to sleep and immediately after waking, but during the time that I am dreaming I cease to have this belief. If we are to claim that every night, during dreams, we suspend our longstanding beliefs and reclaim them immediately after waking, we have to explain this interesting fact. Ichikawa asks us to consider the following example:

> 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 come 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 (Ichikawa 2009, p9).

If I have a dream like that, I do not always at the beginning of the dream confront evidence to that effect and at the end overturn my earlier beliefs. Although I can have a dream in which I gradually discover a conspiracy of philosophers from the beginning of that discipline, but I can only dream that the conspiracy is the case without dreaming that I confronted any evidence for that. Actually, I can dream that I always knew about that conspiracy and even being an important part of it. From this Ichikawa concludes that if dream beliefs are beliefs and our long-standing beliefs temporarily disappear, then we have cases of belief revisions that are different from our usual belief revisions. According to him, if we accept that our long-standing beliefs are suspended during the night, then we have to explain why these revisions are so different from our usual waking revisions.

If, on the other hand, we accept that that during dreams we continue to have our long-standing beliefs and temporarily acquire an additional logically inconsistent belief, we must admit then that, during dreams, we exhibit a kind of epistemic irrationality that can only be resolved upon waking. This is not satisfying for Ichikawa for at least two reasons. First, to him dreaming does not seem to be an intellectually irrational activity. We are not required, if we are interested in our positive epistemic status, to avoid dreaming or to try to dream only truths. He points out that the target of this objection is not to show that it is impossible to have contradictory beliefs, but that our activities during dreams do not have the model of self-deception in which subjects might be said to have contradictory beliefs. Furthermore, I can dream that I am a famous basketball player. But, after waking up, I do not introspect my belief that I am a philosophy student, notice disagreement between that belief and the belief that I am a basketball player, and reject the belief that I am a basketball player. As soon as my dream is over, Ichikawa claims, all my dream beliefs are already finished and I do not have to reject false beliefs I have acquired. Again the problem is not that it is impossible to have contradictory beliefs; the problem is that dreaming does not fit this model.

I am not going to try to resolve the problem of the status of dream belief, although I am going to say a little bit more about it later when I discuss Sosa's anti-skeptical strategy and its use of the claim that in dreams we do not form genuine beliefs. The purpose of the previous discussion was to highlight the observation that it is not obvious that the traditional model of dreaming provides us with a proper account of dreams which is supported by sound arguments. The results of this section will come into play in the following chapters when I am going to assess the importance of the proper account of dreaming in the design of an anti-skeptical strategy.

1.5. Problems with the method of dream science

My work partly draws on the findings of dream science and dream science heavily relies on the belief that dream reports are correct accounts of our dreams. But not everybody thinks that dream reports are very reliable ways of telling what is going on when we are dreaming. Eric Schwitzgebel

(Schwitzgebel 2002), Norman Malcolm (Malcolm 1959) and Daniel Dennett (Dennett 1976) respectively criticized the reliability of dream reports. Before discussing their views I am just going to give a general consideration about the unreliability of dream reports.

Dream reports could be regarded as less reliable than reports of waking experience because of the following factors. We report about a sleep experience when awake and this change of setting can influence our reports. We report about our dreams sometimes hours after we had the dream experiences, which may lead to forgetting of the experience. We often have difficulties in verbally describing experiences that are mainly visual and emotional. This happens even when we describe waking life situations. For example, some people are better in describing suspects of the crimes they witnessed than some other people. Even when we try to describe waking life events we remember well, some inaccuracies may occur. First of all, when we describe an event we were part of, we see ourselves and the event from a third person perspective, although when the event happened we had experienced it from a first person perspective. The shift of the perspective will make our description of the event poorer than our perception of the same event. Furthermore, a person with some literal talent and better perceptional skills will be able to provide better account of the event than a person with no literal talent and with modest perception. As I would describe a suspect as a tall brownish man in dark cloths, someone with the eye of Sherlock Holmes and better verbal and vocabulary skills would describe the same suspect as a white man, approximately 1,95m tall, who has a hair of the color of sunflower in May, who wears black sweat pants and a dark gray sweat shirt. The situation is similar in dreams. Non-lucid dreamers usually do not know how to pay attention to dream characters and events, or how to improve the dream recall after waking up. This does not mean that we are unable (in principle) to provide accurate accounts of our dream experiences. With right training, these difficulties could be diminished. But, as I said, this is not the opinion everybody shares.

1.5.1. Eric Schwitzgebel and black and white dreams

Eric Schwitzgebel's paper "Why did we think we dreamed in black and white?" (Schwitzgebel 2002) starts off by exploring an interesting feature of dream reports in USA in 1950's. In almost all dream reports back then people reported that they dreamed in color. Only 0, 5% of dreams are reported to be in black and white. (Schwitzgebel 2002, p. 650) However, studies conducted in the 1940s and 1950s led dream researchers to believe that most dreams are black and white.[2] In the 1960's different studies have been conducted and the opinion about whether dreams are colored or black and white changed. These studies showed that when subjects were awakened during REM sleep and questioned about the incidence of color in their dreams, 83% of dreams were described as having some color (Schwitzgebel 2002, p. 650). The other researches were taken after this one and they all showed very high percentage of dreams to contain color. Since significant part of dream research in modern days considers dream reports, it would be interesting to look into why people in this (and according to all available data only in this) period thought that their dreams are black and white. Schwitzgebel considers the following possibilities. "One possibility is that the ubiquity of black and white images in technologically advanced countries in the first half of the twentieth century (and the studies indicating that people dream in black and white are mostly conducted among American students) actually caused our dreams to change in their phenomenology" (Schwitzgebel 2002, p. 653).

The other possibility is that dreams are predominantly in color. And the reason why people in the 1950s believed that they were not was because they compared dreams with black and white movies

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[2] Hall 1951, Tapia, Werboff and Winokur in 1958, Middleton, in 1951, Calvin S. Hall announced in *Scientific American* that 29% of dreams are either entirely colored or have some little bit of color in them (Hall, 1951). He called such dreams 'technicolored', thereby explicitly comparing them to the colored movies that were becoming increasingly prevalent in the 1940s and '50s, and implicitly contrasting them with lower-tech black and white movies and dreams. Tapia, Werboff and Winokur in 1958 found that only about 9% of a sample of people reporting to the hospital at Washington University in St. Louis for non-psychiatric medical problems reported having colored dreams, compared with 12% of neurotic men and 21% of neurotic women. Middleton (1942) found that 40% of his college sophomores claimed never to see colors in their dreams, 31% claimed rarely to do so, and only 10% claimed to do so frequently or very frequently. Interestingly, Middleton found a similar percentage of his respondents to report *hearing* in color, 11% claiming they frequently or very frequently experienced colored hearing, 68% claiming they rarely or never did. De Martino (1953) found that only 17% of his undergraduate respondents claimed to see colors in their dreams at least once a month. (Schwitzgebel 2002)

and television of the time. "As paintings and tapestries yielded to photographs and motion pictures, people naturally updated the media to which dreams were compared; and since these media were black and white, so also, it came to seem, were dreams." (Schwitzgebel 2002, p. 655). This may explain the fact that people rarely dream about pain or about typing. When virtual reality becomes more developed and present in the movies of the future, it may be that pain and other haptic elements become more frequent in dreams.

The third possibility is that dreams are neither colored nor black and white and applying either of these categories is misleading. In this case dreams are considered in the analogy with novels. Most elements of most scenes in novels do not have determinate colors. When a character slides into her 1966 Mustang and rumbles away, to use Schwitzgebel's example (Schwitzgebel 2002, p656), the scene could be imagined to have any of a variety of colors. If novels, or the images evoked by novels, cannot properly be described as being either in black and white or in full color, then it might be odd to try to describe dreams as black and white or colored.

All of these considerations show that it is important whether our dreams are in color or black and white because the subjective experience of dreaming would be quite different in the two cases. If dreams are in color, then the objects in our dreams to whose color we are not attending generally have determinate colors. If dreams are not in color then these objects do not have determinate colors. This is really a big difference and we should be able to tell whether the phenomenology of our dreams is one way or another. The changes in opinion about dreaming in black and white throughout history suggest that people are incompetent in reporting about their internal states despite the considerable self-confidence people usually exhibit when questioned along these lines. The main problem is that we do not know the phenomenology of dreaming nearly as well as we think we do. And since the investigations conducted by the modern dream science rely on the subjective dream reports this question has to be taken into account.

However, dream reports provide sufficiently reliable source of the dream science. Dreams can be seen as the experiences that we, usually, have problems to remember and difficulty to describe. They seem like drunken episodes. We know that some things happened but we are not sure what exactly occurred and who was present. Lucid dreams provide us with a way to improve our dream recalls. We can further compare our lucid dream reports with our waking recalls of non- lucid dreams and see the improvement. However, Schwitzgebel, could insist that even our lucid dream reports are susceptible of the same criticism. This is a part of his broader strategy where he attacks introspective knowledge in general. If he is right, then not even our reports about perceptions are safe.

On the other hand, if he is correct, an easy answer to dream skepticism can be provided. The danger of dream skepticism comes from the fact that we mistakenly think that we are awake while in fact we are dreaming. The two states are understood as fundamentally different. One is not deceptive, while the other is. If Schwitzgebel's verdict concerning our ignorance about dreams is right, we don't have good reasons to think that we have had dreams when we were convinced that we were awake. So it is hard to see how the skeptical challenge would rise in the first place.

A view according to which a dream is an experience that occurs during sleep is called a received view (Springett 2013). On this view, after waking, we are usually able to recollect our dreams in fewer or greater detail depending on how good our memory is. On this view, we can fail to remember every detail of the dream, but we will not have false memories of the experiences that did not happen in the dream. For example, when I wake up from a dream in which I was chased by a lion, I might not remember what was the color of my clothes or how big a lion was, but I am not going to wake up with memories of being chased by a lion while in fact I dreamt that I was riding a bicycle. The received view also implies that dream experiences are very similar to waking life experiences in a way that same mental states and emotions can occur in dreams and in waking life. In both we can judge, believe, fell fear or happiness (Springett 2013). The validity of the received view is usually presupposed in the dream science. The received view is most famously criticized by Norman Malcolm

and Daniel Dennett and before going any further, I am going to present their respective criticisms and offer some responses.

1.5.2. Malcolm's criticism

In his most famous work on the subject "Dreaming" (Malcolm 1959) Malcolm argues that dreams cannot be experiences, deceptive or otherwise, because experiences require awareness, that is, conscious experiences. Conscious experience, in its turn, requires language, or at least the capability to declare "I am having an experience". The use of language in this way shows that the person declaring to have experiences is awake, which, according to Malcolm, means that there can only be waking experiences. This means that dreams are not experiences. A summary of Malcolm's and Dennett's respective view is given by Ben Springett (Springett 2013), and by Markku Roinila (Roinila 2013) and in my reconstruction of Malcolm's and Dennett's arguments I am going to rely strongly on Springett's and Roinila's interpretations.

Springett sees in Malcolm's criticism three main arguments: 1) dream reports are unverifiable; 2) sleep and dreaming have conflicting definitions and 3) communication and judgments cannot occur during sleep.

Dream reports are unverifiable because they are insufficient to show that there are conscious experiences during sleep. This argument by Malcolm is inspired by a passage from Wittgenstein's Philosophical Investigations. There Wittgenstein says:

> …must I make some assumption about whether people [when telling their dreams] are deceived by their memories or not; whether they really had these images while they slept, or whether it merely seems so to them on waking? And what meaning has this question? – And what interest? Do we ever ask ourselves this when someone is telling us his dreams? And if not – is it because we are sure his memory won't have deceived him? (And suppose it were a man with a quite specially bad memory?) (Wittgenstein 1953: part 2, § vii; p.415).

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The received view, according to Malcolm, is committed to a claim that when we recall dreams we recall the content of an earlier experience. (Although this is not true in Descartes' case. Descartes is saying that our memories of dreams are fragmentary – he is not saying that we can recall the dream exactly. On the other hand, Descartes seems to clay that these fragmentary memories are recalls of the content of an earlier experience, which is, according to Malcolm, wrong – in dreams there are no experiences to recall) But the cited passage from Wittgenstein presents the possibility that one could recall content that did not happen. Why we should believe that somebody with even a good day-to-day memory is in any better position to remember earlier conscious experiences during sleep after waking?

The dream reports are not the same as the dreams themselves, but there is no other way to check the claim that dreams are consciously experienced during sleep. The most important way to tell that we have been dreaming is that after awakening we have an impression of memory of dreaming and then we are able to reconstruct what had happened in the dream. However, there is no way to verify that the memory actually corresponds with the conscious experience of the dream. We can only believe what the dream reports tell us. Therefore dreams are only grammatical illusions and they do not really exist. One way to verify the dream reports could be to observe behavior during the sleep, but, for Malcolm, that is insufficient to show that one is having a conscious experience in the sleeping state. In fact, it would not suffice to show that there is any mental activity in the sleeping state (Roinila). We will see later that this way of determining whether there are (conscious) experiences during sleep might not be as useless as Malcolm claims, but for the time being let us go with his line of reasoning. Because of the previous reasons I cannot claim: "I dreamed that I was chased by a lion" because that would mean that I had a conscious experience in the dream that I was chased by a lion. So I cannot know if I was dreaming during the sleep at all. Also, I cannot know how long the dream lasted. I am mentioning this last claim only because later on we will see that we can successfully estimate the duration of dreams.

According to Malcolm, sleep and dreaming have conflicting definitions. Experience implies consciousness, sleep implies a lack of consciousness. Therefore the claim that dreams could occur during sleep implies consciousness and a lack of consciousness (Springett 2013). So the received view results in a contradiction. This contradiction is seen when verifying the dream reports: if one can show that one is having a conscious experience, one is not sleeping. An objection to this argument could be formulated along the following lines. Sometimes the content of dreams (or dream reports) corresponds to events that could be verified publicly. For example, we can verify our dream experience while we are dreaming as showed by LaBerge (LaBerge 1990). When LaBerge proved the existence of lucid dreams, he did that by signaling from within his dream, by previously arranged signals, that he is having a dream. This proves not only that dreams are experiences, but that they can be verified while they are happening. To this Malcolm responds that in this case I am not really asleep. By "being asleep" he means sleeping without showing any awareness of the outside environment.

We cannot communicate or judge during sleep. For Malcolm, communication is required for verifying that the mental state has been experienced. I could never say "I am asleep" and be aware that I said that statement without it being false. Although it could happen that I talk in my sleep and while someone is listening I could say "I am asleep", I could not assert that I am asleep. When I am actually asleep I am, according to Malcolm, not aware of saying the statement, and I need to be aware of saying the statement for it to be as assertion. On the other hand, if I am aware of saying the statement then I am not asleep. Because of that communication between a sleeping individual and individuals who are awake is logically impossible. Therefore, any talk about mental states that could occur during sleep is meaningless. This view is inspired by Wittgenstein's private language-argument, according to which there cannot be a mental state which only one individual could privately experience and understand. And since men cannot communicate during sleep, they cannot make judgments in sleep.

If Malcolm is right, then his results achieve at least two important results. First, dream science should be abandoned because it has a wrong starting point. It strongly relies on dream reports as accurate

accounts of dreams, and his arguments, if correct, show that dream reports cannot determine if during sleep there are any experiences at all. The second result is an easy answer to Descartes' dream skepticism. The threat of that skepticism emerged from the alleged similarities between dreaming and waking experiences. If Malcolm is right, dreams are not experiences at all and they cannot be similar to waking experiences. "If one cannot have thoughts while sound asleep, one cannot be deceived while sound asleep" (Malcolm: 1956, p.22), and a quick answer to a skeptic could be devised: whenever I have thoughts and am aware of anything I can know that I am not dreaming. "It would not occur to anyone to conclude that a man is sleeping from his saying 'I am asleep' any more than to conclude that he is unconscious from his saying 'I am unconscious', or to conclude that he is dead from his saying 'I am dead'. He can say the words but he cannot assert that he is asleep, unconscious or dead. If a man could assert that he is asleep, his assertion would involve a kind of self-contradiction, since from the fact that he made the assertion it would follow that it was false." (Malcolm: 1956, p. 7). We will see later on why similar answers to the dream skepticism won't work. But before that, I am going to consider another attempt at questioning the claim that dreams are experiences.

1.5.3. Daniel Dennett and whether dreams are experiences

Dennett (Dennett 1976) criticizes the received view, but his approach is very different than that of Malcolm. Firstly, he disagrees with Malcolm's first result from the previous section. "The most scandalous conclusion that Malcolm attempted to draw from his analysis of the concept of dreaming was to the effect the contemporary dream research by psychologists and other scientists was conceptually confused, misguided, ultimately simply irrelevant to dreaming" (Dennett p. 151). Dennett tries to connect philosophical considerations of dreaming with scientific investigation of that phenomenon. For Dennett there is no doubt that there are dreams during sleep. EEG patterns show this undoubtedly. What is problematic with dreams is whether the received view gives the proper account of dreams. According to Dennett, on the received view, our dream recollection is caused by an earlier dream experience, and while recollecting a dream, it is the second time that the content is

experienced. On Dennett's view, on the other hand, dream recall is the first time the content is experienced. This view is known as the cassette theory.

According to Dennett, the cassette theory is superior to the received view, because his theory can better account for some problematic cases of dreams such as so-called pre-cognitive dreams - situations where the dream merges into waking life (as for example when one dreams that the phone is ringing just to realize that in waking life someone is ringing at his door). Since the received view holds that dreams are conscious experiences that occur during sleep, situation as the one just described could be very problematic for the view. The dream would seem to be caused by the ring on the door, an external stimuli that happens after the dream have had happened. The only way for the received view to account for dreams like those, Dennett argues, is to claim that those dreams are precognitive phenomena, a view that does not sound really scientifically.

Dennett thinks that he has a better explanation:

> Perhaps…dreams are composed and presented very fast in the interval between bang, bump, or buzz and full consciousness, with some short delay system postponing the full "perception" of the noise in the dream until the presentation of the narrative is ready for it. Or perhaps in that short interval dreams are composed, presented and recorded backwards and them remembered front to back. Or perhaps there is a "library" in the brains of undreamed dreams with various indexed endings, and the bang, or bump or buzz has the effect of retrieving an appropriate dream and inserting it, cassette-like, in the memory mechanism. (Dennett, p. 158)

"Pre-cognitive" dreams (together with all other dreams) are never dreamt at all. They are just promptly recalled upon waking. ""dreams are not what we took them to be – or perhaps we would say that it turns out that there are not dreams after all, only dream „recollections"" (Dennett, p. 158) Dream recall is like déjá vu – it only seems that I have experienced it before.

There is, however, an interesting phenomenon that happens during sleep that undermines Malcolm's and Dennett's arguments against the received view. This is, of course, the already mentioned phenomenon of lucid dreams. In lucid dreams, a dreamer is aware that she is dreaming while she is dreaming. Lucid dream is an example of experiencing a dream while one is asleep. Therefore dreams must be experiences that occur during sleep. To this objection Dennett responds that lucid dreaming does not really happen. When we recall a dream it just can happen that the recalled dream has content where it seems that a "dreamer" is aware that she is dreaming. This content also can be stored in our „library in the brains of undreamed dream" and triggered by some stimuli upon waking. The research on lucid dreams that was conducted after the publication of Dennett's paper disproved his explanation of lucid dreams, as well as his and Malcolm attacks on the received view.

It may be objected that all I said so far in criticizing Malcolm and Dennett holds only for lucid dreams while their conception of dreams remains intact. And, since the scientific exploration of dreams is tightly connected with the reports of non-lucid dreams, it may still be the case that they are right and that dream science and everything built on it, does not hold due to the unreliability of dream report. To that I have to say that lucid dreams are not some phenomenon unrelated to non-lucid dreams. These two phenomena are connected and consideration regarding lucid dreams can be rightfully applied to non-lucid dreams, because the only important difference between the two is the fact that in lucid dreams our cognitive powers work properly and give us better view in what happen in non-lucid dreams.

In a specially designed series experiments Stephen LaBerge asked a group of experienced lucid dreamers to communicate with him by pre-arranged eye movement once they enter a lucid dream (LaBerge 1990). If the experiment is successful it would disprove Dennett's claim that dreamers are not conscious during sleep. The experiment was successful. Participants were able to signal that they entered a lucid dream thus disproving that the eye movement is irrelevant for the content of dreams. This is very important for Malcolm and Dennett's arguments. They can no longer claim that matching

of content of a dream with the eye movement is only accidental. Other implications of LaBerge's experiments are also very important. They show that it is possible to communicate during dreams without waking. This undermines Malcolm's claim that it is not possible to communicate during sleep. Furthermore, the experiments show that we can be asleep and still having conscious experiences. This undermines Malcolm's claim that dreams are not experiences. But the most important implication of LaBerge's experiments, at least for me, is connected with the problem of dream skepticism. It questions one of the most important assumptions of the skeptical dream argument, namely, that it is in principle impossible to tell the difference between dreaming and waking experiences. Before lucid dreams entered the stage one way to fight dream skepticism was to claim that although it is not possible for someone who is dreaming to know what state she is in, it does not mean that it is not possible for someone who is awake to know what state she is in. We shall see in chapters 3 an 4 how the recognition of lucid dreams can affect this way of fighting dream skepticism.

1.6. Concluding remarks on Chapter 1

For centuries philosophers have been taken dreams for granted. Since we dream for a significant part of our lives it was believed that we are sufficiently familiar with the nature of dreams. They often mislead us into believing that our experiences are waking life experiences. It was sufficient to make them a powerful skeptical device. Not much of importance was given to the actual ways they delude us. Since they are considered as situations in which we can know nothing about the external world, philosophers, for a long time, did not believe that knowing the real nature of dreams can help against the external world skepticism. However, arguments that the proponents of the imagination model of dreaming offered against the traditional model of dreaming showed that the if the nature of dreams were different, it could affect the ways in which we can fight dream skepticism. One way to do that, Sosa's strategy will be considered in Chapter 3. But even these attempts, in my opinion, failed against

dream skepticism because they have not sufficiently explored the nature of dreams. Probably the first attempt at the full understanding of the nature of dreams is offered by dream science.

Although the consideration from section 1.2.4 of various theories within dream science showed that there is no consensus on what dreams are, there are some features of dreams that all of the considered theories could accept. First, it has been shown that dreams and waking experiences have some differences. In dreams we don't not have voluntary control over our actions. Our self-awareness is also altered or missing in dreams, as well as our reflective powers. On the other hand, perceptual modalities that are present in our waking life are also present in dreams. As events of waking life, dreams are usually in color, rich in shapes, full of movement and incorporate typical wakefulness categories, such as people, faces, places, objects and animals. All these similarities and differences are paralleled in the neurological activities of the brain. These features combined are reason for the delusional character of dreams. The situation could be improved, at least in some ways, if we could learn to wake up our cognitive powers such as reflection and self-reflection and memory in dreams. This can happen in lucid dreams. Lucid dreams have both the features of waking life experiences and dream experiences. Most notably, our cognitive powers in lucid dreams are as active and functioning as in the waking life. This feature of lucid dreams, I am going to argue, is going to play a significant role in a particular anti-skeptical strategy. In order to do that, it has to be shown that lucid dreams are dreams in the sense required by dream skepticism and that knowledge we obtain while lucidly dreaming is relevant in the context of dream skepticism. I am going to talk about this in more detail in Chapter 4. Before that, it would be profitable, I think, to see what kind of skepticism exactly we are dealing with when facing dream skepticism. In the rest of the thesis I intend to do the following:

I am going to examine some dream skeptical scenarios and see if the position for a person facing dream skepticism would be different if she were a lucid dreamer. Also, I am going to examine theories that claim that it suffices to know that one is awake when awake in order to defeat dream skepticism. I hope to show that, theories of this kind cannot work against dream skepticism. After that I am going

to propose a way of responding to a dream skeptic, based, in part, on lucid dreams. At the end, I am going to explore some further consequences of my proposal. But before I do any of those, I am going to examine the exact ways in which dream skepticism works.

CHAPTER 2

2.0. Conditions for knowledge

Before I begin to analyze the different types of skeptical scenarios and the skeptical arguments based on them some preliminary remarks are needed. Since skepticism (as far as this thesis is concerned) argues that it is impossible to have knowledge about the external world, it will be useful to clarify what knowledge is. More precisely, I will consider the requirements propositions about the external world need to satisfy in order to be considered as knowledge. Since the analysis of knowledge is not the central topic of my thesis, I will not attempt a complete discussion of all the conditions of knowledge; I will focus on the features that are important for the evaluation of dream skepticism.

I will begin by briefly discussing necessary and sufficient conditions for knowledge (section 2.0). In sections 2.2 and 2.3. I will present two types of arguments for skepticism about the external world based on the so-called Bad Case/Good Case distinction. I will call these "A-type" and "B-type". I intend to show that the A type argument (section 2.2), if correct, brings about skepticism by insisting on the assumption that our evidence is the same in GC and in BC. In order to reach the skeptical conclusion, the A type argument, I will argue, needs the internalist conception of knowledge. The B type argument (section 2.3) works differently. What is necessary for it to bring about skepticism varies, depending on skeptical scenario. I will argue that in the case of the BIV scenario skepticism about the external world will follow from the construction of the scenario, the application of the closure principle and the truth of the premise that we cannot know that we are not BIVs. In the case of dreams, however, an additional principle will be required in order for the B type argument to bring about skepticism - the KK principle. Since the KK principle is the trade mark of the internalism, I

will try to show that the internalist conception of knowledge is a requirement for both the A type and B type of argument, if they are to bring about skepticism about the external world relying on the dream scenario. In section 2.4. I will argue that a number of well-known skeptical arguments use the A-type and B-type arguments, or their combination.

According to one traditional analysis of knowledge, justified, true belief is necessary and sufficient for knowledge. More formally, if S is an epistemic subject and p a proposition about the external world[3], such as for example "There is a hand in front of my eyes", then S knows that p iff:

1. p is true,

2. S believes that p,

3. S is justified in believing that p.

Probably the first attempt at a similar analysis of knowledge was made in (Plato 2014). By the end of the dialogue, Socrates argues that having true belief (orthos doxa) is not sufficient for knowledge. He provides a case in which a sophist lawyer can persuade the jury to believe the story of his client, the story is true, but the lawyer uses sophistic methods to persuade the jury into believing. This true belief is, according to Socrates, not supported by proper account (logos) to be knowledge. To the question of what the proper account would be, Socrates does not have a definite answer. He argues that an account should be something that the subject knows and not only truly believes. That, however, means that this new true belief (account for the account) also needs to be grounded by proper account. Thus, the first attempt to give a proper account of knowledge turned to be unsuccessful.

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[3] I am narrowing the analysis to knowledge of the external world. That knowledge, in my opinion, is questioned by dream skepticism.

The difficulties in providing a satisfactory theory of proper justification continued throughout ancient philosophy. They are dramatically marked in the Pyrrhonian skeptical tradition and illustrated by the famous so-called "trilemma". Pyrrhonian skepticism is by itself a very interesting subject, but it is not a subject of this thesis and I cannot go into deeper analysis of it. Here, it suffices to say that, according to the trilemma, no belief can be justified properly, because any attempt at justification will end up in infinite regress, a vicious circle or by a belief that does not require justification.

In modern days it is a shared opinion among most epistemologists that the first two conditions of knowledge are not controversial. With some exceptions, considering the belief condition, almost all agree that in order for a proposition to be counted as known, the proposition has to be true and it has to be believed by the epistemic subject. What they disagree about is the nature of the third component. Internalists believe that justification is necessary for knowledge and whether a belief is justified depends only on states internal to the subject, that is, on states the subject can access by reflection or introspection. Unlike them, externalists think either that justification is not necessary for knowledge, or that factors external to the subject can be relevant for justification. For example, beliefs could be justified if they are formed by reliable cognitive processes. A somewhat different approach denies that knowledge can be analyzed into individually necessary and jointly sufficient conditions.

The internalism/externalism debate often centers on the acceptance and rejection of the KK principle. The KK principle states that if one knows that p, then one is in a position to know that one knows that p (without further empirical investigation). In general, proponents of an internalist theory of justification endorse the KK principle. If knowledge is justified true belief, then one way of knowing that one knows p is to know that these three conditions hold. If one knows p, then one knows that the truth condition is satisfied; it is usually not problematic to know that one believes that p; so the crucial question for an internalist is to be in the position of knowing that one's belief is justified. Since

justificatory status is reflexively accessible on an internalist view, this condition is also likely to be satisfied. That is why it is easy for internalists to accept the KK principle.

On the other hand, externalists hold that if justification is needed at all, factors external to the subject can be relevant for it. If this is the case, then then there is no reason to expect those who know that p to be in a position to know that their belief that p is justified without further empirical investigation. If one's belief that p is produced by a reliable process that one knows nothing about, then one cannot know that this belief constitutes knowledge merely by reflection or introspection, and thus one is not in a position of knowing that p through those channels. The KK principle is highly debated and I cannot provide the reasons for its acceptance or rejection. I am mentioning it here only because it has an important role to play later.

The understanding of the conception of knowledge as justified true belief was seriously shaken by Edmund Gettier's 1963 paper "Is Justified True Belief Knowledge?" (Gettier 1963). In that paper Gettier presented examples that showed that there can be justified true beliefs which are not knowledge. The upshot of the Gettier style cases is that they involve an agent who would normally, in given circumstances, have formed a justified false belief, and yet, through luck, he formed a true belief. Let us consider a following case to illustrate how these example work. A clock in my living room, unknown to me, stopped at 5:05 previous day. That clock is otherwise very reliable and presents an excellent way of knowing what time it is. However, it just happened that when I looked at this clock it really was 5:05. In this situation I have justified (because it was obtained by proper means) true (it is really a time my stopped clock shows it is) belief which is not knowledge because I cannot know what the time it is by looking at a stopped clock. It was just luck that this belief happens to be true. To eliminate the influence of luck on our putative knowledge, some additional conditions for knowledge have to be added.

Gettier style cases are not the only problem for the justified true belief conception of knowledge. This conception is unable to explain why we lack knowledge in the so-called 'lottery' case. Unlike in Gettier cases, where the agent formed true justified belief through the influence of luck, the way in which the agent forms her belief in the lottery case is very reliable in that it will usually enable the agent to form a true belief. The problem for traditional theories of knowledge posed by the lottery cases is that they are unable to explain why we lack knowledge in lottery cases. Let us look into an example of lottery case given by Duncan Pritchard in Pritchard 2008[4].

> This concerns an agent who forms her belief that she has a losing ticket for a fair lottery with long odds by considering the low probability involved of her winning. Suppose further that the draw has been announced and the agent's belief is true in that she has a losing lottery ticket. Given the nature of the odds involved, one would surely regard this agent as being justified in believing what she does. Nevertheless, even though this belief is justified and true, we also have the strong intuition that it is not a case of knowledge. (Pritchard 2008, p.4)

Although here, as in the Gettier cases, we have a case of justified true belief which is not knowledge, the upshot of the lottery cases is different. In Gettier cases an agent formed a justified true belief through the lucky combination of good and bad epistemic luck. In a lottery case, however, the agent forms justified, true belief by a method which is usually very reliable, and yet lacks knowledge. The lottery case gets even more puzzling if we assume that the agent could gain knowledge about whether she has a winning ticket by reading results in a reliable newspaper. But, as Pritchard correctly notices, "...the probability that she forms a false belief by forming her belief in this way could well be a lot higher than the probability that she forms a false belief by considering only the odds involved in the lottery (note that one can set the odds involved in the lottery as high as one wishes in order to ensure

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[4] Page numbers here refer to the penultimate version of Pritchard's paper.

that this is the case)." (Pritchard 2008, p.4) Lottery cases show that sometimes weaker evidence is sufficient for knowledge while stronger evidence is not (at least when strength of evidence is understood probabilistically).

One way to deal with both Gettier cases and lottery cases is to add modal conditions of knowledge. Here I am going to take a look at the tracking analysis of knowledge given by Robert Nozick, and the safety based theory of knowledge provided for example by Ernest Sosa. I am going to state the theories in this section, and I am going to offer some criticism when examining how these theories work against external world skepticism.

Nozick (Nozick 1981) argues that if p is a proposition about the external world (such as "There is a hand in front of my eyes") and S is an epistemic subject, then, if S is to know p, the following conditions have to be satisfied:

1. p is true

2. S believes that p

3. If p weren't true, S wouldn't believe that p.

4. If p were true, S would believe that p and not-(S believes that not-p).

Conditions 3 and 4 are called tracking conditions. Condition 3 is called the sensitivity condition. The idea behind the introduction of the sensitivity condition is the following. Our beliefs in genuine cases of knowledge should be responsive not only to the facts of the actual world (it is not sufficient that belief is true in the actual world), but also they have to be able to track truth in a relevant range of possible worlds. This seems like an intuitive idea. My belief that there is a hand in front of my eyes is sensitive because if there were no hand in front of my eyes (for example, if I put it in my pocket) I would not believe that there is a hand in front of my eyes. On the other hand, S's belief from the

Gettier case involving a stopped clock is not sensitive, because even if it were 5:06 or 5:10, S would continue to believe that it is 5:05. The sensitivity condition, thus, seems to eliminate at least some possibilities of acquiring knowledge by accidentally gaining a true belief.

Sensitivity based theories can also explain why we lack knowledge in the lottery cases. Although S's belief that she has a losing ticket is true in the actual world, it is not sensitive, because in a close world where it is false (in the world where S has a winning ticket), S will continue to form the same belief based on the probabilistic evidence and as a result she will form a false belief. Probabilistic evidence does not always provide sensitivity of belief. On the other hand, if S forms her true belief that she has a losing ticket by reading the lottery results in the newspaper, her belief that she has a losing ticket is sensitive, because in the worlds in which she wins a lottery and everything else is the same, the paper would publish the winning number and she would no longer believe that she has a losing ticket.

Although able to deal with both Gettier and Lottery cases, sensitivity based theories of knowledge have problems of their own. The first problem with sensitivity based theories is that they seem to be committed to accepting what Keith DeRose calls abominable conjunctions (DeRose 1995, pp 27-29).

1. I know that I have two hands, but not that I am a handless brain in a vat.
2. I know that I am sitting in front of a computer, but not that I am merely deceived into thinking I am sitting in front of a computer.
3. I know I am not in a vat, but I don't know that I am not a handless brain in a vat.

The first conjuncts in all three statements are sensitive and thus I can know them, the second conjuncts consist of propositions expressing non-sensitive beliefs which – if sensitivity is a necessary condition – cannot amount to knowledge. It surely seems strange to claim that knowing that I have two hand does not enable me to know that I am not a handless brain in a vat. The knowledge of the former

claim seems to imply the knowledge of the latter. This does not happen under sensitivity based theories of knowledge, because of their denial of the Closure principle. The idea behind this principle is that "if you start from knowledge, and perform some operation on that knowledge, you get more knowledge as a result." (Greco 2007, p. 627) More of that will be said during the examination of skeptical arguments. Various other objections are given against the sensitivity principle and they will not be discussed here. Detailed exploration of those could be found in Jonathan Vogel's paper "New Relevant Alternatives Theory" (Vogel 1999, pp. 155–80).

Because of similar objections, Ernest Sosa proposed that the sensitivity condition should be replaced with the safety condition. According to the safety principle, S knows that p only if: S would believe that p only if p were true. The idea underlying this principle is that, in cases of knowledge, one would not easily believe that p when p is false. The safety principle could be formulated in a stronger and weaker version. The strong safety condition states that S knows that p only if: In close possible worlds, always if S believes that p then p is true. According to the weak safety condition, S knows that p only if: In close possible worlds, usually if S believes that p, then p is true. Since the condition expressed in weak safety might seem too weak, and vulnerable to some examples discussed by Vogel[5] that provide close worlds where a highly improbable possibility is actual, Duncan Pritchard, according to Greco (Greco 2007, p. 634) proposed the following formulation of the safety principle: S knows that p only if 1) in all close possible worlds, usually if S believes that p then p is true, and 2) in the closest possible worlds, always if S believes that p then p is true. Thus, in everyday situations when I believe that there is a computer in front of me I would believe this only if it were true. The same is true of my belief that I am not plugged into The Matrix. Since there are no close worlds where

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[5] For example the case of the rookie cop "Suppose two policemen confront a mugger, who is standing some distance away with a drawn gun. One of the officers, a rookie, attempts to disarm the mugger by shooting a bullet down the barrel of the mugger's gun. . . . Imagine that the rookie's veteran partner knows what the rookie is trying to do. The veteran sees him fire, but is screened from seeing the result. Aware that his partner is trying something that is all but impossible, the veteran thinks (correctly as it turns out) [that the] rookie missed" (Greco 2007, p. 630)

In the nearest world where the rookie cop does not miss, the veteran cop still believes that he does. But it is absurd to think that there is no knowledge in the two cases.

I am plugged into The Matrix, there are no close worlds where I believe that I am not but I am. The safety condition is satisfied.

One of the main advantages of safety based theories is that they are not committed to abominable conjunctions. In normal environments, where no brains in vats or deceiving demons exist, many of my beliefs about the external world will count as safe. For example, in normal environments where I believe that I have two hands, I would believe this only if it were true. The same is true of my belief that I am not a handless brain in a vat. Since there are no close worlds where I am a handless brain in a vat, there are no close worlds where I believe that I am not but I am. The safety condition is satisfied. If other conditions on knowledge are satisfied as well, a safety theory allows that I know that I am not a handless brain in a vat. We shall see later whether similar considerations could be applied to other skeptical scenarios.

One aspect where safety based theories are inferior to sensitivity based theories is that safety-based theories of knowledge cannot account for our lack of knowledge in the lottery case. This is because given the probabilities involved, there are very few nearby possible worlds in which one's belief that one has lost is false, and thus in most nearby possible worlds in which one believes that one has lost (on the same basis as in the actual world) one's belief will be true. Thus, the belief will be safe and hence, on this score at least, a potential case of knowledge, contrary to intuition[6]. Further consequences of both sensitivity and safety based theories of knowledge will be discussed when we look into how they handle various types of skeptical arguments.

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[6] It could be objected that the argument for lotteries that I presented is effective only against weak safety theories. Since I cannot enter here into the debate about various types of safety theories I am just going to acknowledge the objection.

2.1. Good Case and Bad Case

One way to introduce a skeptical argument is by way of the "Good Case/Bad Case" distinction. By the "Good Case" (GC) I understand a situation in which we usually take ourselves to know something about some subject matter and we are right. For my purposes here the subject matter will be restricted to knowledge of the external world. For example, when I am well rested, having functional eyes and under sufficient light I look at my hand, I could be taken to know the proposition "There is a hand in front of me". Since a hand is a part of my body, and for the purposes of the skeptical argument, my body is a part of the external world, in this situation, I know something about the external world. A "Bad Case" (BC) is a specially construed situation, in which we do not have knowledge about the same subject matter. Often the source of problem is that in BC, things appear as they ordinarily do, but they may not be in that way. It may be the case that I lost the feeling in my limbs and that under the obscure light I mistake my friend's hand for my own. Or I could be drunk and falsely believe that I see two hands instead of one, or I might be dreaming or hallucinating. BC is also known as a skeptical scenario. Some of the most famous skeptical scenarios are the "Evil Demon" (ED), the "Brain in a Vat" (BIV), "The Matrix", being drunk, being mad, dreaming.

Both the skeptic and the anti-skeptic agree that we do not know anything about the external world when in BC. The further claim the skeptic makes is that this somehow undermines our knowledge also in GC. One way the argument could proceed is this. Both the skeptic and the anti-skeptic agree that when I am in BC, I cannot, in some sense, distinguish my current situation from the good case. This can be cashed out by claiming that when in BC, for all I know, I could be in GC. Everything I know in BC is consistent with my being in GC. For example, in BC, all I can know is that it appears to me that things are such and such. It appears to me that there is a hand in front of my eyes, or that there is a table or a computer in front of me. This is consistent with my being in GC, because in GC everything appears the same. But when it comes to GC, the skeptic has to claim (and provide arguments for the claim) that even when I am in GC, for all I know I could be in BC, that is I do not

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know things that are inconsistent with my being in BC. Thus I cannot know that there is a hand in front of my eyes. All I can know is that it appears to me that there is a hand in front of my eyes, which is consistent with me being in BC. Hence the possibility of being in BC undermines our claim to knowledge also in GC.

In this chapter I am going to examine how the skeptic can argue for this claim by way of different types of arguments through different BCs. I intend to show that different scenarios generate different skeptical arguments. More precisely, I intend to show that the dream scenario fails to produce skepticism about the external world in the way the BIV scenario or the Matrix generate skepticism.

There are at least two different ways in which skeptical arguments from GC/BC situations could be developed. I am going to call them "A type" and "B type" arguments. It should be noted here that the A type and the B type arguments should be regarded as rather ideal forms of skeptical arguments based on Good Case/Bad Case distinction. The reason they are introduced here is to show that there are at least two significantly different ways skepticism can arise from the Bad Case scenarios and that each type of arguments can produce skepticism independently from the other, although section 2.4 argue that in philosophical tradition the two types are often (unnecessarily) combined in order to bring about skepticism. Each type is based on discernibly different assumptions and relies on different epistemic principles. The A type/B type division is, as far as I know, not found in the literature and it may seem a bit artificial. However, the analysis of some canonical skeptical arguments in the section 2.4 will show that one of both of this types of arguments can be found in well-known formulations of skeptical arguments.

2.2. The "A type" argument for skepticism

The first argument I am going to consider has the following structure:

A.1. If my evidence equally supports two distinct propositions then I cannot know that one of them obtains.

A.2. My evidence for any proposition about the external world is given by my perceptual experiences

A.3. My perceptual experiences in GC and experiences I have in BCs are exactly the same type of mental experiences

A.4. Hence, my evidence is the same in GC and BC.

A.5. If the evidence is the same, then it equally supports two distinct propositions.

A.6. I cannot know any proposition about the external world

A.7. Steps from 1 to 6 could be applied on each proposition about the external world.

A.8. Hence, we don't have knowledge about any empirical proposition.

This argument rests on several assumptions. The strength of this type of argument will depend on how much of these assumptions we are willing to accept. Before I start discussing how this type of argument works with different skeptical scenarios, some general remarks are needed.

A.1 is a general statement on how our justificatory practices usually proceed. Let us for a moment put ourselves in a position of a detective who has to resolve a murder case. As in many good whodunit mysteries, a wealthy man had been murdered in his library. The main suspects are a butler and a cook. The evidence consists of the following. All the members of the household claim that both, the butler and the cook, threatened their employer. Both suspects lied about their whereabouts at the time of the murder. On the murder weapon, a knife, the fingerprints of both the butler and the cook had found. The autopsy determined that the victim died of one stabbing wound inflicted by one left-handed man. Both the cook and the butler are left-handed. Could a detective, based on this evidence alone, know who the murderer is? He could not. The evidence, as presented, is compatible with two distinct propositions: that the cook did it, or that the butler did it. The detective would need additional

evidence to exclude one of the alternatives and if he could not obtain it, the detective would remain ignorant, the case would remain unresolved and the murderer would remain free. This, however would not present a problem for someone who does not hold that the evidence for a proposition is all we need in order to know that the one proposition obtains rather than the alternative, but it is on them to explain what additional knowledge is needed and how it can be obtained.

A.2 states that the evidence for any proposition about the external world is given by my perceptual experiences. This statement is also in accordance with our established ways of gaining knowledge about the external world. If someone asks me how I know if there is a computer in front of me, I am going to answer that I know that because I can see, touch, and type on that computer. Although in order to properly answer that question I need some non-perceptual knowledge, such as understanding what "computer", "in front" or "seeing" mean, my answer would not be correct if in the final instance I would not refer to my current sensory experiences of the computer. There also may be the cases where I acquire knowledge about the external world by reading someone's testimony. For example, I can read that a concert happened at a certain square, but even that knowledge, in the final instance, needs to be based on someone's seeing the concert happening at the square. A.2 should not be read as the claim that some important evidence for claims about the external world comes from experience. A.2. should be read as the claim that all the relevant evidence for any proposition about the external world needs to be based (in the final instance) on perceptual experience.

A further important premise of the A type of argument is the claim that our perceptual experiences are the same as the hallucinations generated by the computer, The Matrix or dreams. Behind this assumption lies the internalist conception of justification. According to this conception, in order to know if some proposition is true we need to have introspectively or reflectively accessible reasons in support of the truth of that proposition. In case of perceptual beliefs, the best support for a claim about perceptual experiences is the phenomenal character of our ongoing experiences. When I try to

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determine if there really is a hand in front of my eyes, I am going to look at it, touch it, try to remember if I was recently involved in some kind of accident with fatal consequences for my hand etc. If there was no accident and my ongoing experiences are as they usually are when I look at my hand, then I have good reasons, according to internalists, to believe that there is a hand in front of my eyes. However, on this conception, the phenomenal character of my experiences of really seeing my hand and the phenomenal character of a delusion produced by the evil scientist or The Matrix would be the same. That is why, on this conception, we are committed to skepticism. One way to block the A type argument is to deny this assumption. It seems reasonable to some philosophers to try to avoid skepticism about the external world, by rejecting the internalism. Here, I am going briefly to examine two possible externalist's approaches.

Defenders of the disjunctivist theory of perception deny that the experience we have when we veridically perceive is the same as the experience we have when we hallucinate. John McDowell (McDowell 1982) claims that on disjunctivist account "an appearance that such-and-such is the case can be either a mere appearance or the fact that such-and-such is the case making itself perceptually manifest to someone." (McDowell 1982, p. 472) On this account the only thing the phenomenally indistinguishable states have in common is that the subject cannot distinguish between them. On McDowell's account, the propositional content of a non-deceptive experience depends on the presence of the object that is 'manifest' or 'open' to it. In order to determine which disjunct obtains in any particular case, one must apply ordinary empirical procedures, such as relying on other sensory modalities or the testimony of other observers, to determine whether how things seem is a case of perceiving how things are (McDowell 1986, p 150). Because of that, on this account I can infallibly know how things seem to me and only fallibly know whether how things seem is a case of actually perceiving that things are thus and so (ibid., p. 149).

This account presupposes externalism about mental states. The possibility of any empirical content depends on the fact that at least some of our experiences must be non-deceptive in the sense that the relevant objects figure in them. These are cases in which the actual presence of the objects of perception enters into our understanding of the relevant experiential content. Once we accept this conception, the danger of skepticism generated by the A type argument disappears, because the premise A3 would not hold. It should be noted here that for McDowell our mental states are evidence for the propositions about the external world. Here he is not different from an internalist who also claims that justification of our perceptual beliefs falls down on our perceptual experiences. What distinguishes McDowell from internalists is his claim that the mental states we have in GC are different from mental states we have in BC.

Another way for an externalist to reject A3 and avoid skepticism about the external world could be obtained by adopting some kind of reliabilism. Someone like Alvin Goldman (see for example Goldman 1979) could claim that when it comes to the phenomenal character of our experiences, it is same in both BC and GC. But the justificatory status of our resulting beliefs does not depend solely on our mental states. What distinguishes our mental states in GC from mental states we have in BC is that in GC our mental states are caused in the proper way (by the objects of the external world) and obtained by reliable means – our properly functioning perception. In BC, our mental states are caused improperly and obtained by unreliable means. We do not need to be aware that our perception functions properly as long as it does in fact works in that way. Because of that, in GC we are justified in believing our proposition about the external world, and skepticism about the external world via the A type argument will fail to bring about skepticism.

Both McDowell's and Goldman's conceptions have problems of their own, details of which I cannot discuss. What is important to notice here is that once we abandon the internalist conception of evidence, the danger posed by the A type argument disappears. I am not arguing here for externalism

nor disjunctivism. I am only trying to emphasize how the A type argument relies on the internalist conception of evidence. The answer to this type of argument I am going to propose will not be dependent on externalism or disjunctivism, although I am going to argue that dream experiences and waking experiences are different types of experiences.

Timothy Williamson (Williamson 2000) found that the claim that the evidence is the same in GC and in BC is not self-evident. An argument for this claim should be provided. Such an argument, according to Williamson, would go as follows. He claimed that the skeptic cannot appeal to sameness of evidence in BC and GC because of their indistinguishability, because then we should have sameness of evidence throughout a series of indistinguishable experiences, which we cannot. These arguments are part of Williamson's wider strategy whose aim is to show that our mental states are not luminous, i.e., that it is possible to be in a mental state and not know that one is in that mental state. If we are willing to accept this, then some skeptical arguments cannot hold. A full discussion of Williamson's theory is beyond the scope of this thesis. It is mentioned here to illustrate one of the directions to attack the A type of argument.

Even now it can be seen that this argument can be criticized from a number of angles. What is interesting about this type of argument is that it can be applied to every proposition as long as knowledge of that proposition depends on the evidence based on the perceptual experience. The other advantage of this type of argument is that if we accept or establish its premises, its conclusion follows without the application of any additional epistemic principles like closure or the KK principle. Also, if valid, this argument should bring about skepticism about the external world through all BCs. More on this will be said in sections 2.2.1- 2.2.3. What should be emphasized here is that the A type argument, in its general form, strongly relies on an internalist conception of knowledge and evidence. Once this conception is abandoned, the A type argument will fail to bring about skepticism. Let us explore now how the A type argument works with particular skeptical scenarios.

2.2.1. The A type argument and the BIV scenario

The world as described by the BIV scenario is a very barren place. Besides a brain, a vat and a mad scientist or computer that fills the brain with hallucinations of an external world apparently containing various objects and beings, there is nothing else in the BIV world. Another important feature of the BIV scenario, as it is usually discussed in contemporary debates on skepticism, is that the cognitive powers of the epistemic subject work properly. Her memory (except for the fact that she is envatted), her reflection and her discriminatory powers are in no way impaired. They are at the optimal level of functioning and there is nothing she could do to improve them. This is an important feature of a skeptical scenario. We shall see later that not all skeptical scenarios have this feature. We shall also see that in some cases the improvement of our cognitive powers can have serious anti-skeptical potential.

We have seen that one of the necessary requirements for knowledge is that our beliefs should be true. In this scenario, none of our ordinary beliefs about the external world are true, because the external world does not contain objects that usually (in the actual world) cause our belief about the external world.

Although very simple and wide in range (it destroys our entire knowledge about the external world, other minds, past), the BIV scenario based arguments have some unfavorable features. The world presented by the BIV scenario is a sad lonely world consisting only of a brain, a vat and a deceiving computer and scientist. It is very different from the world in which we live. As such it presents a distant possibility and it is considered by some philosophers (e.g. Robert Nozick, Fred Dretske, and

Ernest Sosa) as not very interesting for considerations of knowledge about the actual world. As for now the following points should be taken from the previous considerations. The BIV scenario supports skepticism about the external world by way of the A type of argument. The argument does not need to assume closure principle. All it needs is the internalist conception of knowledge and evidence as explained earlier during the discussion about McDowell's and Goldman's respective externalist accounts. A type fails because on McDowell's account the premise A3 (and A4) is false, while on Goldman's account A2 does not hold either. The question of defeating the BIV skepticism via the A type argument could, then break down to acceptance of the different (externalist/disjunctivist) conception of knowledge.

2.2.2. The A type argument and The Matrix

The Matrix scenario is very similar to the BIV scenario. They both assume that the world is significantly different than the actual world. Because of that the majority of our beliefs about the external world are not true. However, there is one interesting feature in The Matrix which the BIV scenario lacks. In the Matrix scenario, the real world is destroyed in the war between humans and machines. Machines won, and now humans live only because their brain activity generates energy necessary for the survival of machines. Humans are grown in waste fields of post-apocalyptic Earth, while the computer program – The Matrix - feeds them with the simulation of life. The experiences a Matrix dweller has are indistinguishable from the experiences she would have if she perceived the external world. Her memory, her reflection and her discriminatory powers are in no way impaired. They are at the optimal level of functioning and there is nothing she could do to improve them in the way relevant for recognizing if she perceive the external world or is generated by bytes of information by a computer. (For my purpose I am going to disregard possibilities presented in The Matrix trilogy).

If I were in the Matrix, and had perceptions of a tree in front of me, I would not know that there is a tree in front of me, because there are no trees in the Matrix and all my beliefs about trees would be false and thus disqualified from being knowledge. As a part of the skeptical strategy, the Matrix scenario works as the BIV. We lack knowledge in the Matrix according to the A type of the skeptical argument, because our evidence is not sufficient to support the claim that there is a tree in front of me rather than the claim that the Matrix generates illusion of a tree.

However, the Matrix is not entirely like the BIV scenario, because not all propositions about the external world are false in the Matrix. Let us consider the proposition "I have a hand". In the Matrix scenario humans "grown" in the fields of post-apocalyptic Earth, and they have their entire bodies. One of these unfortunate humans can, by floating in tanks in which they are kept, put herself in the position in which her hand is in front of her eyes in the moment when the Matrix generates "perceptions" that human beings have when put their hand in front of their eyes (in GC). Her belief "There is a hand in front of my eyes" would be true. And yet, there seems to be something unsatisfying in ascribing knowledge of this proposition to the unfortunate Matrix-dweller. Before we see where the dissatisfaction comes from, let us see how the fact that the belief "There is a hand in front of my eyes" is true in the Matrix affects the A type argument.

As noted before, the success of the A type argument depends on the truth of its assumptions. The experience of a hand caused by the Matrix is indistinguishable from the experience one would have if they were in the real world. The fact that the hand of the Matrix-dweller is positioned the way it is does not play any role in causing the experience of a hand of the Matrix-dweller, and thus does not add anything to forming her belief about the proposition in question. The only way a person in the Matrix can form the belief "There is a hand in front of my eyes" is through the Matrix. Although this belief would be true in the described case, it won't jeopardize the A type argument, because the experience of seeing or "seeing" a hand would not be sufficient for knowledge of the proposed

proposition. This case is similar to Gettier cases discussed above. Through the combination of bad epistemic luck - the person is plugged in the Matrix which is a bad way for obtaining true beliefs about the external world- and good epistemic luck - it just happened that the belief at that moment was true, the Matrix-dweller formed a true belief which is not knowledge. Why this belief is not knowledge is, I hope, already explained. Although the Matrix scenario could be reformulated in such a way that it avoids similar examples (e.g. people cannot move their limbs, or all machines need for the energy productions are heads) and work entirely as the BIV scenario, it is worth noticing that even if a skeptical scenario allows that some of our beliefs are true and justified, it can still jeopardize our knowledge, because these beliefs are not knowledge. One other skeptical scenario very much depends on similar beliefs. It is the dream scenario.

But before discussing dreams, I am going to explore David Chalmers's claim that The Matrix scenario and, by extension, the BIV scenario do not jeopardize our knowledge of the external world, because they are not skeptical hypotheses at all (Chalmers 2005). They are rather hypotheses about the underlying nature of reality, or metaphysical hypotheses. They are no different from relativity theory or quantum theory. If it is correct it would only mean that the world has a *further* nature that goes beyond our initial conception. In particular, things in the world are realized computationally in a way that we might not have originally imagined. But this does not contradict any of our ordinary beliefs. At most, it will contradict a few of our more abstract metaphysical beliefs. But exactly the same goes for quantum mechanics, relativity theory, and so on. If we are in a matrix, we may not have many false beliefs, but there is much knowledge that we lack. For example, we do not know that the universe is realized computationally. But this is just what one should expect. Even if we are not in a matrix, there may well be much about the fundamental nature of reality that we do not know. We are not omniscient creatures, and our knowledge of the world is at best partial. This is simply the condition of a creature living in a world (Chalmers 2005). There would still be hands, chairs and tables and if, we were plugged into The Matrix, our beliefs about them would be true. When a Matrix dweller says

"There is a hand in front of my eye" she does not refer to a nearly atrophied extremity of her envatted body. She refers at the matrix- generated virtual hand. For the Matrix dweller this virtual hand, made of bits, is real hand in the same my hand, made of flash and bones, when I am not in the Matrix is the real hand. If I were a part of the Matrix then the real hand would be a hand which is made of bits. If what Chalmers says about the nature of The Matrix hypothesis is true, then the A type argument (or for that matter any skeptical argument) does not bring about skepticism in the case of The Matrix, because being in the Matrix would not count as being in BC. However, even on this account, there are scenarios that bring about skepticism and one of them is going to be explored right now.

2.2.3. The A type argument and the dream scenario

Although introduced for the first time by Plato in Theaetetus, the dream scenario get its most dramatic formulation in Descartes' First Meditation.

> And how could I deny that these arms and this body are mine? Unless I compare myself with those insane persons whose brain is so troubled and obscured by black vapors of bile so that they constantly claim that they are dressed in gold and crimson when they are completely naked…But what? They are crazy and I wouldn't be any less extravagant if I were following their example. However, I have to consider that I am a man and therefore in habit of sleeping and that in my dreams I experience same things or sometimes even less likely things then those insane persons experience when they are awake. How many times, at night, I thought that I was in this place, dressed by the fire, although I was in fact completely naked in my bed? It looks to me now that I am not looking at this paper with sleepy eyes, that this head that I move is not at all asleep, that I extend this arm intentionally and purposely and that I am sensing that: what is happening in sleep does not seem at all as clear nor as distinct as all of this. But, when I think about this carefully, I remember that I was often deceived, while

sleeping, by similar illusions. And when I hold on this thought, I see so clearly that there are no conclusive indices or marks certain enough, by which waking could be clearly distinguished from sleep, that I am completely astonished by that; and my astonishment is such, that it is almost capable to convince me that I am sleeping (Descartes 2005).

In some of its features the dream scenario is similar to The Matrix scenario. Although we often have dreams in which peculiar things happens, we can also have dreams that correspond to the events of the real world. For example, I can have an uneventful dream in which I am looking at my hand, while I have my hand in front of my (closed) eyes, but I could not be said to know the proposition "I have a hand" or "There is a hand in front of me", even though these propositions are true. The reason for this lies in the fact that my beliefs of these propositions are only accidentally true (as in The Matrix case). As in the Matrix case, they are true beliefs which are not knowledge, because they are acquired through a combination of bad and good epistemic luck. All of this does not mean that in the dream scenario our beliefs cannot be false. We often dream of the things that are very different from the external world. In these dreams our beliefs about the external world are false. In Chapter 3, when discussing Ernest Sosa's anti-skeptical strategy, we will see that on his view, in dreams we can lack knowledge because our dream beliefs are not genuine beliefs, so the second necessary condition of knowledge is not satisfied. What I want to emphasize here is that even if what we dream is true, and we accept that the majority of things we believe about the external world are true, we still lack the knowledge about that world because when we are dreaming that something is the case, we don't thereby know that that is the case. Even if we allow that while dreaming we can know that rain drops fall on my window because this is something we learned when we were awake,[7] and we haven't forgotten them, dreaming that rain drops fall on my window cannot be the way we first acquired knowledge that rain drops fall on my window.

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[7] I will discuss in detail what happens with beliefs we acquired in waking life when we fall asleep in the next chapter.

Again, the way the argument works is by showing that our evidence is not sufficient to establish that one of the competing propositions ("There is a hand in front of my eyes") obtains rather than the other one ("I am only dreaming that there is a hand in front of my eyes"). The sameness of evidence in BIV and the Matrix is established by the construction of these scenarios. Our cognitive powers work properly in these scenarios and yet, they cannot help us to determine which of these scenarios obtain. The way these scenarios describe the world requires imagining the actual world as being fundamentally different - containing only a brain, a vat and a computer or as being a vast abandoned land inhabited by machines and fields in which humans are bred to provide energy for the functioning of machines. The skeptical conclusions they achieve are very powerful and very general, but they present distant possibilities and as such are not interesting to some philosophers.

What makes the dream scenario different from other skeptical scenarios is that it presents a close possibility. I could easily be dreaming that something is the case when it is not the case. This has a consequence to the threat dreams pose to our knowledge of the external world. If we regard dreams as contingent actual phenomena, it is true that most people most of the time know very little in dreams (including the fact that they are dreaming – most of the time, we don't know that). But, if the considerations from the previous chapter are right, dreams are very different from waking experiences. Waking experiences are perceptual experiences caused (usually) by the object of the external world. Dream experiences are imaginary experiences caused by (depending on the theory one accepts as the explanation of dreaming) our brain trying to make sense of signals coming from the rapid eye movement during phase of our sleep. If this is correct, then, the premise A3 of the A type argument (which states that we have the same type of experiences in GC and BC) will be false and the entire argument fails. We shall see in Chapter 3 how this happens. In the meantime, let us see how the B type arguments cause skepticism in different skeptical scenarios.

The other distinguishing feature of the dream scenario is that in dreams, unlike in BIV scenario or in The Matrix scenario, the dreamer loses the ability to contemplate whether the events, persons, places

or objects in dreams are possible (as noticed in Chapter 1, on pp. 7-9, 16-18). Chapter 4 is going to show how this feature can be used against dream skepticism.

So far I argued that, although prima facie artificial, the A type argument can bring about skepticism about the external world by insisting on the sameness of evidence in GC and BC and on the internalist conception of justification. I also pointed out that in case of dream scenario, if the considerations from Chapter 1 are correct, dream experiences and waking experiences are different in some important aspects, and A3 will not hold. I also pointed out that some externalist conception can easily ruin the A type argument.

2.3. The "B type" argument for skepticism

The second type of skeptical argument I am going to discuss has a different structure from the A type, and it is based on different premises and assumptions. The two types indicate broadly different strategies in arguing for a skeptical conclusion, but it is also possible to combine steps of the two arguments.

If p is a proposition about the external world such as "There is a hand in front of my eyes", then the B type argument has the following form

> B.1. I can't know that I am not in BC
>
> B.2. If I can't know that I am not in BC, then I can't know p
>
> B.3. I can't know p

We have already seen that both the skeptic and the anti-skeptic agree that when in BC I cannot know if I am in BC or in GC - for all I know I could be in GC. The challenge raised by the skeptic is that

the acceptance of this claim undermines our knowledge in GC. One way to do that was explored in previous sections.

Unlike the A type arguments, the B type skeptical argument does not need to rely on the sameness of evidence in GC and BC, but that is not the only difference between the two types of arguments. For example, in the A type argument there was no step that was a general reflection on one's predicament. There it was not considered if one is a brain in a vat or dreaming. The A type argument attempted to bring about skepticism by taking any proposition about the external world and showing that, based on our evidence, we cannot know if it is true or not. The generality in the A type argumentation was achieved as the end result by repeating steps of the argument for each and every proposition about the external world.

The B type argument starts off by a very general claim about our predicament. But why would we accept this assessment of our epistemic situation? One way to support the B1 would be to use the A type argument for that: we could argue that we do not know whether we are in BC or GC, because our evidence would be the same in both situations, and it would equally support the claim that we are in BC and that we are not in BC. However, this move is questionable, although it is used by philosophers, as we will see in the section 2.4. It is questionable because it leaves us with the following choice: the A type argument is either good or bad. If it is good, then it can bring about skepticism by itself without additional steps. If, on the other hand, the A type is, as the previous analysis hopefully showed, bad argument, then it can be used as a valid support for a premises of a valid argument.

B1 could also be defended in a different way, for example by accepting the sensitivity as a condition of knowledge. As discussed at the beginning of this chapter, proponents of sensitivity based theories of knowledge accept that we cannot know that skeptical scenarios do not obtain, because our beliefs

about them do not satisfy the sensitivity condition. But we have also seen that the acceptance of sensitivity condition has its own downfalls, such us the problem of abominable conjunctions. All in all the first step of the B type argument is not unproblematic, but for the sake of the discussion let us proceed and assume that the skeptic can somehow establish B1. The other important step in the B type argument is premise B2. To justify this step, the skeptic usually relies on the closure principle.

2.3.1. The B type argument and the BIV scenario

Given that I know that if there is a hand in front of my eyes then I am not a BIV, the application of the closure principle implies that in order to know an everyday propositions such as "There is a hand in front of my eyes", then I must also know that I am not a BIV. If, on the other hand, I do not know that I am not a BIV, then - given that I know this entailment - I do not know the everyday proposition "There is a hand in front of my eyes." Philosophers disagree on the amount and probability of possible alternatives one has to rule out to know p, but I am going to leave that disagreement for the time being. Let us grant that one has to rule out BCs to know p. What I am interested in is how various BCs are incompatible with our knowledge of p.

In case of the BIV scenario, the situation seems to be very clear. If I were a BIV that would be incompatible with there being my hand in front of my eyes, because BIVs do not have hands nor eyes, and all of my propositions about either of them are false. Being a BIV is logically incompatible with the truth of almost any proposition about the external world (with a few exceptions of there beings vats, computers, etc.). The truth of p, when p is an everyday proposition as "There is a hand in front of my eyes", would entail the falsity of BIV. The necessity of ruling out the BIV scenario would follow analytically, provided that we accept the Closure Principle. With the further premise that we cannot rule out the BIV scenario, the skeptical argument proceeds as follows

B1. I do not know that I am not in BC (from the construction of BC), this is the B1 from above

B11. I know that there is a hand in front of my eyes (assumption)

B12. "There is a hand in front of my eyes" entails "I am not in BC" (it follows analytically from the construction of the scenario)

B13. I know B12

B14. CP: If S knows that p, and knows that p entails q, then S knows that q

B15. I know that I am not in BC (application of CP on B11 and B13)

B16. I know that there is a hand in front of my eyes →I know that I am not in BC (introduction of →, assumption discarded)

B2. I do not know that I am not in BC → I do not know that there is a hand in front of my eyes (contraposition of 5)

B3. I do not know that there is a hand in front of my eyes (B1, B2 MP)

Knowing that one is not a BIV is a necessary condition for knowing p. It follows from the construction of the BIV scenario and the application of CP. If it is impossible to meet this condition, skepticism issues.

There are several ways to fight this kind of skeptical argument.

The straightforward way is the Moorean response. Based on G.E. Moore's famous "proof of an external world" (Moore 1939), an argument of the following form can be devised.

M11. I know that there is a hand in front of my eyes (assumption)

M12. I know that "There is a hand in front of my eyes" entails "I am not in BC"

M13. CP: If S knows that p, and knows that p entails q, then S knows that q

M14. I know that I am not in BC (application of CP on M11 and M12)

We can see that the Moorean response corresponds to steps B11-B14 from the skeptical B type argument from above. The main difference between the two arguments is that the Moorean argument takes the knowledge of everyday proposition as given. Knowledge of this proposition, then entails the denial of radical skeptical hypothesis. Moore is convinced that there are a few things that we can know with more certainty than those everyday propositions and that our justification has to start from everyday propositions. The B type skeptic, on the other hand, assumes everyday propositions only as the first premise in a *reductio ad absurdum* argument. So whether one is going with the Moorean answer or with the B type skepticism will strongly depends on one's preferences towards the status of everyday propositions. Because of that, according to many philosophers, the best the Moorean answer can achieve is a stalemate with a skeptic. On the other hand, both the Moorean response and the skeptical B type argument use the closure principle. The success of either of these strategies will, then, depend on the acceptance of the closure principle.

But not everybody is satisfied with this principle. Some thought that the way to answer to this type of skepticism is to deny the closure principle. Here, I am going to explore the sensitivity based response. This response will deny the step CP. This is not an *ad hoc* move. It is motivated by the considerations about the nature of knowledge. As we have seen, according to some plausible proposals, sensitivity is a necessary condition of knowledge. S knows p only if: If p were false, S would not believe that p.

My belief that there is a hand in front of my eyes is sensitive, because if there were no hand in front of my eyes (if my hand was in my pocket), I would not believe that there is a hand in front of my eyes. This, however, does not entail knowledge that I am not brain in a vat. My belief that I am not a BIV is not sensitive, because even if I were a BIV, I would still believe that I was not. And since the belief is not sensitive it cannot amount to knowledge. Thus, I can know everyday propositions, in virtue of possessing a sensitive belief in these propositions, I can know that they entail the denials of

skeptical hypotheses, like the BIV hypothesis, and yet fail to know the denials of skeptical hypotheses, in virtue of lacking a sensitive belief in these propositions. This contradicts CP, and because of that, according to the advocates of the sensitivity, CP has to be abandoned. The rejection of (for lot of epistemologists) very intuitive principle, together with other problems sensitivity based theories have to face, may explain the replacement of the sensitivity criterion by safety.

We have seen that safety theories are not committed to the acceptance of the abominable conjunctions. They are not committed to the denial of CP either. A safety-based account can deny that I don't know that skeptical possibilities are false. Consider my ordinary beliefs about the world, such as my belief that there is a hand in front of my eyes. In everyday environments, where no brains in vats or deceiving demons exist, many such beliefs will count as safe. For example, in such environments where I believe that I have two hands, I would believe this only if it were true. But the same is true of my belief that I am not a handless brain in a vat. Since there are no close worlds where I am a handless brain in a vat, there are no close worlds where I believe that I am not but I am. The safety condition is satisfied. If the remaining conditions on knowledge are satisfied as well, a safety theory allows that I know that I am not a handless brain in a vat. But not everybody is happy to accept the approach proposed by safety based theories. Juan Comesaña (Comesaña 2005), among others, criticized these theories. I am not going to discuss their respective criticisms, because it is not within the scope of the thesis. I am mentioning them just to point out that safety based approach is not readily accepted by everyone. The anti-skeptical approach I intend to present is not going to rely on the acceptance of any particular theory of justification.

2.3.2. The B type argument and the Matrix

When discussing The Matrix scenario in the context of the A type arguments we have seen that the Matrix has a peculiar feature. Namely, a certain number of propositions about the external world, including a proposition "There is a hand in front of my eyes", are true. As I mentioned when discussing the A type argument, under some formulations of the Matrix scenario, a dweller of the Matrix generated world can sometimes be in position in which some of her beliefs about the external world are true. For example, a Matrix dweller can have an experience of seeing her hand and she can, then, form a belief: "There is a hand in front of my eyes." At the same time, her real hand can be placed in front of her eyes, while her body is floating inside of the jar. Her belief, that there is a hand in front of her eyes, would in fact be true. Possibilities like this distinguish the Matrix scenario from the BIV scenario. The skeptical conclusion would not follow in the Matrix scenario in the same way it follows in the BIV scenario – by the application of the Closure Principle. The Closure Principle states that, in order to know some proposition, we have to rule out the things we know to be logically incompatible with that proposition. Being plugged in the Matrix is not logically incompatible with there being a hand in front of my eyes. So, if the B type argument is to work in the Matrix scenario formulated in this way, some modification of this type of argument is needed. We shall see in the following section how the B type argument can bring about skepticism even if a skeptical scenario is compatible with significant number propositions about the external world being true.

2.3.3. The B type argument and the Dream scenario

One of the reasons the dream scenario is interesting for a skeptic is that dreams, unlike the BIV scenario and the Matrix, do not require alterations of the actual world. We dream regularly and in dreams we are often deceived into thinking that we are awake. This is indicated for example by Descartes in the passage quoted above. Another important feature of dreams is that dreaming that

something is the case does not imply that it is not the case. I might be dreaming that there is a hand in front of my eyes and a hand might be in front of my eyes, I might dream that various other objects are in some specific spatio-temporal relations and they might be in those relations. The dream scenario is not logically incompatible with many of the propositions I claim to know on the basis of perception. Because of this, the above proof for premise B2 – which was based on the incompatibility of the BIV scenario with the truth of ordinary propositions about the external world - cannot be applied to the dream scenario. Since the dream scenario allows that a number of propositions about the external world remain true even when we are dreaming, step B2 needs a different proof in the case of dreams. Let us see if such a proof can be provided.

Both the skeptic and the anti-skeptic agree that dreaming p (Dp) is not a sufficient basis for knowing that p when p is a particular proposition about the current state of the external world. Can we then say that Dp entails not knowing p? Can we not still know certain everyday propositions even in ordinary dreams?

 Let us consider the following example. If I dream that I am called Nenad, do I know that I am called Nenad? If during my waking life I obtain knowledge about my name only by perception, then the situation of knowing this proposition would be similar to the one when I dream that it rains while in fact it rains. In both cases knowing p would require that one is not dreaming that p. However, these propositions are different in one important aspect. "My name is Nenad" is a different proposition than "It is raining". The former is based on memory and not on my current experiences. The scope of this version of the dream argument includes only propositions about the current state of the world that are based on my current experiences. Other propositions about the external world won't necessarily be jeopardized by the dream argument. It should be clear, though, that I am not claiming that dreams cannot jeopardize other types of our knowledge. For example, I could dream that I choose a completely different career path and never tried to become a philosopher. It might be suggested that

the kind of the dream argument I proposed might be used to threaten my knowledge about my personal history (my past career choices in this case), but these are not types of arguments in which I am interested. My interest here is focused on the relation between some versions of the dream argument and our knowledge of the external world.

It seems plausible that if p is a proposition about the current state of the external world, and my belief that p is somehow based on my current experience, then dreaming p implies not knowing that p. Contraposed, this means that knowing p requires that I am not dreaming that *p*: Kp requires ~D*p*. But if the skeptical argument is to work, a stronger claim is needed: knowing p (Kp) requires *knowing that you are not dreaming that p* (K~Dp). The question is whether the B type argument can bring a skeptic from Kp → ~ Dp to the different claim Kp →K~Dp? It cannot do that analytically with the application of CP as in the case of BIV. Let us see if there is some other way to apply CP for a conclusion of dream skepticism.

Let us suppose that I know *p*

1. Kp (assumption)

Knowing p entails that I am not dreaming p

2. Kp → ~Dp (uncontroversial for both skeptic and anti-skeptic as long as p is a proposition one claims to know on the basis of current perception)

If 2. is true, then I know that it is true.

3. K(Kp → ~Dp)

From 1. and KK principle follows:

4. KKp

I know that I know p by the application of the KK principle. The KK is an epistemic principle which states that "If you know that p is the case then you are in the position to know that you know that p is the case." As we have seen at the beginning of this chapter, the KK principle is usually endorsed by internalists. This would imply that dream skepticism arises, if introduced by this type of argument,

only if we accept an internalist conception of knowledge/justification. I cannot go into a detailed criticism of the KK principle. For my purposes here it suffices to show that by the employment of this principle we can reach a skeptical conclusion by way of the B-type argument, because, from 3 and 4, with the application of CP we have

5.   K ~Dp (CP from 3, 4)

6.   Kp → K~Dp (1,5 introducing →, discarding assumption)

Because of the special status of dream scenario (dreams are not logically incompatible with the truth of many propositions I claim to know on the basis of perception), that the B-type skeptical argument based on dreams requires the application of two epistemic principles - the CP and KK principles.

The previous analysis, hopefully, showed that the way skeptical arguments about the external world by way of skeptical scenarios work, significantly depends on the skeptical scenario we choose. The ways in which the BIV scenario brings about skepticism is different from the way the dream scenario achieves the same goal, regardless of the type of skeptical argument we employ. This reveals some interesting features. If we try to reach a skeptical conclusion about the external world by way of the A type argument, we can see that it is not possible in the dream case because a fundamental assumption of this type of the argument (the sameness of evidence in GC and BC, via the sameness of experiences in GC and BC) does not hold in case of dreams. This finding is based on the considerations about the nature of dreams in the previous chapter. If, on the other hand, we decide to go by way of the B-type argument, we can see that the argument depends on the closure principle, and in case of dreams, on the additional application of the KK principle. Some theories of justification (sensitivity-based theories) can bypass the B-type skepticism by denying the closure principle. Externalists can avoid skepticism by denying the KK. In the next chapter, I will explore the question of whether we can have a strategy against the dream skepticism (both the A type and the B type)

which is not committed to externalism or to denying closure. But before we do that, few features of the previous discussion should be highlighted.

The KK is not needed to run the B-type argument for skeptical scenarios where it is stipulated that most of our beliefs about the external world are false. In those cases, the application of the closure principle is straightforward, because the truth of (almost) any ordinary proposition we believe about the external world entails the falsity of the skeptical scenario. This is not the case with dreams. From the fact that I have a hand in front of me, it follows that I am not a brain-in-a-vat, but it doesn't follow that I am not dreaming. So if we assume closure, from the fact that I know I have a hand, it follows I know I am not a brain in a vat, but doesn't follow that I know I am not dreaming. I argued that an additional premise is needed if the dream scenario is going to bring about skepticism even in those cases in which the truth condition is satisfied (i.e. even if what I may come to believe on the basis of a dream is true). The additional premise doesn't have to be the KK, and I note that there may be alternatives for bringing about skepticism via the B-type argument, but for the purposes of the thesis I concentrated on bringing about dream skepticism via the application of the KK principle, because it emphasizes the internalist nature of such an argument and it is also present in some well-known skeptical dream arguments.

Also, bringing about dream skepticism via the B-type argument, depends on the details of BC in question. Although it is true that there might be bad cases of dreams where everything we dream is false, these are not features of actual dreams, whereas my concern is actual dreams. It could be questioned if the skeptic loses something important by restricting her attention to the cases in which the truth condition is not satisfied. One of the distinguishing features of dream scenario, beside the fact that it presents a close possibility, is that it can bring about skepticism even if what we dream is in fact true. Dreaming seems incompatible with knowledge not only because it may lead to false beliefs. Disregarding these cases will make dream argument less special.

Knowing that one is not a BIV is a necessary condition for knowing p. It follows analytically from the construction of the BIV scenario and the application of CP. Endorsing some form of externalism about justification or knowledge won't help. The skeptical conclusion follows regardless of the nature of our experiences in BC and GC. In the case of dreams, the situation is different. The skeptical conclusion does not follow analytically because lot of our beliefs about the external world can be true even if we are dreaming. For dream skepticism to issue via the B type argument, it is necessary to employ the KK principle, which is a staple of the internalist conception of knowledge (or find an alternative proof for premise B2 of the argument).

For the time being, let us just remember these points, because they have an important role to play in the final chapter. Before we arrive there an issue needs to be addressed. I already said at the beginning of the section 2.2 that the A type and the B division is somewhat artificial, and that these strategies are often mixed in skeptical arguments presented in the literature. To illustrate this, I am going to explore some of well-known reconstructions of skeptical arguments.

2.4. Examples of A type and B type strategies

2.4.1. The Blumenfelds' argument

As I argued above, the two types of arguments exhibit two different strategies to argue for skepticism on the basis of skeptical scenarios. It is also possible to combine the two types, and as an illustration, I am going to discuss two arguments for dream skepticism and indicate how they use steps from the A type and B type skeptical arguments. The arguments I am going to discuss are given by Jim Pryor[8] and David and Jean Blumenfeld (The Blumenfelds 1978, pp. 234-255).

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[8]   Pryor's argument is reconstructed from his notes for a lecture that could be found here
http://www.jimpryor.net/teaching/courses/epist/notes/blumenfelds.html

The Blumenfelds' argument goes as follows:

1. I have had dreams which were experientially indistinguishable from waking experiences.

2. So the qualitative character of my experience does not guarantee that I'm now not dreaming.

3. If the qualitative character of my experience does not guarantee that I'm now not dreaming, then I can't know that I'm now not dreaming.

4. So, from 2 and 3, I can't know that I'm now not dreaming.

5. If I can't know that I'm now not dreaming, then I can't know that I'm not always dreaming.

6. So, from 4 and 5, I can't know that I'm not always dreaming.

7. If I can't know that I'm not always dreaming, then I can't know to be true any belief about the external world which is based on my experience.

8. So, from 6 and 7, I can't know to be true any belief about the external world which is based on my experience.

According to this argument, in order to know if any of my beliefs about the external world is true, I need to know that I am not (now or always) dreaming (steps 4 and 6). The claim that we cannot know that we are dreaming is a general statement about our predicament that seems to be employed by the B type argument. The further steps proceed, , as in the B type argument, by showing that knowing that one is not dreaming is a necessary requirement of knowing if any belief about the external world is true.

The way this conclusion is achieved is interesting. Although premise 1 of the Blumenfelds' argument sounds biographical, for the purpose of their argument, it is not crucial if some of them really had the described dreams. It suffices to claim that it is possible to have dreams of that kind. But what dreams meet this description? An implicit premise in the Blumenfelds' argument is that the only way to know if I am dreaming is given by the qualitative character of my experiences. This claim is an extension of A2 from above. A2 states that the evidence for any proposition about the external world is given by perceptual experiences. The propositions that I am awake or that I am dreaming are not strictly speaking about the external world: these are claims about my experiences. Yet the argumentative strategy is very similar to the A type argument. The Blumenfelds claim that at least some dream experiences are experientially indistinguishable from waking experiences (premise 1). This corresponds to premise A3 of the A type argument. A3 states that the experiences I have in BC and GC are the same type of experience. The crucial step of both Blumenfelds' and the A type argument is that the (qualitative character) of my experiences equally supports two incompatible propositions.

So far both arguments will bring about skepticism if it is true that our waking and dream experiences are different. This in turn means that if this claim is denied both arguments will be in trouble. If, on the other hand, this premise holds, and if we for the sake of discussion, disregard objections to the other premises of the arguments, both the A type from A1 to A6 and the Blumenfelds' argument from 1 to 4 will bring skepticism, by showing that we cannot know any proposition about the external world. After these points the two arguments differ in a way they attempt to generalize their respective skeptical conclusions. The A type only claims that steps A1-A6 could be applied on each proposition about the external world, one at a time. If we accept the premises of the argument, then this step is not problematic, unless an independent reason is found to support the claim that there are some experiences on which the steps A1-A6 could not be applied. This does not seem as strong enough result for the Blumenfelds.

Their argument, on the other hand, seems to make one suspicious step in premise 5. They just claim that if I can't know that I am not now dreaming, then I can't know that I am not always dreaming. This step is most emphatically criticized by Bernard Williams (Williams1978). He claims that there is a difference between two following claims: (1) for each experience, for all I know it is possible that that experience is a dream and (2) for all I know it is possible that: All of my experiences are dreams. According to Williams (2) is a stronger claim and it cannot be derived from (1). The two claims are in the same relation as the following two claims: (3) For each child, it is possible that he or she has an older brother and (4) It is possible that all the children have older brothers. While (4) is obviously false (3) can be true and does not entail (4). Similarly with (1) and (2). Even if the skeptic is correct in showing that it is possible for each experience to be a dream, that claim (by itself) does not entail that all the experiences can be dreams.

Based on this reasoning, Williams rejects step 5 of the Blumenfelds' argument. The Blumenfelds respond that although it is true that claims of the form of (1) do not generally entail claims of the form of (2), step 5 of their argument is, nevertheless, correct because of the specific content of what it says. The skeptic, according to them, can claim that if I cannot not know that I am not now dreaming, I can never know that I am not dreaming. There are, according to them, two ways in which I could know that I am not always dreaming: on the basis of experience or via some a priori argument. In order for the former to work, it has to be some point at which, based on my experience, I could have known that I was not dreaming. But, if steps 1-4 are correct, it would be impossible at any point for me to know that I was not dreaming. If on the other hand, I managed (somehow) to establish that I was not dreaming by some a priori argument, the question could be raised on how something that has nothing to do with my experience could lead to knowledge about my experience.

An interesting question here is why it is important for the Blumenfelds to argue from step 4. (I can't know that I'm now not dreaming) to step 6. (I can't know that I'm not always dreaming)? If, at any

point, I cannot know that I am not dreaming at that moment, isn't that enough to undermine my knowledge? As far as I can see, the only reason for transition from step 4 to step 6 may be the assumption that each moment is, in epistemically relevant way, unique. But if at any given moment I cannot know that I am not dreaming at that moment, I do not need to generalize in the way the Blumenfelds did. All I need is to assume that any moment is, in regards of my prospect to know about the external world, no different than any other moment. This way the argument might avoid the criticism by Williams.

These responses and objections could be further discussed, but for my purpose here, it suffices to point out that the Blumenfelds' argument has the same important steps as the A type argument, and because of that, if those step do not hold in the A type argument, the Blumenfelds' argument will fail as well. Furthermore, the Blumenfelds' argument has some features of the B type argument in that that it considers general statements of our predicament and insists that knowing that one is not dreaming is a requirement of knowing if any belief about the external world is true.

2.4.2. Pryor's argument

Pryor's argument is in fact Jim Pryor's reconstruction of Descartes' argument from the First Meditation (Pryor 2009) and it goes as follows:

> 1.When you're dreaming, you're not in a good position to tell whether or not you're dreaming.
>
> 2.Any course of experiences you can have while awake can also be dreamt. So it'd be possible for you to be dreaming and having all the experiences you're now having. Everything would seem just the same, whether this were a dream or waking reality.

3.So even if you're awake, you're not in a position to tell whether or not you're dreaming. In other words, you can't know you're not dreaming--even if it's true that you're not dreaming.

Step 3 could be taken to mean either:

3. a. For *each* of your experiences, you can't tell whether *that* experience is a dream or not. (You can't tell *which* of your experiences are waking experiences and which are dreams), or

3.b. For all you know, *all* of your experiences may be dreams. You may be walking around in a total dream, *never* having any waking experiences.

Claim 3.b. is stronger than 3.a. in the same way step 6 from the Blumenfelds' argument is stronger than step 4. Although the decision between 3.a. and 3.b. can affect the scope of the argument, and according to Pryor, it is not clear which step Descartes undertook in the First Meditation, the following step is this:

4. To know anything about the external world on the basis of your sensory experiences, **you have to know you're not dreaming.**

The result entailed by 1-4 is:

5. You can't know anything about the external world on the basis of your sensory experiences[9].

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[9] The steps of the argument are taken from Pryor's notes for his course in epistemology (Pryor 2009) and they could be found at http://www.jimpryor.net/teaching/courses/epist/notes/descartes1.html#step2

Step 4 of Pryor's argument is the same as B2. They both arrive at the conclusion that knowing that one is not dreaming is a necessary condition of knowing anything about the external world on the basis of your sensory experiences. In this respect Pryor's argument is an instance of the B type argument. On the other hand, steps 1-3 of Pryor's argument are very similar to steps 1-3 of the Blumenfelds' argument. Both arguments, together with the A type argument, rely on the claim that dream experiences cannot be distinguished from waking experiences. It is interesting to note that, as in the case of the A type argument, if this claim is correct, the arguments can bring about skepticism without further assumptions. Or to be more precise, they will bring about skepticism if it is correct that dream experiences cannot be distinguished from waking experiences on the basis of our evidence and if we hold on to the internalist conception of evidence. However, the Blumenfelds and Pryor add further steps. What distinguishes the Blumenfelds' argument from Pryor's argument is step 4 of the later argument. It claims that in order to know anything about the external world on the basis of my experiences I have to know that I am not dreaming. Knowing that I am dreaming is posed as a necessary for knowing anything about the external world. But how is this step justified? According to Pryor, the best answer to this question can be found in Barry Stroud's analysis of Descartes' argument (Stroud 1984, pp. 1-38).

Stroud argues that Descartes is right in claiming that knowing that one is not dreaming is a requirement for knowing anything about the external world. Even in everyday situations, Stroud claims, we think that, in order to know some proposition p, we need to rule out possibilities that are incompatible with p. In philosophical terms, this can mean one of the following two things: (Pryor http://www.jimpryor.net/teaching/courses/epist/notes/stroud1.html)

(I) "Knowledge is closed under logical entailment," - this means that if you know that P, and P logically entails that Q, then you know Q too. (Well, perhaps you won't believe Q; but at least you'll be *in a position* to know Q.), or

(II) "Knowledge is closed under *known* logical entailment," - means that if you know that P, and *you know that* P logically entails that Q, then you know Q too (or at least, you'll be *in a position* to know Q).

The second is a formulation of the Closure Principle, CP,

Stroud, according to Pryor, thinks that we usually treat knowledge as being closed under known logical entailment. If there's some possibility q we know to be incompatible with p, then we do ordinarily expect someone to be able to rule q out, if he's to know that p. The dream scenario, as it is noted during the discussion of the A type and the B type of arguments, is not logically incompatible with the truth of lot of propositions about the external world. I can dream that it rains, believe that it rains, it can in fact rain while I dream that it rains, and I will not know that it rains on the basis of my dreaming that it rains. The CP alone, as we have seen, when discussing how the B type argument brings about skepticism when applied to dream scenario, will not be enough for skeptical conclusion. CP only tell that, if we're to know that p, we have to rule out the things we know to be logically incompatible with p. Dreaming that p is not logically incompatible with P. A stronger principle is needed. This principle Pryor calls Stroud's principle (SP), and formulates it as follows: If you know that p, and you recognize that p is incompatible with *your knowing that p*, then you have to know not-q (or at least, you have to be in a position to know not-q). SP combines CP with the claim that if you know something, then you know that you know it. This later claim is a formulation of KK principle. Which is exactly what was necessary for the B type argument to bring about dream skepticism.

So, Pryor's argument uses steps of the A type argument in its steps 1-3, and then adds the B type in step 4.This illustrates how skeptical arguments based on skeptical scenarios use the steps that are indicated in the A and B type arguments. Even more interestingly, it looks like that in the basis of both of these arguments is the A type argument. The addition of the steps of the B type does not seem necessary, because if the A type argument is sound it will bring about dream skepticism only by

insisting on the indistinguishability of dreams and waking experiences. However, I hope that the considerations from Chapter I showed that this assumption is false and that dreams are different from waking experiences.

2.5. Concluding Remarks on Chapter 2

I started this chapter by briefly discussing necessary and sufficient conditions for knowledge. This was, in my opinion, necessary in order to provide a framework in which the problem of skepticism about the external world would be examined. After that, I presented two different strategies of arguing for skepticism about the external world from the Good Case/Bad Case distinction. The analysis, I hope, showed that, if what I called the A type argument is to bring about skepticism, it needs to rely on the internalist conception of knowledge. Once this conception is abandoned, the A type argument falls. I also pointed out, that, in case of dreams, if the considerations from Chapter 1 are correct, the argument will not hold for dream scenario even without abandoning internalism. Analysis of the B type argument showed that it brings about skepticism about the external world differently and the way it does that varies with the change of the skeptical scenario. While in the BIV scenario the skeptical conclusion is achieved easily from the construction of the scenario and the closure principle, in case of dreams, additional assumptions are required – KK principle and acceptance of internalism. The final section of this chapter tried to dispel a worry that the A type/B type division is artificial by finding instances of these types of arguments in some of well-known skeptical arguments.

But even if that is the case, it may be that a different dream skeptical argument, the one that does not depend on steps from the A type argument, can be devised. If that is the case, what is the adequate response? In what follows, I am going to proceed as if such an argument can be devised. I am also going to examine some anti-skeptical strategies that advocated that we can know that we are not

dreaming, albeit only when awake. I am going to show that this limitation undermines these strategies.

After that, I am going to propose one anti-skeptical strategy which (I hope) improves these attempts.

At the end I am going to discuss some interesting consequences of this new attempt.

CHAPTER 3

3.1. Introduction

The considerations in the previous chapter, hopefully, showed that the way skeptical arguments about the external world by way of skeptical scenarios work, significantly depends on the skeptical scenario we choose. The way in which the BIV scenario brings about skepticism is different from the way the dream scenario achieves the same goal, regardless of the type of skeptical argument we employ. In this chapter I am going to consider some promising anti-skeptical strategies which argue that if our aim is to fight dream skepticism, it is irrelevant what we can or cannot know in dreams. I am going to show that these strategies share a fatal flaw – they are all vulnerable to what I will call the "Hobbesian objection". In order to answer dream skepticism along the lines these strategies proposed, the Hobbesian objection has to be ruled out. Ruling out the Hobbesian objection, I am going to argue, requires some knowledge in dreams. The required knowledge can be obtained in lucid dreams. I am going to present a new anti- skeptical strategy. At the end, I am going to consider some consequences of this strategy.

In Chapter 1 I examined the arguments of the proponents of the imagination model of dreaming. Ernest Sosa and Jonathan Ichikawa have been mentioned as the main advocates of the imagination model of dreaming. I also pointed out that even though Ichikawa and Sosa reject the traditional model, they seem to agree with one if its fundamental assumptions: that we are in principle unable to acquire knowledge about the external world or about the nature or origin of our ongoing experiences while we are dreaming. I am going to examine this assumption carefully. In my opinion, it is possible to know some things while we are dreaming. I will argue that it is possible to know that we are dreaming while we are dreaming. The remarkable state in which we know that we are dreaming while we are dreaming is called lucid dream. In what follows, I will try to show that if lucid dreams are genuine phenomena, then dreams can be regarded as belief forming processes in which we proceed without due care and this is the reason why we are often deceived by dreams. This predicament can be

improved by learning how to dream lucidly. This claim should not be taken to mean that lucid dreams are suitable for forming (perceptual) beliefs about the external world. They are not. In lucid dreams we cannot form perceptual beliefs about the external world. But, I am going to argue that knowing that we are dreaming while dreaming can improve our epistemic predicament in such a way that, combined with the results of previous chapters and the discussion to follow in this chapter, it can serve as a crucial step in an anti-skeptical strategy.

3.2. A and B type of arguments and dream skepticism

In the previous chapter I discussed two main types of skeptical arguments. For the continuation of the discussion I am going to summarize how they bring about skepticism in the case of dreaming. The A type argument proceeded as follows:

A.1. If my evidence equally supports two distinct propositions then I cannot know that one of them obtains.

A.2. My evidence for any proposition about the external world is given by my perceptual experiences

A.3. My perceptual experiences in GC and experiences I have in BCs are exactly the same type of mental experiences

A.4. Hence, my evidence is the same in GC and BC.

A.5. If the evidence is the same, then it equally supports two distinct propositions.

A.6. I cannot know any proposition about the external world

A.7. Steps from 1 to 6 could be applied on each proposition about the external world.

A.8. Hence, we don't have knowledge about any empirical proposition.

In Chapter 2 I discussed the ways in which philosophers challenged this type of argument. Usually it was done by questioning one of its premises. Premise A3 is essential for this type of argument. This

premise is questioned by Colin McGinn and Jonathan Ichikawa. (McGinn criticizes this thesis not in the context of dream skepticism, but in discussing the nature of dreams. Nonetheless, his arguments are relevant when considering the truth of the premise). According to them, the reason why this premise was unquestionably accepted was that in philosophical discussions of dreams, dreams were subsumed under the traditional model of dreaming. The traditional model of dreaming is committed to the following two claims: in dreams we have non-veridical perceptual experiences, and form false beliefs on the basis of these. To this model they contrasted the imagination model of dreaming. According to the imagination model of dreaming: 1: in dreams we do not have percepts but images (Ichikawa and McGinn), and 2. In dreams we do not form beliefs. Rather, we are engaged in some kind of imagination. (Sosa, Ichikawa and McGinn).

In Chapter 1 I offered a detailed discussion of the two models of dreaming. I hope that the considerations offered there showed that premise 3. ("My perceptual experiences and my dream experiences are exactly the same type") is false. Dream experiences and waking experiences have some similarities. All sensory modalities are present in our dreams and we experience our dreams from the embodied first person perspective, in a similar way that we experience our waking reality, to name a few. But, as I hope considerations from Chapter 1 have established dreams and waking experiences are also very different in some fundamental aspects. Dreams, unlike waking experiences, seem to be more like imaginations than percepts. Thus, the A-type argument will fail in the case of dreaming because one of its fundamental premises will be false. The falsity of the argument is caused by the misunderstanding of the nature of dream experiences.

The B-type argument does not seem to rely on a specific conception of evidence. Also, it seems to work on both the traditional and imagination model of dreaming. In its essential form it goes like this.

B.1. I can't know that I am not in BC

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B.2. If I can't know that I am not in BC, then I can't know p

B.3. I can't know p

In order for this argument to work, as shown in Chapter 2, we need to (somehow) establish that one does not know that one is not dreaming. Dream skepticism will follow from this with the help of the Closure principle and the KK principle or possibly some other argument. One obvious anti-skeptical strategy, as we have seen in the previous chapter, would be to deny one of these principles. The costs and benefits of these strategies have also been briefly discussed and I am not going to consider them again. Besides, there may be some other way to support premise 2. In order to explore further ways of developing an anti-skeptical argument, I am going to look into strategies that argued that B1 is false and that one can know that one is not dreaming.

A number of these strategies agree on the claim that as long as one can know that one is not dreaming while awake, it is irrelevant whether one can know that one is dreaming while dreaming. I am going to raise doubts about this claim. I am going to examine several arguments of this type, and attempt to show why they fail against dream skepticism because of disregarding whether one can know that one is dreaming while dreaming. I will also propose a way in which they can be improved. But first, I am going to explore a strategy that inspired the anti-symmetry strategies – the strategy argued by Descartes at the end of Sixth Meditation. There, he proposed a (possibly misunderstood) way of responding to the dream skepticism he outlined in the First Meditation.

3.3 Descartes and asymmetry strategies.

3.3.1. Descartes

The Dream Argument is presented in the First Meditation. In the following meditations, Descartes develops an anti-skeptical strategy based on the existence and benevolence of God. Towards the end of the Sixth Meditation, Descartes returns to the subject of dreams:

And I ought to reject all the doubts of those bygone days, as hyperbolical and ridiculous, especially the general uncertainty respecting sleep, which I could not distinguish from the waking state: for I now find a very marked difference between the two states, in respect that our memory can never connect our dreams with each other and with the course of life, in the way it is in the habit of doing with events that occur when we are awake. And, in truth, if someone, when I am awake, appeared to me all of a sudden and as suddenly disappeared, as do the images I see in sleep, so that I could not observe either whence he came or whither he went, I should not without reason esteem it either a specter or phantom formed in my brain, rather than a real man. But when I perceive objects with regard to which I can distinctly determine both the place whence they come, and that in which they are, and the time at which they appear to me, and when, without interruption, I can connect the perception I have of them with the whole of the other parts of my life, I am perfectly sure that what I thus perceive occurs while I am awake and not during sleep. (Descartes 2005)

According to the considerations in this passage, dreams and waking experiences can be distinguished by the coherence criterion. My waking experiences are part of a coherent whole and they are connected to each other by memory. In dreams this kind of coherence does not exist. We usually do not know how we ended up at some location nor why we are there. That is not the situation when we are awake. When awake, every event is connected directly and indirectly to all other events of our life by memory. According to most interpreters, this argument is at best weak.[10] The predicament Descartes is in, according to them, could be described as follows:[11]

We sometimes dream and sometimes have waking experiences.

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[10] Standard interpretations can be found in Norman Malcolm in *Dreaming* (London: Routledge and Kegan Paul, 1959), 1o1--1o8; (in the t96os), Anthony Kenny *Descartes: A Study of His Philosophy*, and Hobbes

[11] In providing this interpretation I strongly rely on what Robert Hanna in his paper *Descartes and Dream Skepticism Revisited* calls "standard interpretation".

It is (almost) impossible to tell for any (every) given experience whether it is waking or dreamt.

But knowing that I am not dreaming would be, according to the skeptic, a condition for knowing any proposition about the external world.

To this Descartes responds by proposing this argument: Only waking experiences are part of a coherent whole connected with each other by memory. If an experience possesses this structure, it is a waking experience. If it lacks this structure, it is a dream. This is guaranteed by clear and distinct intuition. Therefore, we can always tell waking from dreaming experiences. Therefore we can establish that we are not dreaming. (Hanna 1992, p.p.387-389)

That argument can be criticized because dreams, though not actually coherent, could *appear* to be as coherent as waking experiences. The first criticism was offered by Descartes' contemporary Thomas Hobbes in the *Third Objections.* There Hobbes writes: "Consider someone who dreams that he isn't sure whether or not he is dreaming; couldn't he dream that his dream fits in with his ideas of a long series of past events?" (Descartes 2007, p. 53). In this situation the coherence criterion would appear to be satisfied, but we still would have no knowledge of the nature of our experience: we would mistakenly think that we are not dreaming whereas in fact we would. In order to overcome this difficulty Descartes, according to this interpretation, needs a further step, appealing to the truth of clear and distinct perceptions being granted by a benevolent God. When we have a clear and distinct perception that our experiences that satisfy the coherence criterion are genuine waking experiences, we cannot be mistaken, or God would have to be a deceiver. "God underwrites the rule relating clear and distinct intuitions to the truth, and the coherence criterion is certified by clear and distinct intuition." (Hanna 1992, op. cit.) The problem is, however, that we can also have an illusion of *a clear and distinct* perception of coherence while believing that it is a case of clear and distinction perception of real coherence, and Descartes's argument, understood in this way, does not equip us with ways of distinguishing the cases of (clearly and distinctly perceived) real coherence from those when we have only an illusion of coherence.

Not everybody agrees with this reconstruction of Descartes' anti-skeptical strategy. In his paper "Descartes and Dream Skepticism Revisited", Robert Hanna provides an alternative interpretation of Descartes' anti-skeptical strategy, in an attempt to show that the coherence criterion can be successfully used against the dream skeptic, and that the appeal to God's undeceiving nature does not need to play an essential role in it. I am going to present his reconstruction of Descartes' anti-skeptical strategy. After that I am going to show how that strategy can be improved.

Hanna agrees with the standard interpretation that Descartes objects to the skeptical premise that we can never distinguish between dreaming and waking experiences. He, however, disagrees about the way in which Descartes tries to do that. The standard interpretation, according to Hanna, claims that to the skeptical premise Descartes opposes its logical contrary – that we can *always* distinguish between dreams and waking experiences. Hanna, on the other hand, proposes the logical contradictory of the skeptical premise, i.e. that we can *sometimes* distinguish between waking and dreaming. To see how this is achieved, first we have to see how these experiences are structured. Descartes, according to Hanna, makes an implicit distinction between the ontology and epistemology of dreaming and waking experiences. "It is possible to make remarks about the nature of waking and dreaming, drawing structural or conceptual distinctions between them, without having to claim that this ontological difference is always epistemically recognized." (Hanna 1992, p.389) Descartes does not have to prove, and in fact he does not try to, that only waking experiences can appear to be coherent. He is, according to Hanna, claiming that only (but not necessarily all) waking experiences are actually coherent. This is consistent with the fact that some dreaming experiences can present themselves as very similar to waking experiences, they may seem very coherent although they are not actually coherent.

In order to defeat the skeptic, Descartes has to argue for the following two claims: 1) every actually coherent experience is necessarily a waking experience and 2) some of these actually coherent (waking) experiences never present themselves as incoherent. The claim that every actually coherent experience is necessarily a waking one, is the expression of an analytic truth about the ontology of

dreams. "Dreams are, by their very nature, necessarily not possessed of the coherence structure. If dreams were actually coherent, then of course they would not be dreams but rather waking experiences" (Hanna 1992, p. 392). This claim only highlights a feature that distinguishes two kinds of experiences. If an experience does not actually possess the coherence structure, then it is a dream, if an experience actually possess the coherence structure, it is, then, a waking experience. What we should be able to do to fight a dream skeptic is to be able to tell for any of our (perceptual) experiences whether it actually possesses the coherence structure or it only appears to possess it.

As for the second claim, waking experiences, according to Hanna, besides their apparent coherence, need two additional features in order be recognized with certainty: 1) actual coherence and 2) clear and distinct recognition, within the experience, of the causal sources of the content of experience (when I distinctly see where things come from and where and when they come to me)". (Hanna 1992, op. cit.) The first feature has to be present because there are waking experiences that are only apparently coherent. Experiences of imagination belong to this group. "While it is true that these are waking experiences, and while I believe that they are waking experiences, and while the apparent continuity of the experience justifies the belief that these are waking experiences, I still do not yet know with certainly that these are waking experiences." (Hanna 1992, p. 395) On the other hand, experiences containing clear and distinct recognition of causal sources of experiences connect these experiences with the object of the external world as the sources of these experiences. These two conditions are, according to Hanna, jointly necessary and sufficient to tell the difference between waking and dreaming experiences with certainty.

Because of its use of clear and distinct perceptions, even this reconstruction of the anti-skeptical argument eventually has to rely on God's undeceiving nature. And for that reason, it is vulnerable to the Hobbesian objection discussed earlier. Furthermore, involvement of God makes this argument vulnerable to another of Hobbes' objection, namely that "an atheist cannot infer that he is awake on the basis of memory of his past life." (Descartes 2007, p. 53) However, this reconstruction of the Cartesian anti-skeptical argument seems to have some advantages (at least for Hanna). First, unlike

the standard interpretation, it does not commit Descartes to the, impossible to defend, view that every apparently coherent experience is necessarily a waking experience. Second, although utilizing clear and distinct perceptions, Hanna's interpretation relates them "to causal facts about the sources of an experience--not to mere psychological facts about the connection between apparent experiential coherence and being awake." (Hanna 1992, pp. 397-398) In this way, Hanna hopes, an argument similar to Descartes's could be devised without appealing to clear and distinct perceptions or to God, "but rather only to more naturalistic ways of recognizing the causal source embedded in certain mental contents." (Hanna 1992, p398) Hanna sees the theory offered by Alvin Goldman in "A Causal Theory of Knowing" (Goldman 1967) as the most promising candidate for the job. I am not going to discuss Goldman's theory here. But like Hanna, I hope that a strategy similar to Descartes's could be devised without referring God's undeceiving nature or to clear and distinct perceptions.

Few things should be noted here. Hanna's reconstruction sees Descartes as holding the view that we can have certain experiences only when we are awake: the experiences that possess actual coherence. Also, it doesn't seem to deny that we can have certain experiences only when we are dreaming. If this is the case, then we seem to have two criteria at our disposal in fighting against dream skepticism: the coherence criterion which we can use to determine if we are awake while awake, and, as we may call it, the "incoherence criterion" which we can use to determine that we are dreaming while dreaming. The procedure for determining which state I am in would go like this. In order to determine if I am awake or dreaming, I should assess my environment. If I can connect my ongoing experiences with memories of my past experiences and determine their causal connections with the objects of the external world, then I can be certain that I am awake. If I notice that there are gaps in my memory, that I cannot tell how I came here or integrate my ongoing experiences in a coherent whole, it would mean that I am not awake.

The problem is, however, that in dreams we often do not notice that our ongoing experiences are not connected by memory with our past experiences, nor we try to see if they are causally connected with the objects of the external world. It is interesting to note that in the passage quoted above, Descartes

advises to use the incoherence criterion to establish that an experience was a hallucination. However, the application works when we are awake: so the criterion may be useful to distinguish veridical experiences and hallucinations *when we are awake*. It is quite a different matter to distinguish wakeful experiences from dreams. When we dream, we often act as if there were no gaps, and as if our experiences were caused by the objects of the external world. It is usually not before we wake up that we acknowledge these peculiarities of dream experiences. And the Hobbesian objection will arise again.

Descartes seems to be aware of this. In his response to Hobbes he writes: "A dreamer cannot really connect his dreams with the ideas of past events, though he may dream that he does. Everyone knows that a man may be deceived in his sleep. But afterwards, when he wakes up, he will easily recognize his mistake." But it is hard to see how this is an answer to Hobbes's objection. As long as it is possible to dream (that is, have the illusion) that we connect current events to past events, and it is even possible to dream (i.e. have the illusion) that we clearly and distinctly perceive this, then no current conviction will provide enough assurance that I am not dreaming. It seems that from the internal point of view, we still cannot distinguish between the two situations. (A similar problem is going to emerge with Sosa's anti-skeptical strategy). Difficulties like these lead some authors to reconsider if what we can or cannot know in dreams affects our waking life knowledge. We are going to see now how those strategies work.

It could still be argued that Descartes' strategy is not threatened by the Hobbesian objection. Descartes provides the following answer to dream skepticism: I know that I am awake because I have a clear and distinct perception of the coherence of my experiences. If Hobbes asks whether Descartes can have the illusion of a clear and distinct perception of coherence, the Hobbesian objection does not jeopardize his (Descartes') knowledge of the external world. Descartes does not assume that no one could ever be deceived in this way. He is only citing his clear and distinct perception which is sufficient for knowledge of being awake.

To this I respond that one can reply along these lines, but only if one assumes externalism about justification. For an externalist, actual coherence and actual proper connection to the environment may be enough for justification, even if it is internally indistinguishable from an illusion of coherence and connection. Descartes arguably accepted an internalist conception of justification, which is why his reply to Hobbes is not satisfactory. Earlier (for example on p. 43), I defined internalism as follows:

"Whether a belief is justified depends only on states internal to the subject, that is, on states the subject can access by reflection or introspection."

The important part is the second half of the sentence, namely that justificatory status depends on reflective accessibility. If one can have an illusion of a clear and distinct perception in dreams, then we cannot tell that the perception is clear just by reflection. So clear and distinct status is not justified under this conception of internalism. However, there is another conception of internalism (also contained in my definition) according to which justification is given by internal (mental) states. Normally, internal states are accessible to reflection, so the two definitions come to the same thing. But in the case of dreams, mental states are not accessible to reflection. So I need to emphasize the second part of the definition. Here we have further evidence that dream skepticism relies heavily on internalist assumptions (earlier, we saw that it relies on the KK principle).

Descartes' account cannot respond to the dream skeptic because it is vulnerable to Hobbes' objection. Since we cannot rule out the possibility that we are just dreaming that we apply the coherence principle, the principle itself becomes useless. If there was a way to know if we are just dreaming of doing something instead of really doing it that could improve Descartes's position.

3.3.2. Bernard Williams

Bernard Williams thought that the problem of dream skepticism lies in the fact that the requirement for knowledge was misunderstood. In order to be able to tell *whether* one is awake one has to know the following conjunction: One has to be able to tell that one is awake when one is awake, and one

has to be able to tell that one is dreaming when one is dreaming (Williams 1987, pp. 288-313). When considering the conjunction, he says that, although we may be tempted to think that the two conjuncts must go together, it is important to note that they do not necessary go together. As a matter of fact, in many situations we can know that one state of affairs obtains without being able or needing to know when the complementary states of affairs obtains. For example, I can tell that I am not dead, although I could not tell that I am dead when I am dead. This however does not obviously help our consideration of dreaming versus waking. When one is dead, one does not exist and by that not able to do anything. Similarly, in dreamless sleep we cannot tell nor do anything of which we are conscious. Although, I can easily tell that I am not in a dreamless sleep when I am awake.

The following situations seem more relevant to dream skepticism problem. In some cases of drugged conditions, one cannot tell anything, come to any conclusion about anything nor make any judgment. Again, when one is not drugged one can rationally judge and draw conclusions about one's situation. (Williams 1987, pp. 288-313) A similar situation is the case of idealized anoxia that Williams presents. Anoxia, or the lack of oxygen, is a condition that sometimes affects high-altitude pilots. One symptom was blue finger-nails, and another was overconfidence. Overconfidence led pilots to neglect blue finger-nails. Because of that, one is (in the idealized version of the situation) unable to tell that one is anoxic when anoxic. But, according to Williams, it would be absurd to suggest that therefore one could not tell that one is not anoxic when not anoxic. For instance, I now can tell that I am not anoxic. According to him, dreams are phenomena similar to the drugged conditions and case of idealized anoxia.

The problem of dream skepticism emerged, because Descartes, according to Williams, was mistaken about the nature of dreams. Descartes, Williams claims, thinks that in dreams one can rationally decide, come to rational conclusions, etc., but his experience is such to lead rational decisions to the wrong conclusion. This, according to Williams, does not happen in dreams. Even if the question of whether we are dreaming comes up in dreams, we cannot resolve it, because "every consideration that one might deploy is liable to be distorted when one is dreaming, so…rational judgment gets no

leverage." (Williams 1987, p. 300) According to Williams, if the nature of dreaming is really as described by Descartes, and in dreams we can judge, then we cannot perform tests for deciding if we are dreaming or not because "the standpoint of rational enquiry is neutral between dreaming and not dreaming." From that standpoint we should be able to present reasons for claiming that we are in one situation rather than in the other. But features of the situation when one is not dreaming are such that provide the reasons to believe that one is not dreaming. So it is "obscure how one can ever tell which obtains." (Williams 1987, p301)

This problem, however, seems to disappear if dreams belong together with idealized anoxia and the drugged conditions mentioned above. There we cannot expect from the subject to tell that she is in those situations when she is in those situations, because she cannot rationally tell anything. If so, how can the subject's inability to tell that she is drugged, anoxic or dreaming while drugged, anoxic and dreaming, affect her ability to tell that she is not drugged, anoxic nor dreaming when she is not drugged, anoxic nor dreaming? In the former cases, according to Williams, there is no rational way of telling anything when a subject is in those cases. So those cases cannot affect our ability to rationally tell that we are not in those situations when we are not in them, because when we are not drugged, anoxic or dreaming there *is* a way to rationally tell that we are not drugged, anoxic or dreaming. Putting dreaming together with anoxia gives an efficient way of fighting dream skepticism. We can grant to the skeptic that in dreams we have all kinds of false beliefs. It will not affect our position when we are awake, because when awake, we can deploy certain considerations about both the nature of dreaming and waking. We can see that our waking experiences are coherent and causally connected with our previous experiences, and we can, by using our memory, track back at any point of our life how we got there. In dreams we just find ourselves in the stream of events without having any (reliable) memory of how we got here. This difference is followed by another one. Namely, from the perspective of waking, we can explain dreaming and we can see that while dreaming we cannot rationally refer to incoherence of dream experiences. This does not affect our ability to counter the

dream skepticism, because every time we ask ourselves if our ongoing experience is a dream or a waking experience, the fact that we are able to check this would entail that we are awake.

Now let us see how this strategy stands when confronted with the Hobbesian objection. As we have seen, the Hobbesian objection points out that as long as we allow for the possibility of the illusion of coherence of experiences, we won't be able to tell if our ongoing experiences are waking or dreaming experiences. Williams could answer that for as long as I am awake I can tell that I am awake. If I were dreaming, I would not be able to consider this question. The fact that I am considering it means that I am not dreaming. Is this enough to fight dream skepticism? What if I *dream* that I am considering whether I am awake or dreaming? Williams would argue that if I were just dreaming that I was considering the question, I wouldn't be **really** considering the question. But, the possibility of dreaming of considering the question would be dangerous for his account. Dreaming (at least non-lucid dreams) is not a good epistemic situation. Our cognitive powers in dreams are impaired and we are usually not able to assess experiences we are having. Because of that, we might be deceived into believing that we are really considering the question and, following Williams's line of reasoning, deciding that we are awake, while in fact we are dreaming. The Hobbesian objection sneaks up at us again.

It could be objected here that Williams' anti-skeptical strategy could work in spite of the Hobbesian objection. Williams could be reconstructed in the following way: I can tell that I am not dreaming now, because of the coherence of my experiences. I could have belief in the coherence of my experiences even if I were dreaming, but it does not follow that I am in that situation now, because my recognition of coherence does not consist solely in the fact that I believe that my experiences seem coherent. I could have a deluded belief but my experience overall would not be like it is now. The strength of this objection is augmented by my somewhat loose use of the phrases 'appear to be', 'think that' and 'can tell'.

In order to answer to this objection, first, I have to clarify my usage of the terms in question. Although "looks" or "appears" are sometimes used to mean the same as "to believe" or "to be inclined to

believe" it is not always the case. Sometimes "looks" or "appears" can be used to mean perceptual or sensory look or appearance. So the sentences as "I can have dreams in which everything looks normal" can be problematic. If "looks" means "perceptual look", the sentence is false because things do not perceptually look the same in dreams. I use "it looks", "it appears" to mean "to affirm" or "to quasi-affirm". These terms are borrowed form Sosa and Ichikawa and I am going to say more about them in the following section. As for now, it suffices to say that "to affirm" means "come to believe" and "to quasi affirm" means "being in a situation that looks as believing, but it is not". Quasi affirming happens when one is dreaming. From the internal point of view, these are indistinguishable. When I have a perceptual or dream experience, it might be helpful, for the purposes of fighting a dream skeptic, to know in which activity one is engaged.

As for Williams's position, although my recognition of coherence does not consist solely in the fact that I believe that it is normal, my situation would be different if I were dreaming. What is relevant for the problem of dream skepticism is whether I would be able to assess the situation. Williams says that if I am awake I could do that. But the problem is that, if we allow possibility of the illusion of assessing, we will have the similar problem we had with Descartes. That is why we need a way to rule out the possibility that the illusion is happening.

Williams's anti-skeptical strategy starts off by identifying dreams as very bad epistemic predicament. In dreams our cognitive powers are impaired. We cannot rationally decide, come to rational conclusions or even consider if we are awake or dreaming. Because of that, we cannot expect from a dreamer to tell if she is in that predicament while in that predicament. On the other hand, when one is awake, her cognitive powers work properly and she can rationally judge and consider if she is awake or not. The fact that she is able to tell that she is awake when awake is enough to fight dream skepticism. What happens in dreams, according to Williams, is irrelevant for answering to a dream skeptic. For as long as I am **really** considering if I am awake, I know that I am awake, and a dream skeptic is defeated. This works especially on an internalist conception of justification. But, his account allows for the possibility that one can dream that one is considering if one is awake or dreaming.

Because of that, if Williams's strategy is to work, we have to be able not only to know that we are awake and really considering if we are awake. We have to rule out the Hobbesian possibility that we are only dreaming that we are considering whether we are awake. I am going to show how the Hobbesian objection can be bypassed in the sections 3.4.-3.8. Before that, I am going to explore an account similar to the one proposed by Williams.

3.3.3. Sosa's approach

Ernest Sosa explores the problem of dream skepticism in his "Virtue Epistemology" (Sosa 2007). The problem of dream skepticism is a part of his considerations of the nature of belief and knowledge and his answer to the problem of dream skepticism partly depends on the results achieved later in the book. Here, I am not going to analyze the project of virtue epistemology. I am going to explore the problem of dream skepticism and the strategy against it presented in the first chapter of the book.

One distinction is crucial for the correct understanding of Sosa's position. Sosa insists on the distinction between "in my dream" and "while I dream". In my dream I am conscious, I believe (for example that I am chased by a lion), I intend etc. But does it mean that by believing in my dream that I am chased by a lion, I thereby believe while I dream that I am chased by a lion? Sosa's answer is no. From the fact that in my dream I am chased by a lion it does not follow that while I dream I am chased by a lion. In general, from the fact that while I dream something happens (for example while I dream it rains) it does not follow that it rains in my dream (although sometimes it can happen that I dream that it rains while in fact it rains, the latter does not entail the former). Similarly, from the fact that in my dream I believe that I am chased by a lion and intend to escape, it does not follow that while I dream I have these beliefs and intentions.

Sosa accepts the imagination model of dreaming and for him, dreams are more like stories, daydreams or imaginings. "Even when in a dream one makes a conscious choice, one need not do so in actuality. Nor does one necessarily affirm in reality whatever one consciously affirms in a dream". (Sosa 2007, p5) His reason for this claim is as follows.

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At any time most of our beliefs remain latent. To make a belief explicit is to assent to a proposition, at least to oneself. (Sosa 2007, p4) When we go to sleep we retain numerous beliefs. We know as we dream that we are in bed.

> One lay down in the knowledge that one would be there for hours, and this knowledge has not been lost. One retains, as one drifts off to sleep, beliefs about the layout of the room: the location of one's shoes, for example, or the alarm clock, and so on. It is hard to see how one could then concurrently believe that one is being chased by a lion, rather than lying in bed, with the shoes a certain distance and direction from where one lies. (Sosa 2007, p5).

If we agree that the dream lion is not a real lion, why would we think that a dream belief "There is a lion in front of me" is a real belief? If it were genuine belief, then we would have to incorporate it somehow in the corpus of our other beliefs. But when we wake up we do not call animal control, or try to remember how we arrived from Africa in such a short time or watch the news in order to see if some lion escaped from a zoo. When one dreams that he is being chased by a lion, he is imagining that he is being chased by a lion, while still tacitly believing himself to be safe in bed. When the dream is over, our dream belief is also over, and we do not have to incorporate it with our genuine beliefs – at least according to this line of reasoning.

But maybe dream beliefs are real beliefs, although the dream lion is not a real lion. "One might think that the deliberate, mental nature of dreaming might explain such a connection – perhaps anything as deliberate and internally grounded as a belief would have to really occur in order for it to occur in the dream." (Sosa 2007, pp. 6-7) In order to answer this objection, Sosa offers a normative argument. Dream beliefs are similar to dream intentions. If in your dream you intend to seduce your neighbor's wife, do you violate one of the Commandments? If the answer is no, and one is not to be blamed for their intentions in their dreams, we must ask ourselves whether dream intentions imply real intentions. And if they don't, then why would dream beliefs imply real beliefs?

If dreams are really of the described nature, then a quick - but we shall see, unsatisfactory – answer to the skeptic could be given. Let us consider my belief that I am sitting in front of my computer. We may think that the skeptical challenge is that this belief may be false, if it is based on a dream. If Sosa is right, it is not the case that my belief that I am sitting in front of my computer is threatened by the possibility of dreaming, because if I merely dreamt that I was sitting in front of my computer, I would only imagine this. There would be no false belief.

This answer is not satisfactory, because even if we agree with Sosa that a dream could not cause this belief (or any belief), a dream could still cause a state subjectively indistinguishable from my belief that there is a computer in front of me. The dream possibility does not threaten only my perceptual knowledge that there is a computer in front of me.

> If the imagination model is correct, instead of worrying that my belief is false, now I have to worry whether my belief is a belief! How am I to know that my internal mental experience is not the result of a dream, given the still-unshaken fact that while I am dreaming, I cannot typically recognize that I'm not awake? (Ichikawa 2008, p. 521)

The claim that a dream could still cause a state subjectively indistinguishable from my belief that there is a computer in front of me should be understood in the following way. The difference between affirmation and quasi-affirmation is not reflexively accessible. And this is a problem for an internalist as the internalist position is presented in the thesis. However, if one accepts Sosa's externalism, the problem does not arise. For an externalist, the fact that from an internal point of view one cannot distinguish affirmation and quasi-affirmation need not be a problem. Later in this section I am going to show that Sosa's anti-skeptical strategy could be criticized from various positions and that it is not a satisfactory answer to a dream skepticism, because neither the negative nor the positive part of his strategy is satisfying.

Sosa is aware that the quick answer is not satisfactory, but he nevertheless believes that the imagination model of dreaming provides the correct account of dreams, and that an answer to dream

skepticism can be provided. To that end Sosa develops a two-part strategy. The negative part is supposed to show that our inability to tell whether we are dreaming while dreaming poses no threat to our knowledge of being awake while awake. This is followed by a positive part, whose function is to provide an argument for the claim that we can know that we are awake while awake. I am going to examine both parts of Sosa's strategy and then I am going to present some criticism.

The way the negative part is presented is very similar to some of Williams's considerations presented in the previous section. Sosa says that there is no doubt that I am not (and in fact cannot) be able to tell that I am dead when I am dead (Sosa 2007, p.14). When dead I cannot tell or do anything because, for starters, I would not exist. But that does not prevent me from knowing that I am not dead when I am not dead. The case of being unconscious is similar. Although when unconscious I still exist, I do not have any conscious experiences. I cannot tell that I am unconscious when unconscious, but it does not prevent me from telling that I am conscious when conscious. Inability to do the former in no way affects my ability to do later. In the case of dreaming and waking, I can distinguish dreams from waking experiences if I can tell that I am awake when awake. The fact that I cannot tell that I am dreaming while dreaming does not affect my waking knowledge. All we need to do now is to show that we can know that we are awake while awake. That is what the positive part of the strategy is for.

According to Sosa, the proposition "I am awake" or "I am" enjoys the special a priori status of rational affirmability. This means that neither of these propositions could be affirmed falsely. In the case of cogito or "I am awake" it is always rational to believe because we could not go wrong, because:

Consider a cogito proposition, such as 'I think' or 'I am'. In these cases, disbelieving is defective, since it is self-defeating, for I know that if I take that option I will be wrong. Suspending is also defective, but in a different way. For, I know, about a particular alternative option, that I am epistemically better off if I take that other option, since I will thereby avail myself of a correct answer to my question, which I fail to do if I only suspend judgment. Only the believing option is not defective in this sort of way. Only that option is such that I will not then be epistemically better off

taking either one or the other available options. On the contrary, as I ponder the question whether I think I think and exist, as I epistemically deliberate, the believing option is the only one about which I know ahead of time that my taking it will obviously imply that I am epistemically right in so doing.

On the imagination model of dreaming, 'I am awake' shares the noted epistemic status of cogito propositions. In this case too, believing is the only epistemically non-defective option. "Both suspending judgment and believing will share the following feature: that I know ahead of time, as I ponder my question, that I am better off epistemically if I take a particular other option, namely the belief option, since only about that option is it obvious to me now that if I take it I will be right." (Sosa 2007, pp 18, 19).

The special status to the claim "I am awake" is provided by the imagination model of dreaming. By this model, while dreaming we do not really affirm anything. "Affirm" means "come to believe."

Both parts of Sosa's strategy are criticized, most notably by Jonathan Ichikawa. In addressing the negative part, Ichikawa points out that in case of death it is true that the fact that some states cannot be recognized introspectively does not imply that we cannot recognize their absence introspectively. But dreams are very different from death. Firstly, because unlike death, dreams are experiences. That is why, unlike for case of death, "for dreaming we may sensibly raise the question, is this experience I'm now having a dream?" (Ichikawa 2008, p.522) Not only that dreams are experiences, they are experiences in many aspects very similar to waking experiences, as shown in Chapter1. Because of that we can ask of any experience whether it is a dream experience or a waking experience, and "it is sensible to worry whether we are making mistakes in our answer." (Ichikawa 2008a, p. 51) There is no reason for a similar worry when one considers if one is dead or not.

In the positive part Sosa claims that since I know that I can never falsely affirm that I am awake, and never truly affirm that I am dreaming, it is rational for me to affirm that I am awake, as it is rational for me to affirm that I exist.

Ichikawa agrees with Sosa that we never wrongly believe ourselves to be awake, as well as that we never truly believe ourselves to be dreaming. (Ichikawa 2008a p. 52) But he rejects Sosa's conclusion that we may rationally affirm wakefulness on no further basis. We are going to explore his reasons for that.

On the imagination model of dreaming we do not come to believe the contents of our dreams when we dream, so we do not affirm our dream events to occur while dreaming. But we do come to imagine. Ichikawa calls this activity quasi-affirmation. Quasi-affirmation is very similar to affirmation, in the way dream belief is similar to belief. From the internal point of view of the dreamer, quasi-affirmation is indistinguishable from affirmation. Because of that I cannot rationally affirm that I am awake, ignoring the possibility that I am quasi-affirming something false. "It does not follow, from the fact that I know no affirmation of p will be a mistake, that it is rational for me to affirm p. If, for all I know, the mental act I'm to engage in will be a false quasi-affirming, then knowledge that I will never affirm falsely is insufficient." (Ichikawa 2008, p. 523)[12]

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[12] Other objections concerns the safety of the belief that I am awake. This belief is very safe from the dream scenario because, on the imagination model of dreaming, there are no close possible worlds where I believe that I am awake, but in fact I am dreaming. Although the belief "I am awake" satisfies the safety condition, Ichikawa argues that this may not be sufficient for me to know that I am awake. The situation I am in is, according to him, similar to the case of "Safe Barn in Fake Barn Country." In this story

"Henry is driving around in the country, and he sees a bunch of things that look like barns. Henry picks out a barn-looking thing and says to himself, that's a barn. Henry saw was modally robust. In all the nearby possible worlds, that barn was present (and was a barn). The people of Fake Barn Country took that barn. As it happens, Henry is in Fake Barn Country, where most of the barn-looking things are fake barns. The thing Henry singled out was, in fact, the only real barn in Fake Barn Country, although it had no visible distinguishing marks. Furthermore, the barn that Henry saw was modally robust. In all the nearby possible worlds, that barn was present (and was a barn). The people of Fake Barn Country took that barn very seriously; if it ever fell down, the entire town would have made its restoration their first priority. No one would dream of putting a fake barn there." (Ichikawa 2008, p. 524)

Henry's belief is true and justified and safe, but it is not knowledge. He formed a true belief because he was lucky. He might easily have been looking at a fake barn instead. And, according to Ichikawa (Ichikawa 2008, op. cit.), Henry is not very different from a person who affirms that she is awake. True, the ratio fake barn/real barn is much higher than the ratio waking hours/dreaming hours, but the point is the same. Both are lucky in forming the true belief. This contradicts Sosa's treatment of dream skepticism, on which our waking beliefs should count as knowledge.

3.4. Concluding remarks on Chapter 3

So far I have presented three anti-skeptical strategies. Descartes tried to fight dream skepticism by invoking the coherence principle. He saw dream skepticism as a view that claims that because we sometimes have dreams, and it is almost impossible for any given experience to tell whether it is a dreaming or waking experience, whenever we form a perceptual belief, this belief can be false, since we could just be dreaming. Descartes tries to disarm dream skepticism by attacking its crucial premise - that we can never distinguish between dreams and waking experiences. He attempts that by arguing that we can at least sometimes distinguish between the two types of experiences. According to the interpretation presented in section 3.3.1, he does that by arguing that there are certain experiences that we can have only when we are awake – experiences that possess actual coherence. Unfortunately, this is not a good way to fight dream skepticism. When we dream, we do not (usually) notice that our ongoing experiences are not connected with our past experiences, or that they are not caused by objects of the external world. In dreams (usually) it seems that the coherence is present. And it is the main problem of Descartes' strategy: for as long as we allow for the possibility of the illusion of coherence, we won't be able to determine if we are awake or dreaming by applying the coherence criterion. This objection is originally given by Hobbes.

Bernard Williams devised an anti-skeptical strategy which, according to him, avoids some problems of Descartes' approach. According to Williams, the problem of dream skepticism emerges because it was widely accepted that, in order to know whether one is awake, one has to be able to tell that one is awake when awake and one has to be able to tell that one is dreaming while one is dreaming. This, according to him, shows a misunderstanding of the requirement of knowledge and he ascribes it to Descartes' misunderstanding of the nature of dreams.[13] According to Williams' interpretation, Descartes held a view that in dreams we can rationally decide and come to rational conclusions, but

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[13] I am not embracing Williams's interpretation of Descartes' view on the nature of dreams. I am just putting it here for the sake of stating Williamson's position.

our experiences are such that lead us to wrong conclusions. But dreams are, according to Williams, not like that. They are more like unconscious or drugged states. When we are in one of these states we cannot tell that we are in them. But it does not affect our ability to rationally tell that we are not in them when not in them. Thus, when awake, we can connect our ongoing experiences with our past experiences. In dreams we are not (usually) able to do this, but it does not affect our position toward a dream skepticism, because all we should do in order to disarm dream skepticism is to ask if the ongoing experience is a dream or waking experience. The fact that we can consider this question will, according to Williams, entail that we are awake, because only when awake we can really consider this question. If I were dreaming, I would not be able to consider this question.

But, as in the case of Descartes' attempt, the Hobbesian objection proves to be fatal for Williams's anti-skeptical strategy. Even if we grant that in dreams we cannot really consider whether we are awake or dreaming, in dreams we can still have the illusion of considering whether we are awake of dreaming. In order for Williams' strategy to work, we have to be able not only to know that we are awake and really considering if we are awake. We have to rule out the Hobbesian possibility that we are only dreaming that we are considering whether we are awake, which we cannot do on this account.

Sosa's anti-skeptical strategy consists of negative and positive part. The negative part of the strategy is very similar to Williams' account. For Sosa, dreams are in at least one aspect similar to death and unconsciousness: I cannot tell that I am dead when I am dead, or unconscious when unconscious or that I am dreaming when I am dreaming. But it does not affect my ability to know that I am not dead when I am alive, or that I am conscious when conscious or that I am not dreaming while awake. All I need to do in order to defeat dream skepticism is to show that I can know that I am awake when awake which is provided in the positive part of Sosa's strategy, by arguing that the proposition "I am awake" as the proposition "I am" enjoys a special status – neither of these propositions can be affirmed falsely. So, whenever I (really) affirm that I am awake, I am in fact awake, because if I were just dreaming of affirming I would not be really affirming.

This strategy is also shown to be insufficient against dream skepticism. The negative part is criticized by insisting that dreams, unlike being dead or unconscious, are experiences in many aspects similar to waking experiences. Because of that it make sense to ask if ongoing experience is dream or not, in the way it does not make sense in the case of death or unconsciousness. In the criticism of the positive part, the Hobbesian objection again emerges. Even if we accept that in dreams we do not affirm, we have to allow that we are engaged in the activity very similar to affirming or in Sosa's terms coming to believe. Ichikawa calls this activity quasi-affirmation. From the internal point of view of the dreamer, quasi-affirmation is indistinguishable from affirmation. Because of that I cannot rationally affirm that I am awake, ignoring the possibility that I am quasi-affirming something false. In order to fight dream skepticism I have to be able to rule out the possibility that I am just quasi-affirming.

The three strategies, with some restrictions in the case of Descartes', attempt to fight dream skepticism by arguing that it is sufficient to know that one is awake while awake, while what happens while dreaming is irrelevant. They attempt to show that one is awake while awake by using specific tests. Descartes claims that when we can connect our ongoing experiences with our past experiences, we can know that we are awake, Williams argue that only when awake we can consider the question of whether we are awake or dreaming, and Sosa relies on special status of the claim "I am awake". All three strategies are vulnerable to the Hobbesian objection. Descartes' fails because of the possibility of the illusion of coherence, Williams' because of the possibility of the illusion of consideration of the question whether one is awake and Sosa's strategy is jeopardized because of the possibility of the illusion of the rational affirmability. On an externalist conception, it is fine to say that the justificatory status of claims are different even in two subjectively indistinguishable situations, like actual coherence and illusion of coherence. But on an internalist conception, there is a potential comeback here for the skeptic.

Because of that, it seems that, if we are to fight dream skepticism, along the lines proposed by these strategies, we have to be able to rule out the possibility that our ongoing experiences of applying some version of the coherence principle are just an illusion. In what follows I am going to try to

provide a strategy that can deal with the Hobbesian objection. I intend to present a two way strategy that can improve the discussed strategies. In the first step I intend to show that in dreams we can have knowledge. In the second step, I am going to show how this knowledge can be used against dream skepticism.

Also, although I recognize that externalism could provide an answer to dream skepticism, I will try to provide an answer from an internalist point. The Hobbesian objection seems relevant. If one is holding an internalist position on justification (as defined in the thesis) one has to be able to answer to the Hobbesian objection. It might seem that the Hobbesian objection is implied by internalism and that presupposition of internalism is the only reason to even consider the Hobbesian objection. I am, on the other hand, endorsing internalism because I think that the Hobbesian objection is worth answering. I think, together with Barry Stroud (Sosa and Stroud 1994), that anyone who tries to offer externalism in order to answer dream skepticism needs to provide an independent support for that position and also explain why people have strong internalist intuitions.

CHAPTER 4

4. 1. Lucid dreams

So far I have been assuming that in lucid dreams, unlike in non-lucid dreams, we can have some knowledge. The aim of the following sections is to explain what knowledge we can obtain in lucid dreams. To that aim, I am going to contrast the epistemic situation we find ourselves in when having lucid dreams to the one we are in when having non-lucid dreams. I will try to show that the situations are different in a way that is relevant for fighting dream skepticism.

Although known for a long time, lucid dreams are recognized as genuine phenomena by science in the 1980s when necessary proofs are given by Stephen LaBerge and his colleagues (LaBerge et al. 1981a and La Berge et al. 1981b) which is discussed in some detail in Chapter 1. The potential of lucid dreams as an anti-skeptic device, however, has not been, as far as I know, sufficiently explored in the philosophical literature. The solution to dream skepticism may be that dreams are simply epistemological practices where we proceed without due care. Being careless is a familiar source of mistakes: when we are in a hurry, we might make a lot of mistakes in a calculation; if we only pay half-attention to a subject, because our mind is on something else, we may make mistakes; when we make up our mind about a dispute after hearing only one of the sides, we may make a mistake, etc. In all these cases we should be more careful.

The following example might illustrate this further. I have not slept for two nights before the logic exam. I try to solve the test, and all of a sudden everything becomes easy. The reason for this is that I proved the theorem which I used after that to solve some otherwise difficult problems. Unfortunately, in the "proof" of the theorem I used a rule of negating the antecedent. I become aware of the mistake two days after the test was over. During the test I really believed that my theorem was

well formed, and my reasoning was well established. But, due to my sleep deprivation, I did not notice the fact that the logical rule I used was incorrect. The situation is similar in non-lucid dreams. When I dream, I cannot remember that I went to bed several hours ago, I do not draw the conclusion I would usually draw I was awake. I do not even ask myself how it is possible that I find myself in that weird situation. But, as in the case of the ill-justified theorem, I do form a false (dream) belief. Once I regain my reasoning capacities, I can realize that the theorem is wrong.

If lucid dreams are genuine phenomena, and we can learn the technique of lucid dreaming, then, it maybe suggested, this is one of those cases where learning lucid dreaming is becoming more careful about how we form judgments on the basis of dreams. In what follows, I am going to cite some of the reasons why people may think that in dreams, we do not have knowledge. Then I will try to show that in lucid dreams, the same reasons do not apply: as far as those reasons are concerned, we can have knowledge in lucid dreams. At the end, I will try to show that lucid dreams are dreams in the relevant sense, regardless of the epistemic differences. That is to say, I will try to show that dreaming is an epistemic practice, and like in other practices, we can become better at it by training. Lucid dreams should, then, be considered as dreams in which expertise is achieved.

The objection could be raised here that even if we are willing to accept that lucid dreams are genuine phenomena, one may still doubt that in lucid dreams, we have knowledge. I will attempt to dispel these doubts in the following way. Firstly, I will start to list the reasons for believing that we have no knowledge in ordinary dreams. After that I will try to show that none of these reasons apply to lucid dreams.

Many theories of knowledge agree that a true belief plus justification or/and sensitivity, safety or some additional condition are at least necessary for knowledge. This is discussed in detail in the previous chapter. Justification here is very broadly understood. It could be understood as externalist justification by which a belief is epistemically justified because it comes from an epistemically, truth-conductively reliable process. Or, justification can be understood as internalist justification that a

believer has obtained and sustains his belief through wholly appropriate thought, where the appropriateness of the thought is a matter purely internal to the mind of the subject, and not dependent on the environment. I cannot here provide an exhaustive theory of knowledge, but this list will provide us at least with some of the reasons against the possibility of knowledge in dreams. It has been claimed about each of these conditions that they are not met in dreams: we have no beliefs, justification, or truth.

4.2. Dream beliefs are not true, justified, safe or sensitive, and they might be not beliefs at all

First I will discuss the truth-condition. Let us consider the café dream again. I dream that I am in the café that was closed long ago in my hometown, although in reality I am sleeping in my bed miles away. In this situation I do not know that I am in the café because it is not true that I am in the café. So the reason why I lack knowledge in this case is because the proposition: "I am in my favorite café" is not true. I am in fact sleeping in my bed, miles away.

The second reason we might lack knowledge in dreams is that in dreams we do not form proper beliefs. As we have seen, Ernest Sosa argued that in dreams, we do not form beliefs on the basis of our dream experiences. Sosa's position is discussed in section 3.3 and I am not going to discuss it again here.

We can lack knowledge in dreams because, even if we form (genuine) beliefs in dreams, these beliefs may lack both internalist and externalist justification. The main reason why I don't have knowledge in dreams is that most things I dream are false. Sometimes, however, the truth requirement seems to be satisfied in dreams. I could fall asleep in my armchair and have an uninteresting dream about myself sleeping in the armchair. Or I can have a dream in which raindrops drum on my window,

while raindrops in fact drum on my window. In this case what I dream is true. But even here we are inclined not to ascribe knowledge. And we seem to have good reason for that. On most accounts of knowledge, if a belief is to be knowledge, it is not sufficient for that belief to be true. Something else is needed. The discussions about what that should be started long ago in Plato's "Theaetetus". The proposed view was that knowledge is true belief with an account (logos). The difficulty with determining what the proper account should be is noted in the dialog. In modern times, Gettier's cases showed that these are not sufficient. However these conditions could be at least necessary. What seems to be common for all internalist'[14] accounts is that we need to be aware of some reasons why a belief is true. This often implies that we have to be able to defend our beliefs against alternative explanations. In dreams we are not able to do that.

While dreaming, usually, we do not question the predicament we find ourselves in. In my café dream I do not ask myself how I got there and why the café is open. In order to provide reasons and gain reflective knowledge, I would need my reflective powers to be functioning. But as we noted, these powers are diminished in dreams.

The previous discussion (hopefully) gave some reason to think that we lack knowledge in dreams because our dream beliefs are not true and even if these beliefs happen to be true they still cannot count as knowledge because we cannot provide any internalist justification that could be counted as justification of that belief. In this section I will try to show why we may lack knowledge in dreams also by externalist standards.

In our waking life, as the dream skeptic assumes, our experiences of the external world are caused by an independently existing external world. The world somehow affects our perception and based on the perception, we form beliefs about the external world. Many of the times these beliefs are true, and on some occasions they are false (illusions, hallucinations). The falsity of our belief can be due to

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[14] Here I am not going to provide detailed discussion of various externalist/disjunctivist accounts. I am just going to highlight some differences relevant for my purposes.

some obstacle in the external world (the stick in the water seems broken because when the ray of light passes from one transparent material (say, air) into a different material (say, glass, or water), its direction changes). When this happens we can use some other method (for example our other perceptions) to decide whether the stick is broken. Or we may be deluded in regards of our beliefs of the external world if our perception or some other perceptual capacity is impaired. However as long as our percepts are caused by the external world and our cognitive powers work properly, perception is a reliable way of acquiring true beliefs. And, from the externalist's point of view, we do not need to have any introspectively or reflectively accessible reasons for believing that our beliefs are adequately caused or reliably produced. It suffices that they are thus caused and produced.

In dreams our sensory inputs are closed. Our experiences are not caused by the external world, but by our brain. Dream beliefs are not justified because they are not properly caused, and because they are not acquired by proper method and they are not reliable.

Someone might object that in some cases dream beliefs are justified and true, at least on the externalist account. On several occasions I had a dream in which a phone rang, and I realized that in reality my phone actually was ringing. It might seem that in this case my dream belief "The phone is ringing" was caused by the external world and acquired by proper method – my auditory perception.[15] I do not think that this proves that, at least in some cases, we have knowledge in our dreams on the externalist account. The ringing of my real phone interrupted my dream. And my belief that my phone rang was caused by the real phone. From the moment I heard the real phone ringing I was awake. In some cases I dream that the phone is ringing, and if the real phone does not ring the dream ringing does not wake me up. So the ringing that wakes me up was caused by the external world, and the ringing of the dream phone is just a coincidence. Often, the ringing of the phone does not coincide with the dreaming of the ringing of the phone, and dream ringing happens without real ringing and does not wake us up. When we are awake and the phone rings, our belief "The phone rings" is justified by externalist

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[15] Daniel Dennett in *Dennett 1976* used similar example to question whether dreams are experiences at all.

standards, because it is acquired in the proper way. On the other hand, the ringing of the phone is not necessary or sufficient cause of the dream belief „The phone rings", nor is the dream belief acquired by the reliable process. Dreams are not reliable ways for acquiring beliefs about the external world.

Finally, we can lack knowledge in dreams because dream beliefs are neither sensitive nor safe. Some philosophers claim that sensitivity of beliefs is a necessary condition for knowledge.[16] According to them S knows that p only if: In the closest possible worlds where p is false, S does not believe that p. If Sosa is right and we have no beliefs in dreams, then the sensitivity condition does not apply. Suppose, however, that someone accepted that we can have beliefs in dreams. Consider my believing in my dream that it was raining, when in fact it was raining. Is this belief sensitive? That is, in the closest world where it was not raining, would I still believe that it was? The answer is plausibly yes: I can easily continue to dream that it's raining even if it's not, and in that case (assuming that we have beliefs in dreams) I would continue to believe that it was raining. My dream belief is not sensitive.

Dream beliefs are not safe either. Again, for the sake of the argument, we are not going to consider Sosa's view that in dream we do not form beliefs. According to the safety principle, S knows that p only if: S would believe that p only if p were true. Let us assume that I believe that it is raining, because I have a dream that it's raining. As it happens, it is indeed raining. In the nearest possible worlds where I have the same belief also based on my dream, is it also the case that it's raining? Plausibly the answer is no: I can easily dream (and believe) that it's raining without its actually raining.

4.3. In lucid dreams we have justified, true, sensitive and safe beliefs.

In the previous sections we saw why someone may argue that we lack knowledge in dreams: we do not have knowledge in dreams because our dream beliefs typically are not true, or even if sometimes happens that they are true, they are not justified by internalist nor by externalist standards, or, if Sosa

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[16] Safety and sensitivity conditions have been discussed in Section 2.0.

is right, in dreams we do not have knowledge because dream beliefs are not (genuine) beliefs. In this section, I will show why these reasons for denying dream-knowledge don't apply to lucid dreams. In lucid dreams we can have knowledge because we can have true justified genuine beliefs.

One thing should be clear though. When the skeptic talked about lack of knowledge in dreams he meant that in dreams we cannot have perceptual knowledge about the external world. At least in one version of the skeptical argument, this ignorance was intimately connected to the lack of knowledge of not only the external world, but also of the nature of our experiences: namely, the lack of knowledge that one is dreaming. The three anti-skeptical strategies I considered agreed with skeptic on that. They were all talking about non-lucid dreams. I am going to talk about lucid dreams. These are dreams in which we know that we are dreaming. But, not even in lucid dreams can we have perceptual knowledge about the external world. The only knowledge we can have in lucid dreams is knowledge about the nature of our ongoing experiences – we know that these experiences are produced by our brain and not by the external world. This knowledge by itself cannot defeat dream skepticism about the external world, but it can improve our epistemic position and, combined with the strategies discussed above, help us fight skepticism as a step in a broader anti-skeptical strategy.

The situation we are in when having a lucid dream perhaps is best explained through the following analogy. Imagine a drunk who drives. If he is really drunk and not aware how drunk he is he will insist on driving and in that condition he could be a danger for himself and for other participants in traffic. If, on the other hand, he can realize that he is too drunk to drive he won't be a danger for himself or for the others. Realizing that he is too drunk to drive will not make him a good driver, but it will prevent him from killing someone. Similarly, lucid dreams won't provide us with mechanisms suitable for obtaining true perceptual beliefs about the external world, but they may prevent us from making mistakes about the nature of some of our experiences and about the external world.

Lucid dreams arise when a dreamer realizes that his ongoing experiences are dreams caused by his brain, instead of perceptions caused by the external world. In lucid dreams I am aware of the fact that

the sentence "I am now dreaming that I am in my favorite café" is true. In reality I am miles away in by bed, and the café is closed long ago. The first necessary condition of knowledge –the truth condition seems to be fulfilled.

The problem of the externalist justification of dream beliefs was found in the fact that dream beliefs are not properly caused or acquired by a reliable method. In lucid dreams, however, our beliefs are caused by the proper method. Lucid dreams are epistemic practices, and as in other practices, we can become better by practicing. An experienced lucid dreamer can enter a lucid dream whenever she wants, and can become fully aware of the nature of her experiences. In order to do that, she will perform tests consisting mainly of the reality checks. Analyzing the dream journal should point out which aspects of the dream are peculiar. Part of the training of a lucid dreamer is to do reality checks while awake as many time as possible. She should observe aspects of waking life which are peculiar in dreams (for some people these are unusual faces, way of moving or written or printed text). When she recognizes these peculiarities, she is able to enter a lucid dream. The lucid dream state has a specific neural pattern which could be monitored by the fMRI. The dreamer can, by a previously agreed pattern of eye movement, signal when she enters the lucid dream state. Her beliefs are acquired by a reliable process that can be justified from the third person perspective and thus justified, at least on some externalist accounts.

The upshot of the skeptical argument in regards of the internalist justification was that we cannot have justification for our dream beliefs, because on the experiential evidence we have, we cannot have sufficient reasons to believe that our beliefs are caused by the external world rather than by our dreams. This is the case because, according to the skeptic, our dream experiences are phenomenally indistinguishable from our waking experiences. But, according to modern dream science, human beings like us do not have dreams of this kind. In our dreams there are always some peculiarities, and often when recollecting dreams, we are astonished by the fact that we didn't recognize them. Sentences such as "I dreamt my mother but she looked like my neighbor" or "I was sitting in the long ago closed coffee shop" are commonplace when we describe our dreams. The peculiarities of dream

experiences are easily spotted when our reflective capacities are working properly, as they usually do, when we are awake and well rested. If we could somehow "awake our" reflection while we are dreaming, it seems that we could recognize the peculiarities of the dream experiences and distinguish them from waking experiences.

Lucid dream is a state in which our reflection works properly, and we can see the real nature of our ongoing dream experiences. My dream belief "I am dreaming that I am sitting in the long ago closed café" is knowledge, because it is true, and I have sufficient reasons for holding it. There are peculiarities disagreeing with reality, and I am aware of them. Furthermore, I am aware that the state like this is called a lucid dream, and in that state I can change the scenery or the characters of my ongoing experiences. All of this is reflectively available to me, so lucid dream beliefs seem justified according to internalist standards as well.

The skeptic could insist that even if the nature of dreams is really as dream science describes it, it is still possible to have dreams that are even in principle indistinguishable from waking experiences. And that possibility is enough for dream skepticism to work. In order to answer to this objection the sense of "possible" should be clarified. If "possible" means "people sometimes have dreams which, while occurring, they cannot distinguish from waking experiences", I have no problem with agreeing with that. We often have dreams we mistake for waking experiences. However, this is not because of some inherent feature of dream experiences, but only due to our inability to distinguish between them. We can become better in this by practicing lucid dream techniques. If the skeptic is going to insist that we cannot distinguish dreams from waking experiences because of their inherent indistinguishability, then it would be his turn to provide reasons for such claim. If "possible" is supposed to mean "it is not impossible to have dreams that are in principle indistinguishable from waking experiences" I would have to say that it is true that we can imagine that humans might have such dream experiences in the same way we can imagine them to have hearts in the place of brains, or being only brains in vats. This would require huge alterations in the way the world is. And the allure of dream argument lies in the fact that we do not need these alterations in order for the argument

to be powerful. If we are compelled to make big alterations in the way the world has to be, then the dream argument is not better than the brain-in-a-vat argument – a distant possibility.

The dream argument started from the premise that in dreams we are deceived by our experiences into thinking that they are waking experiences. This is something that happens to all of us from time to time, and since, bored from reading this paper you may fall asleep next minute, this possibility is different from the brain in a vat or The Matrix scenario. If the dream skeptic still wants to insist that it is possible to have dreams containing lucid dreams and the entire dream science, and that we are in principle unable to recognize these, then the skeptics seem to be guilty of a fallacy. The concept of dream he had at the beginning of the argument – dreams are states real human beings experience while sleeping - is changed into a different concept which by dreams understands the experiences indistinguishable from waking experiences that human beings (or beings like humans) can have in some possible world.

The sensitivity condition is defined as follows: S knows that p only if: In the closest possible worlds where p is false, S does not believe that p. The closest possible worlds to a world in which I am lucidly dreaming are worlds in which I am not lucidly dreaming or where I am awake. Lucid dream beliefs are sensitive. In a lucid dream I believe that I am dreaming. If I were not dreaming I would not believe that I am dreaming. Lucid dream belief is, thus, sensitive.

It also satisfies the safety condition. According to the safety principle, S knows that p only if: S would believe that p only if p were true. A dreamer enters a lucid dream when she discovers that her ongoing experiences are dreams. What differentiate lucid dreams from both waking and non-lucid dream experiences is that in both waking and non-lucid dream experiences we operate under the assumption that we are awake. We rarely question that assumption in those states. By contrast, a necessary condition of entering a lucid dream is to question one's predicament, to look for the oddities in ongoing experiences. Once a dreamer realizes that she is not awake she enters a lucid dreams. Only a state in which she is fully aware of the nature of her experiences is a lucid dream. In a lucid dream

I would believe that I am dreaming only when I am dreaming. Otherwise it would not be a lucid dream. If I were not lucidly dreaming that I am dreaming I would not believe that I was dreaming.

Finally, in lucid dreams we have genuine beliefs. At the end of section 3.3.3 we saw Sosa's argument that although in dreams we seem to have various beliefs, we do not have any beliefs while dreaming. For the account I suggested it is irrelevant whether in regular (non-lucid) dreams we form beliefs or encounter some belief like states. Once we realize that these are caused by our brain and not by the external world, we can have true beliefs about their nature. It does not make a difference if "I am now dreaming that I am sitting in my favorite café" means "Up to this realization I falsely believed that I was really sitting in my favorite café" or "Up to this realization I was just imagining that I was really sitting in my favorite café". What is important is that after the realization I have genuine true beliefs (exercise proper dispositions). When I realize that I am dreaming that I am chased by a lion, my belief "Now I dream that I am chased by a lion" is a genuine belief, because it is not contradictory to my longstanding beliefs. It is incorporated in the corpus of my beliefs. I do not have to either abandon them or to face the problem of incorporating the lucid dream belief. I believe that I am in bed in the same way I believe that I am dreaming that I am chased by a lion.

4.4. Are lucid dreams genuine dreams?

The traditional strength of the dream argument relied on the assumption that dream experiences are indistinguishable from waking experiences. Following others, I proposed that this assumption is mistaken, and originates in a misconception of the nature of dreams. I argued that although it is an undeniable fact that in dreams we are deluded, the cause of the delusion is not the indistinguishability of the experiences, but a temporal impediment of our cognitive powers. I suggested that we can overcome the bad epistemic situation in dreams by raising our cognitive powers by using some of techniques for inducing lucid dreams. After that I tried to show that in lucid dreams we have knowledge by the same standards we lack knowledge in non-lucid dreams.

At this point someone may ask whether lucid dreams are genuine dreams. I argued that in ordinary non-lucid dreams, we don't have justified true beliefs, but in lucid dreams we do. Furthermore, in lucid dreams we have voluntary control over the course of dream events, a feature which seems to be missing from non-lucid dreams. While in lucid dreams we notice peculiarities of dream events and constantly check whether we are dreaming, in non-lucid dreams we take for granted that we are awake and we are not aware of the peculiarities of the experiences, and even when something strikes us as unusual we provide some non-plausible explanation which is at that moment sufficient for us. Lucid dreams seem to be more like waking experiences then dreams. So perhaps lucid dreams are not even dreams. Why would we then accept that what we know in lucid dreams is relevant to what happens in regular dreams?

To this concern I can offer the following answers. First of all, scientific studies show that dream cognition and waking cognition are not as different as it was previously believed. The power of reflection is diminished in regular dreams, and fully active in lucid dreams and waking experiences. But this difference is not a difference in kind but rather in degree. In dreams we sometimes act like insane persons. Strange and illogical things seem normal to us because our cognitive capacities are diminished. Once we regain them we can became aware of the absurdity of the situation. And this is just a continuation of the previous process.

Second. It is not unusual that we do not perform properly even basic things that we do every day such as breathing. Most people are habitual chest breathers: we use a shallow form of respiration that makes use of only the top part of the lungs. In reality, most of the blood vessels that take up oxygen are in the bottom, neglected half. Since so much lung power is going to waste, we get less oxygen, and as a result, we're breathing more rapidly than we should. Human babies use a deeper type of respiration called abdominal breathing, which strengthens and makes full use of their diaphragms. It's only as we grow older that we revert to the more inefficient style. However, you can train your body

to go back to breathing properly, and over time, you can even breathe abdominally in your sleep.[17] The kind of breathing with the full use of the diaphragms is a part of the training of professional athletes. In this case we are not inclined to say that Usain Bolt is not really breathing when he runs 100 meters under 10 seconds. If dreams are understood as epistemic practices in which we engage without due care, then lucid dreams are nothing but expert dreaming, the practice that could be learn with different degrees of success. Regular dreams are sufficient for resting our brain and body, growth and other physiological purposes. In the same way chest breathing is sufficient for satisfying our basic need for oxygen. But if we would like our dreams to be more reliable epistemical practices, we have to learn how to become better dreamers.

Third. What happens in our dreams is similar to what is going on in our everyday usage of the information which we do not have time, reason or any interest to check. I heard that George Clooney is getting married. And I can go through my life believing that, although in fact he swore that he would remain bachelor for his entire life. There are ways to confirm or disprove this information. If I am to participate in a George Clooney trivia quiz show or write his biography, I would certainly check this information. But for all the purposes of my life, I really do not care about his marital status. In the same way we proceed in our dreams. Usually we are not interested in the epistemic aspects of dreams, and view them in the same way we view other physiological needs. However, there is a way for them to be more than that. We can improve our breathing and in that way make our muscles stronger and prevent cardiac arrest. This new breathing technique does not make improved breathing into non-breathing. Lucid dreams should be regarded in the same way.

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[17] An interesting discussion on this could be found in Rakel, D., Saunders, and WB. (2003)

4.5. The second step

So far I argued that even if it is true that in dreams, lucid and non-lucid, alike we do not have perceptual knowledge about the external world, we can have some knowledge in lucid dreams. We can know (in lucid dreams) that we are dreaming and that our ongoing experiences are not caused by the external world. Although this knowledge does not defeat dream skepticism, I am going to argue that it can serve as an important step in a broader anti-skeptical strategy. In section 3.3 I explored three anti-skeptical strategies that argued that knowing that one is awake while awake is enough to fight dream skepticism about the external world. According to them in dreams we do not have any relevant knowledge, but this lack of knowledge does not play any role in our ability to successfully answer to the dream skepticism. For as long as we can know that we are awake while awake, there is no need to concern ourselves with the inability to know if we are dreaming while dreaming. A common feature of these strategies is that they are not able to answer to the Hobbesian objection. My proposal is, then, to use knowledge we can have in lucid dreams to fight the Hobbesian objection and, building on the three anti-skeptical strategies, answer dream skepticism about the external world.

Part of the reason why Descartes, Williams and Sosa failed lies in the fact that their respective accounts of dreams are incomplete. Let us briefly recap these accounts. Descartes and Williams claimed that in dreams we form false beliefs and that it was the reason of the emergence of dream skepticism. Sosa, on the other hand, claims that while dreaming we do not form beliefs. All of them share the opinion that in dreams we cannot have any (perceptual) knowledge. They also held that while dreaming we are unable to tell if we are dreaming or awake. They also thought that it is not a problem for their respective accounts, because the question of whether we are dreaming while dreaming is rendered moot by their accounts. I can agree with most of these points. In general dreams are really as bad epistemic situation as they described them. But, and it is where our position differ, dreams they describe are not the only dreams there are, and, more importantly, they are not the only dreams relevant for the answering to dream skepticism. Their accounts of dreams are incomplete because they did not include lucid dreams in their respective accounts of dreams. All three accounts

rely on the assumption about dreams according to which dreams and waking experiences are sharply divided, in such a way that waking life is a domain in which we can learn and know, and dreams are deprived from any relevant cognitive contribution to the waking life. Modern dream science showed that these domains are not so sharply divided. Dreams, according to dream science, are continuation of our waking lives. In some dreams, we can know lot of things. We usually do not use dreams in order to obtain knowledge. The reason for that was that we did not know how to dream properly. Once we master this technique we can significantly augment our knowledge. Outside of philosophy, dreams are used in treatment of night terrors. Also, although researches are at the beginning, there are indications that lucid dreams can be used for practicing music or even improving gymnastic performances[18].

As explained in Chapter 1, lucid dreams are dreams in which a dreamer knows that she is dreaming. Lucid dreaming can be learned. There are several techniques for entering lucid dreams. One technique consists of constant reality checks. As often as possible we should ask ourselves if we are dreaming or awake and then check our surroundings. This technique is motivated by the scientific discovery that there are some experiences that we can have only while dreaming (flying, walking on the water, etc.), and there are some experiences that we can have only when awake. Thus, we can read a printed text two times in a row only when awake (LaBerge 2000). In dreams the text becomes distorted during the second reading. But how is the ability to read printed text going to help us against dream skepticism?

The discussion of Descartes's Williams's and Sosa's positions showed an important flaw of their strategies- the inability to answer the Hobbesian objection. At best their strategies resemble a medical testing procedure that often gives positive test results, but also gives false-positives. The procedure cannot, without additional testing procedures, exclude false positives. In the context of dream skepticism I discussed here, the Hobbesian objection represents a false-positive: we test an experience

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[18] See for example (Earlacher & all 2013)

for coherence, and since the illusion of coherence in dreams is possible, we mistakenly declare the presence of coherence.

The approach I advocate here could be seen as analogous to a procedure that eliminates false positives. There is an additional procedure that can be applied in order to exclude cases of illusion of coherence. For example, a lucid dreamer can determine whether she has the dreams of the kind Hobbes is talking about by trying to do something that would be impossible to do, were she awake. Since the dream world is not subject to the laws of physics, the lucid dreamer can try to levitate, for example. If she is successful, then she knows that she is dreaming. Or she can try to perform some of the actions that can be performed only in waking life. For example she can try to read a printed text two times in a row. This is impossible to perform while dreaming. If she is successful, that would indicate that she was awake and Hobbes' objection would fail. If she cannot successfully perform this action that would again indicate that she is dreaming. Only by constantly reminding ourselves that we might be dreaming, and by conducting tests for checking if we are in fact dreaming we might defend ourselves from certain types of dream skepticism. Once we achieve this skill we can, by performing the described tests, tell if our ongoing experiences are dreams, and we do not really affirm or really consider whether we are awake or dreaming. Our ability to perform these tests and to consider their results when dreaming seems to be a necessary requirement if we are to give a satisfactory answer to the dream skeptic. We can do this only if we know how to dream lucidly. That is, if we accept that in order to have any perceptual knowledge about the external world we need to know that we are not dreaming. And in order to know that we are not dreaming, we need to successfully learn how to dream lucidly.

We have seen in the previous section that a lucid dream is a genuine, although improved, kind of dream, so it is relevant for the considerations about dream skepticism. Although dreams are not usually used in order to obtain knowledge, but rather for the refreshment of the brain, it does not mean that they cannot be used for epistemic purposes as well. Also, beliefs we obtain in lucid dreams are genuine beliefs about our ongoing experiences, and, since they satisfy necessary internalist and

externalist requirements, valid candidates for knowledge. Because of that, knowledge we obtain in lucid dreams is well justified and can safely be used in establishing a position against dream skepticism.

The proposed strategy works well against the two types of arguments discussed in Chapter 2. As we have seen, one of the main assumptions of the A type arguments was A3. This premise states that my perceptual experiences in GC and experiences I have in BCs are exactly the same type of mental experiences. Dream science shows that the experiences we have when dreaming are different type from experiences we have when awake and perceive. Furthermore, once we enter a lucid dream we become aware of the origin of our ongoing experiences.

As for the B type argument, it is shown in Chapter 2 that this type of argument brings about dream skepticism by showing that knowing that one is not dreaming is a necessary condition of knowledge of any proposition about the external world. On the account I proposed here, it is not difficult to meet this condition. Let us consider the proposition "There is a hand in front of my eyes." I can observe it, connect my experience of watching at it with my previous experiences of using it to type these lines etc. If the Hobbesian objection arises, I can disarm it by determining if my ongoing experience is wakeful or dreamt experience. And I can do this for any proposition about the external world.

This however leads to an interesting consequence. How about people who do not know how to dream lucidly? Do they ever know that they are not dreaming, and by extension, that there are hands in front of their eyes? The short answer would be: not really. The longer answer, and the detailed consideration of the short answer will be provided in the next section. Before I get into that, one general objection to the strategy I proposed needs to be addressed.

In Chapter 3 I evaluated Descartes', Williams' and Sosa's anti-skeptical strategies by confronting them with the Hobbesian objection. I claimed that they are inadequate answer to dream skepticism because they were not able to provide a satisfying answer to that objection. The question is now if the Hobbesian objection can be raised against the strategy I proposed.

In order to answer this question, I think that the following two things should be distinguished. One part is: can the lucid dreamer have an illusion of dreaming? The other part is: can the lucid dreamer still go wrong when she asserts that she is awake? The objection expressed in the first part seems different from the Hobbesian objection. As for the answer to the second question, I do not claim that lucid dreamers are infallible. All I claim is reliability. If one does not dream lucidly, then in dreams, she is not reliable and because of that, the Hobbesian objection arises. As with each practice, different levels of expertize can be achieved. Although it is sometimes possible that there is an illusion of reality check, an experienced lucid dreamer will run different tests as often as possible in order to avoid the possibility of error. This is how dreams of human beings function. One could insist that we can have dreams in which we are always mistaken about doing the checks properly, but it is not the way our dreams really function. Lucid dreams are intended to be seen as improved ways of dreaming. Non-lucid dreams are seen as epistemic practices in which we proceed without due care and because of that we are deceived by them into believing that our ongoing experiences are caused by objects of the external world. Lucid dreams improve these epistemic practices.

Another general objection could be outlined in the following way. I claim that the strategy I proposed here provides an answer to dream skepticism along internalist lines. The answer relies on the understanding according to which lucid dreams are epistemic practices more reliable than non-lucid dreams. However, reliability in the way it is employed here is an externalist requirement of knowledge. The question is now how the strategy answer to dream skepticism along internalist lines?

One of the distinguishing features of externalism is that the justificatory status of beliefs does not depend on the states the subject can access by reflection or introspection. In some version of externalism it is sufficient that a belief is obtained via a reliable procedure while subject does not need to be aware if the procedure is reliable. Lucid dreaming is not such a procedure. A dreamer needs to check constantly if the procedure is properly applied at any given moment. In order to do that, she needs to question constantly that she is awake. For that her higher-level consciousness needs to be active. And during all of this she needs to be reflectively aware of all of that. The constant need

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for reflective awareness distinguishes lucid dreaming from procedures that are reliable according to externalist standards.

4.6. Consequences

According to my proposal, one way to answer dream skepticism is to make sure that we can always tell whether we are dreaming or not, and this can be achieved by acquiring the technique of lucid dreaming. It follows, then, that in order to have any perceptual knowledge about the external world, we need to know how to dream lucidly. Does this mean that all those billions of people who do not know how to dream lucidly can have no perceptual knowledge about the external world? The previous discussion seems to imply that it is the case. This certainly seems like an unpleasant consequence.

The position of the dream skeptic (at least if she argues along the lines of B-type argument) relies on the claim that it is not possible to know anything about the external world unless we can know that we are not dreaming. As the discussion in Chapter 2 outlined there are various ways to meet this challenge. Some of the strategies may accept that it is indeed not possible to know that we are not dreaming, but attack another premise of the argument, by objecting to or denying the Closure Principle, as proponents of sensitivity-based theories of knowledge were proposed. The reaction to this move was that this approach, if anything, achieves only a stand-off with the skeptic. In order to fight the skeptic, this approach has to assume that we are not dreaming or handless brain in a vat, which are the assumptions that the skeptic will never concede. This is, however, a misunderstanding of the aim of sensitivity-based approach. As John Greco puts it:

> The purpose of that project is not to persuade a non-believing skeptic, or to otherwise refute the skeptic in a way that is rhetorically satisfactory. Rather, the project is to reject something

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in the skeptical reasoning under consideration, whether or not a 'real' skeptic would be satisfied with that rejection. Put another way, the project is to critique the skeptical argument rather than to convince or persuade a skeptical person (ourselves or someone else). In the context of this project, we are looking for a response to skepticism that is theoretically adequate, as opposed to rhetorically or pragmatically adequate. And what would theoretical adequacy require? Just what the sensitivity theorist pretends to provide: an account of knowledge (in this case a partial account) that explains where the skeptical argument goes wrong, and thereby explains how knowledge is possible. (Greco 2007, p628)

The aim of skepticism is to question the possibility of our knowledge, the aim of dream skepticism is, as I tried to argue, to question our knowledge about the external world, because of the ever present possibility that we might be dreaming. The sensitivity based theorists proposed a new account of knowledge, which if true, removes the mistakes of the closure based accounts of knowledge, and successfully deals with skepticism. Sensitivity based accounts have their own problems. Rejection of CP leads to some bizarre consequences as abominable conjunctions, already discussed in Chapter2. Having these consequences is a high price, for some people as high as skepticism, and for this reason, sensitivity-based theories have been abandoned by many. But the guiding idea is that any account of knowledge will have costs and benefits. The acceptance of a theory will, in part depend on our ability to measure, and willingness to accept, costs and benefits of the theory facing skepticism.

The account I proposed relies on the scientific understanding of dreaming. On this understanding, dreams are belief-forming processes in which we proceed without due care. We can improve our predicament in dreams by learning how to dream lucidly. We can do this because even in our dreams we can know some things. This contradicts the view according to which dreams and waking life are completely different and sharply divided processes. The fact that we can be mistaken while dreaming undermines some ways of fighting the dream skepticism, as illustrated in the case of Williams, but

the analysis also showed, I hope, that his way of fighting dream skepticism was not in fact a good strategy against dream skepticism due to its inability to answer the Hobbesian objection. My account proposed an alternate way, and one of the consequences appears to be the unusual claim that in order to have any perceptual knowledge about the external world one has to know to dream lucidly. Lucid dreaming is a skill practiced by a proportionally small number of people. Many others haven't even heard about it. It seems really unorthodox to claim that all of them need to learn to dream lucidly in order to know if they really perceive chairs and tables and other objects commonly believed to belong to the external world. For most people this is an outcome no better than dream skepticism.

We have three claims here: One is the skeptic's requirement that in order to know anything about the external world we need to know that we are not dreaming. The other is the dream account given by the dream science according to which lucid dreams are genuine phenomena and in dreams we can know that we are dreaming. The third claim is a consequence of my view. I argued that, in order to defeat dream skepticism, in a way it was presented here, and along the lines proposed by Descartes, Williams and Sosa, one needs to be able to refute the Hobbesian objection. One of the requirements to do that, I argued, is to know that one is dreaming while dreaming. This can be achieved by learning how to dream lucidly. The consequence of this is the claim that no one knows anything about the external world, unless they know to dream lucidly. It appears that not all of the three claims could be true. Let us assume, that my reasoning was valid, and that the scientific account is a correct account of nature of dreams. It appears that something has to be done with the skeptic's requirement.

In Chapter 2, we have seen that this requirement is based on the skeptic's acceptance of the KK principle. One of the implications of this principle is the inability to provide a satisfactory account of knowledge and justification. According to this view, a belief acquires the status of knowledge only if it is based on some internally accessible justification, argument, or reason. This requirement, according to Sosa, makes any account of knowledge unsatisfactory because everything we know

would have to be based by good inferences or arguments which are not circular or infinitely regressive. The way out is the acceptance of some reliabilist or externalist accounts of knowledge. Giving up the KK principle might make the externalist account unsatisfactory even under conditions of knowledge they suggested as argued by Barry Stroud (Sosa and Stroud 1994). I am not going to go into details of his criticism here because it was covered in Chapter 2. I am just giving his concluding remarks:

> Externalism' implies that if such-and-such is true in the world, then human beings do know things about what the world is like. Applying that conditional proposition to ourselves, to our own knowledge of the world, to our own knowledge of how that knowledge is acquired, and so on, even when the antecedent and so the consequent are in fact both true, still leaves us always in the disappointingly second-best position I have tried to illustrate, however far up we go to higher and higher levels of reiterated knowledge or reasonable beliefs. We want to be in a position knowingly to detach that consequent about ourselves, and at the same time to know and so to understand how any or all of that knowledge of the world comes to be. And that would require appealing to or relying on part of our knowledge of the world in the course of explaining to ourselves how we come to have any knowledge of the world at all (Sosa and Stroud 1994 p305).

Stroud's criticism seems to show that the KK principle or something above purely externalist requirements is after all necessary if we are to give satisfying account of knowledge.

The position I argued for did not intend to provide a general account of knowledge. What I tried to do was to examine dream skepticism and how it threatens a particular area of our supposed knowledge. I tried to argue that if we go along with dream skeptic and accept his requirements, there is a way to meet them. If the consequence of my considerations is an undesirable view of the

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requirements of knowledge, then one of the following things has to be done. Showing that the argumentation for my view is not valid, proving that the scientific understanding of dreams is not correct, or changing our requirements for knowledge so that they can account for these unorthodox consequences.

I intended this thesis to be a systematic investigation about the ways of responding to dream skepticism. What the three anti-skeptical strategies I discussed have in common is that all of them hold that there is some special feature that distinguishes dream skepticism from other forms of skepticism. Dream skepticism is, according to them, different because dream experiences are represented to be different than the experiences ascribed to us by other skeptical scenarios. Also, dreams are experiences with which we are familiar. The dream scenario is so alluring and powerful because it suggests that the world may be the way it actually is, the world in which people often dream, and yet we could not know the majority of things we think we know. It is easy to see that one can be deceived by dreams, because everybody had similar experiences at one point in life. Also, the considerations from Chapter 2 showed that the dream skeptical argument does not work as other skeptical arguments. If the skeptical threat is presented as the A type of argument, on my account it does not work because some of its crucial premises are false. If the skeptical challenge is formulated via B-type of argument, the special status of the dream skepticism is even more obvious. The analysis there showed that in order for this type of argument to work a KK principle has to be accepted. Otherwise the dream scenario will not bring about skepticism. One way to go is to deny KK principle and face costs and benefits of that move. At the end it would probably boil down to preferences towards internalism/externalism. At the same time, recurs to externalism would have to account for Stroud's objections. [19]

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[19] This move would not necessarily deny the special status of dream skepticism via B type argument, because maybe it is possible to provide different support for some of its premises.

If, on the other hand, one thinks that the challenge posed by the dream skeptic has a special status among other skeptical scenarios, and that a special answer needs to be provided to it, an answer that will not affect other skeptical challenges, then if the analysis I conducted here is correct, the answer has to include lucid dreams.

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