The Problem of Easy Knowledge - Critical Perspectives on Cohen and Others

Matthew Neil White

Supervised by Dr. Dean Chapman

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Introduction:

Cohen (2002, 2005) critiques basic knowledge structure (BKS) theories on the grounds that they allow us easy access to knowledge of things that we intuitively believe to be hard to come by. For example, the negation of skeptical hypotheses, and the reliability of our belief-forming mechanisms. Cohen calls this "the problem of easy knowledge." Although Cohen (2002) states that the problem of easy knowledge affects only BKS theories, Markie (2005) argues that it affects non-BKS theories as well. If Markie is correct, this is a troubling consequence for the field of epistemology as a whole.

My project in this paper is to find a reliabilist theory which is able to adequately respond to the challenge presented by the problem of easy knowledge without committing itself to violations of the closure principle of knowledge, or the kind of "abominable conjunctions" that typically result from such violations. Such a theory, I will argue, can be found by marrying Kelly Becker's (2013) modal reliabilism with Jonathan Ichikawa's (2011) illuminating discussion of epistemic contextualism in the context of modal theories of knowledge.

I have chosen to pursue the reliabilist route not out of any deep affinity for the theory, but rather because it is the epistemic theory most examined by philosophers concerned with the problem of easy knowledge. My theory is distinct from other theories of reliabilism due to its modal component - taken from Becker (2013), but adjusted by me in several key ways - and it's contextualist component - taken from Ichikawa (2011). Given the extent to which I have borrowed from both of these philosophers, it would be unfair to call it entirely my own. However, for the sake of ease and clarity, when I present the theory in its adjusted form, I shall refer to it as "my theory."

This paper will be divided into two major components. The first of these will be a concentrated explanation of the problem of easy knowledge as it is presented by Cohen (2002, 2005), followed by a discussion of whether the problem, as it stands, is truly a problem. In this section of the paper I will examine the common sense approach to the problem of easy knowledge. In brief, for some of those who follow the common sense school of thought, the problem of easy knowledge is a not a problem at all, but rather a

description of how easy it actually is to gain knowledge of seemingly hard to know

propositions of the sort I mentioned above. My response to these philosophers will essentially be (in the words of Nozick (1981)) that they do not give the skeptic his due. I will justify this claim by examining Foley (2003) and argue that, while a leap of faith is required in all cases of knowledge, many followers of the common sense school take this leap too soon, and too far. My own theory, I will argue (in a later section) is far more prudent in this leap of faith, and gives the option to avoid it entirely when it is appropriate (for example, in cases of rigorous philosophical thought on the nature of knowledge.)

The second component of this paper will be devoted to examining and critiquing the solutions to the problem of easy knowledge proposed by Cohen (2002, 2005), Markie (2003), Black (2008), Klein (2004), and Becker (2013). For the sake of brevity, this component will largely focus on the flaws with these arguments - although each has its merits, my primary goal in examining them will be to demonstrate where they fail in order to lend credence to my own theory. Having shown the flaws with these arguments, I will show that once one accepts epistemic contextualism, Becker's theory of modal reliabilism can be altered and reshaped into a fitting solution to the problem of easy knowledge - able to preserve the closure principle of knowledge and suitably deal with the apparent "abominable conjunctions" that modal tracking views of knowledge notoriously suffer from.

Perhaps unfortunately, if we are to embrace my theory of knowledge, we wind up with a theory of knowledge that, while preserving the meaning of the word and making sense of everyday knowledge claims, is not as helpful when dealing with knowledge claims in a more rigorous setting. This is because, in heavyweight contexts, where skeptical threats are made salient, my theory will maintain that (in these contexts) we can know very little - if anything at all. I do not consider this a fatal flaw, however - in my mind the skeptic is largely correct in stating that we know very little (or even nothing at all) in the context of serious philosophical discussion about knowledge.

What my theory can do, that accepting straight radical skepticism can not, is render sensible the knowledge claims made by individuals in ordinary contexts, and in this way preserve some sense of meaning in the term "to know."

Section 1: Definitions and Terms

1.1 Abominable Conjunctions

Before I embark on my discussion of the problem of easy knowledge, and since I have used the term previously, and will do so again, it would be prudent to define what an "abominable conjunction" is. An abominable conjunction is a sentence such as "I know that I have two hands, but I don't know that I am not a handless brain in a vat." This kind of statement is commonly thought to be a necessary consequence of embracing modal tracking views of knowledge, such as that put forward by Nozick (1981.)

The tracking view of knowledge states there are four necessary and sufficient criteria for knowledge:

1. I believe that *p.*
2. *p* is true in the actual world.
3. In all relevantly close possible worlds where *p* is true, I believe that *p.*
4. In all relevantly close possible worlds where *p* is false, I don't believe that *p.*

Abominable conjunctions occur as a result of two factors, though they are interlinked. First, what constitutes a relevantly close possible world varies according to the proposition in question - so for instance when assessing whether I know I have hands, I look at the real world, and worlds that are almost identical where I have hands and I don't have hands. Although Nozick does not explicitly outline what is meant by a relevantly close possible world, we can assume that possible worlds where I am seriously delusional, or where I am a brain in a vat being systematically deceived are beyond the scope of what constitutes "relevantly close" for the proposition "I know that I have hands."

A quick and dirty way to understand what is meant by relevantly close is to hold all other important things equal, except the proposition in question. By important things, I mean, for instance whether I am delusional or not, or whether I exist simply as a brain in a vat. These things will have an impact on my beliefs, and can be considered (in scientific terms) to be confounding variables that must be controlled for if we are to examine

whether the belief tracks in a way that is relevant for establishing knowledge. Non-important things in the context of the question of whether I know I have hands would be such superficialities as my hair or eye colour, my exact date and time of birth, and so on. These things will have no bearing on my beliefs about whether or not I have hands, and thus do not need to be held constant in the way that that important things must be.

Assuming that I am of sound mind in this and other relevantly close possible worlds, it seems obvious that I can know I have hands. I believe it, it is true in the actual world, and in relevantly close possible worlds where I have or do not have hands, I will believe that I do or do not have hands respectively.[1]

The abominable conjunction comes in when we examine the next proposition in question - whether I know that I am not a handless brain in a vat. In this case, what constitutes relevantly close for the purpose of assessing knowledge includes worlds in which I am a brain in a vat being systematically deceived into thinking that the external world exists as I perceive it. In this case, while in the actual world I may not be a handless brain in a vat, and I believe that to be the case, this belief will not track, as in those worlds where I am a handless brain in a vat, I would believe exactly as I do now. This means that according to the tracking view of knowledge I cannot know that I am not a handless brain in a vat.

There is nothing within Nozick's theory that prevents us from combining those two statements into a single sentence - forming the abominable conjunction "I know I have hands, and I do not know that I am not a handless brain in a vat." Nozick himself must have known that this was a consequence of his theory as it stood - the reason being that he admitted that his theory required that we abandon epistemic closure, which would prevent such conjunctions from occurring.

The abandoning of epistemic closure is the second way in which abominable conjunctions may occur. In brief, there are a number of different versions of the closure principle of knowledge. For the purposes of this illustration, I will present only one:

[1] This will be important in section 3.5, where I discuss Becker's (2013) modal reliabilism. I shall reference this discussion and expand on it in that section.

ECP: If S knows that *p*, and S knows that *p* entails *q*, then S knows, or is at least in a position to know that *q* (on the basis of knowing *p* and knowing that *p* entails *q*.)[2]

Ordinarily, epistemic closure would prevent abominable conjunctions from occurring. In the case of the example I used above, having hands entails that I am not a handless brain in a vat. This being the case, and because we take it that I know that I have hands, and that I know that having hands entails that I am not a handless brain in a vat, it logically follows that I know, or at least am in a position to know, that I am not a handless brain in a vat. This is, in fact, one of the forms that the problem of easy knowledge takes - but I will not examine it here. Instead, I will outline another key concept for this paper - Basic Knowledge Structure theories.

1.2 BKS Theories and the KR Principle

In his 2002 paper *Basic Knowledge and the Problem of Easy Knowledge*, Cohen notes the following common intuitions about knowledge: First, we believe that we can gain knowledge about the external world through belief forming mechanisms such as sense perception, inductive reasoning, and memory. Second, we believe that in order to gain knowledge from a belief forming mechanism, we must know that the belief forming mechanism in question is reliable. The latter intuition is formalised by Cohen (2002) as the KR principle:

KR: A potential knowledge source K can yield knowledge for S, only if S knows that K is reliable.

The KR principle is, according to Cohen, intuitively quite appealing: If we do not know the reliability of our belief forming mechanisms, then their ability to lead us to true beliefs

[2] This version of epistemic closure is referred to as the closure principle of knowledge under known entailment, or more succinctly as known entailment closure. Known entailment closure is one of the most basic versions of epistemic closure. It is far from the only version of the principle, but, as Black (2008) points out, it does not matter which version of the closure principle we use, as all are equally vulnerable to the problem of easy knowledge. Black does outline a version of epistemic closure that he believes avoids the problem of easy knowledge, but I will outline and deal with this principle when I look at Black's response to the problem. For now, ECP is the closure principle that I will be assuming for the sake of the arguments to follow.

about the world will be in question - and maintaining that we can acquire knowledge on the basis of an as-of-yet unproven belief forming mechanism seems epistemically irresponsible.

Ideally, we would like to base our knowledge claims on perfectly infallible belief forming mechanisms, but this ideal state of affairs is unlikely ever to exist - I am sure we have all experienced cases where our vision, hearing, memory, and inductive reasoning have been faulty or incorrect. It is enough, I think, that our belief forming mechanisms are generally reliable.

When it comes to theories such as reliabilism, we are faced with the following problem: If we accept the KR principle, how are we to gain knowledge at all? We can only gain knowledge through the use of belief forming mechanisms that we know to be reliable, but it seems that the only way to gain knowledge of the reliability of our belief forming mechanisms is to base this knowledge (at least in part) on evidence gained through the use of this mechanism - but of course we can't use this evidence to gain knowledge of the reliability of the belief forming mechanism because the mechanism used to acquire it is not yet known to be reliable. Another way of stating this point is that we cannot know *a priori* that our belief forming mechanisms are reliable, and we cannot come to knowledge of their reliability *a posteriori*, as doing so would require that we abandon, or make an exception to KR. This chicken and egg scenario seems to spell doom for reliabilist theories that wish to embrace KR. As Cohen (2002) notes, skepticism beckons.

The easiest way out of this dilemma is to simply deny KR, and hold that we *can* gain knowledge through the use of reliable belief forming mechanisms before we possess knowledge of their reliability. Cohen (2002) calls knowledge gained in this way "basic knowledge," and theories that deny the KR principle (and thus embrace the possibility of basic knowledge) basic knowledge structure (or BKS) theories.

The advantage that BKS theories have over their non-KR denying counterparts is that they allow for one to build up enough inductive evidence in the form of basic knowledge to eventually come to know that our belief forming mechanisms are reliable. However, while BKS theories escape the problem of coming to know that our belief forming mechanisms are reliable, they are faced with another problem - that is, that when we reject KR, we are able to come to knowledge of certain propositions in a way that seems

too easy. This is the problem of easy knowledge.

1.3 Easy Knowledge

1.3.1 Easy Knowledge through Epistemic Closure

The problem of easy knowledge has two forms. The first I have mentioned already; basic knowledge interacts with the closure principle of knowledge in such a way that we can come to know the negations of skeptical hypotheses in a way that should strike us as intuitively illegitimate. The example that I used above is a version of Moore's hands argument. Here is a formulation of the piece of reasoning that takes place in this argument:

(I) 1. I have two hands
2. If I have two hands then I am not a handless brain in a vat
3. I am not a handless brain in a vat (from 1 and 2.)

The reason this strikes me as illegitimate is that we come to know the intuitively hard to know proposition that I am not a handless brain in a vat simply on the basis of my having hands. I will explore this thought further in its own section.

It is difficult to see a way out of this problem for the KR denying reliabilist short of denying the closure principle of knowledge. According to Cohen (2002) epistemic closure is "something like an axiom about knowledge." This implies that Cohen wants to hang on to epistemic closure[3], which places him in the opposite camp to philosophers such as Dretske (1981), Nozick (1981) and Becker (2013), all of whom deny that epistemic closure holds for all *p*s and *q*s.

Cohen's (2002) illustration of the problem of easy knowledge through closure avoids the controversy surrounding the Moorean hands argument I used above to illustrate the problem. Cohen instead uses the example of himself and his son going shopping for a red table. For the sake of clarity, I will call the Cohen who wishes to buy a red table for his son "the father" and refer to the Cohen who wrote the paper as "Cohen."

[3] As much as possible, anyway - Cohen denies that epistemic closure holds in certain circumstances, but I will come to those when I discuss Cohen's proposed solution to the problem of easy knowledge.

According to BKS theories, I can come to basic knowledge about the external world through my belief forming mechanisms like my sense perception without knowing that these mechanisms are reliable. Thus, when the father looks at a table in the shop, he can know simply on the basis that the table appears red to him that it is, in fact, a red table. This piece of knowledge on its own seems innocuous enough. However, when the son questions the father about whether he knows that the table really is red, or whether it is actually white and illuminated by hidden red lights, the father can, according to Cohen, confidently say that he knows that the table is not white and illuminated by hidden red lights based on an inference from the fact that the table appears red to him.[4] All other evidence that the father may have for the table being red, and not white and illuminated by hidden red lights turns out to be incidental to this inference - without any such evidence, the inference would still go through (Cohen, 2002.)

The reasoning process that takes place in this scenario goes as follows:

(II) 1. The table looks red.

2. I know that the table is red. (from 1)

3. I know that if the table is red, then it is not white and illuminated by hidden red lights.

4. If I know that *p*, and I know that *p* entails *q*, then I know (or am at least in a position to know) that *q* (on the basis of knowing *p*, and knowing that *p* entails *q*)

5. Therefore, I know (or am at least in a position to know) that the table is not white and illuminated by hidden red lights (on the basis of 2 and 3) (from 2, 3, and 4)

The reason that this process is suspect is that the inference hinges on the inference from 1 to 2, which is problematic because premise 1, that the table looks red, supports the defeater premise "the table is white and illuminated by red lights" just as well as it does the premise "the table is red."

[4] Klein (2004) disagrees with this assessment, arguing that we can only infer that the table is not white though the use of epistemic closure. I have some sympathy for this view, but as I am presenting only Cohen's (2002) argument here, I will leave off discussing this until section 3.4, where I look at Klein (2004).

As has been pointed out to me, I appear to be making a fairly hefty assumption here: that the perception of a table being red will lend equal support to the two rival hypotheses, i.e. that the table is red, and that the table is white and illuminated by red lights. Importantly, other beliefs that one might have may dictate that one hypothesis is better supported by the evidence. However, in the case as it is laid out, the father does not (and, as shown by the argument, need not) make use of any other supporting beliefs or evidence for this inference to go through. Due to this stipulation, my assumption holds - without any further supporting beliefs, the hypothesis that the table is red is equally as plausible as the hypothesis that the table is not white and illuminated by red lights.

Returning to argument (II), the most straightforward way out of this problem seems to be to abandon epistemic closure as a principle of knowledge, as Dretske (1981) and Nozick (1981) suggest we do[5]. This abandonment of closure does not entail that we maintain that it is never that case that one can come to know a proposition *q* based on one's knowledge of a proposition *p*, and knowing that *p* implies *q*, but rather to say that, while this is sometimes the case, it is not a general principle of knowledge. In other words, these philosophers maintain that there are some cases where we know *p* and we know that *p* implies that *q*, but we cannot base our knowledge of *q* on these premises.

Despite this simple solution to this version of the problem of easy knowledge, Cohen (and many others) believe that abandoning epistemic closure altogether is too high a cost to pay for solving the problem. I say "altogether" here because Cohen (2002), and Black (2008) both offer adjustments or restrictions to epistemic closure, which shows that they desire to solve the problem of easy knowledge while ensuring the epistemic closure survives in some form. Whether these adjustments and restrictions are persuasive (I think they are not) we will see when I come to discuss their respective theories later in this paper.

1.3.2 Easy Knowledge Through Bootstrapping

[5] Abandoning closure *seems* like the most straightforward way out of this problem because it *prima facie* requires the least effort. However, there are significant difficulties that come along with denying closure, only one of which I will explore here - that being the problem of abominable conjunctions. Because of this problem (and others which I will not go into) I do not endorse the denial of epistemic closure as a solution to this, or any other philosophical problem about knowledge.

The second way in which easy knowledge arises is through the fact that basic knowledge enables us to arrive at knowledge of the reliability of our belief forming mechanisms through the use of these mechanisms in a way that seems both illegitimate and too easy. The process by which we can come to this easy knowledge of the reliability of our belief forming mechanisms is called "bootstrapping."

The problem of bootstrapping in its earliest form was first raised by Fumerton (1995) and later by Vogel (2000) in connection with reliabilist theories of knowledge. Cohen (2002) argues that the problem of bootstrapping generalises to any theory with a basic knowledge structure. Due to my focus in this paper, however, I will exclusively examine the problem as it arises with regards to reliabilism.

The problem of bootstrapping, as it is outlined by Cohen (2002) involves the use of our belief forming mechanisms (before we know that they are reliable) to build up a stock of basic knowledge about the external world. This basic knowledge can in turn be used as evidence for the reliability of these aforementioned belief forming mechanisms. In theory, this is exactly what BKS theories want to claim. In practice, however (as Cohen (2002) demonstrates) this knowledge of the reliability of our belief forming mechanisms come about in a way that seems too easy.

Cohen's illustration of the problem of bootstrapping goes as follows:

> "Imagine again my 7 year old son asking me if my color-vision is reliable. I say, "Let's check it out." I set up a slide show in which the screen will change colors every few seconds. I observe, "That screen is red, and I believe it's red. Got it right that time. Now it's blue and, *look at that*, I believe it's blue. Two for two…" I trust that no one thinks that whereas I previously did not have any evidence for the reliability of my color vision, I am not actually acquiring evidence for the reliability of my color vision. But if Reliabilism [or other BKS theories] were true, that's exactly what my situation would be." (Cohen, 2002 p.317)

Once again, I will refer to the Cohen in the example as "the father," and the Cohen who wrote the example as "Cohen." Cohen states that according to BKS theories, the father

would, at the end of the slide show, have a bank of basic knowledge on which to base his knowledge of the reliability of his colour vision. As Cohen notes, this consequence runs strongly counter to our intuitions. The challenge for BKS theorists here is to determine if, when, and how this process goes wrong.

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Section 2: Is the Problem of Easy Knowledge Really a Problem?

Although this paper is focussed on solving the problem of easy knowledge, there are some philosophers who think that this is unnecessary - that the problem of easy knowledge is a feature of, not a bug, in our theories of knowledge. These people largely follow the common sense school of philosophy - in particular the Moorean tradition, which holds that we can know the negation of skeptical hypotheses on the basis of basic facts about the world. I outlined a version of Moore's hands argument above, but for reference, here it is again:

(I) 1. I have two hands

2. If I have two hands then I am not a handless brain in a vat

3. I am not a handless brain in a vat (from 1 and 2.)

The Moorean sees nothing wrong with this line of reasoning, and, although our intuitions may differ, argument from intuition will not work here as the Moorean's intuitions may often (but, as has been pointed out to me, not always) run the opposite direction. Instead of arguing from intuition, I will put forward an argument that these kinds of arguments are too hasty, and do not respect the true challenge put forward by skeptical hypotheses.

To aid in making this argument, I will rely heavily on Foley (2001). Foley looks at several kinds of anti-skeptical arguments that have been put forward by philosophers over the years, and argues that they are unable to undermine skeptical concerns. The three types of argument that Foley examines are the argument that skeptical worries are self-referentially incoherent; that skeptical hypotheses are metaphysically impossible; and that skeptical doubts are at odds with the theory of natural selection.[6]

Before delving into these arguments, Foley speaks about the strategies of classical foundationalists such as Locke and Descartes, who tended to argue that God has

[6] The astute observer may notice that the Moorean argument does not make Foley's list of arguments against skepticism. This is because Foley concludes that what is ultimately required for us to have knowledge is a leap of faith - precisely the kind of leap that common sense philosophers such as Moore make. Following my discussion of Foley's arguments against the three arguments mentioned above, I will examine how much of a leap of faith is required, and why common sense philosophers leap too quickly and too far.

furnished us with reliable faculties because it is important to Him that we have mainly true beliefs about the world. Descartes argued that God is not a deceiver, and would thus not allow for our beliefs to be mostly false; whereas Locke argued that it was too important for us to have knowledge of logic and theology for God to fail to give us reliable faculties in these regards.

The problem with these accounts, according to Foley, is that they are circular - they prove the existence of God by first assuming that God exists and that He has made their faculties reliable. This kind of vicious circularity undermined the project of the classical foundationalists and, as we shall see, such circularity is almost inevitable in anti-skeptical arguments.

2.1 Skepticism as Self-Referentially Incoherent

The first argument proceeds roughly as follows: In raising skeptical worries, would-be skeptics inevitably and unavoidably make use of the very faculties they are calling into doubt. The problem that Foley (2003) identifies with this argument is that it is possible for skeptics to argue completely negatively through, for instance, a *reductio ad absurdum* argument. Such an argument would assume that our faculties and methods for acquiring knowledge are reliable, and show that when they are employed rigorously enough, they lead to contradiction, or provide evidence of their own unreliability.

Of course, not all skeptical arguments follow this pattern. In fact, the most commonly used skeptical arguments proceed from the introduction of skeptical hypotheses which seem to have equal justification as our other, non-skeptical beliefs. However, this kind of argument tends to be used to raise doubts about the external world and our relation to it, without necessarily critiquing the faculties and methods of reasoning that we employ to engage with it. The most this kinds of argument does is state that it is not necessarily true that our belief forming mechanisms will lead us to reliably true beliefs about the world.

However, there are other kinds of skeptical arguments which raise doubts about our reasoning methods themselves - skepticism about logic and reasoning - and these arguments can foreseeably be phrased in such as way as to be completely negative, assuming the reliability of these methods and showing by indirect proof that they do not

hold.

Klein (2004) raises an argument in a similar vein to the kind of anti-skeptical strategy that we have outlined above, albeit with some important differences. Roughly, Klein's argument goes as follows: Either we have reasons to believe that skeptical hypotheses obtain, or we do not have any such reasons. If we have no reasons to think skeptical hypotheses obtain, then we should not consider them as defeaters for our everyday knowledge claims. If, on the other hand, we do have reasons to believe that skeptical hypotheses obtain, skeptical hypotheses give us reason to call everything into doubt - including our reasons for thinking that skeptical hypotheses obtain.

This is quite a clever move: Either we have no reasons for thinking that skeptical hypotheses obtain, or, if we do have reasons for thinking they obtain, those reasons undermine themselves. However, there are two important points here - first, as Foley (2003) argues, we can argue for skeptical hypotheses purely through negative means.

Second, Klein's (2004) argument is not really anti-skeptical, in that it doesn't argue that skeptical hypotheses don't obtain, rather it argues that skeptical defeaters should not have a bearing on determining whether we have knowledge. This is not necessarily a bad thing - I don't think Klein's (2004) project was to prove that skeptical hypotheses do not obtain. Rather, what Klein was trying to do is preserve epistemic closure. In this, I think he does a good enough job, however (as I will argue in section 3) I think that embracing contextualism fulfils the same function, without arguing that skeptical concerns can be ignored wholesale when attributing knowledge - which I think is a bad move to make, as I have argued (and will continue to argue) in this section.

2.2 Skepticism as a Metaphysical Impossibility

The second kind of anti-skeptical strategy that Foley (2003) explores is the argument that skeptical hypotheses are metaphysically impossible. This argument states that the hypotheses that are presented as possible by skeptics are in fact impossible, given the nature of belief, reference, or truth. An adequate metaphysics, according to this argument, would preclude the possibility of radical skeptical error.

Two well-known proponents of this kind of theory are Hilary Putnam and Donald

Davidson. Putnam's version of the argument states that, in thinking about the world, it is impossible to separate out our conceptual contributions from what is actually there in the real world. Davidson's version of the argument states that the object of our belief must be taken to be the causes of these beliefs. Thus the nature of our belief precludes the possibility of our beliefs being radically mistaken.

Foley (2003) raises two problems with regards to this kind of anti-skeptical strategy.[7] The first is that, even on the strongest reading of these metaphysical accounts, there is still a great deal of room for error in our knowledge attributions, and if there were not room for error, this too would constitute a good reason to think these theories false.

Foley (2003) does not make clear why the lack of scope for error would be a drawback, so I will have to have a go: An error-free metaphysics intuitively sounds ideal, but good theories of metaphysics ought to be able to handle cases in which individuals are mistaken - at least some of the time. If Putnam or Davidson were to argue that our conceptual contributions or beliefs must always be caused by a truth in the world in such a way that they could *never* be mistaken, this would be a reason to doubt these theories. It is a simple fact that there are many clear and obvious cases in which we have erroneous conceptual contributions and beliefs - that is, conceptual contributions and beliefs that do not necessarily reflect truths about the world. Optical illusions, imitated sounds, and hallucinations of all varieties are examples of such things.

The second problem that Foley raises is that skeptical doubts may be raised about the arguments that are used to defend these metaphysical accounts, and these accounts themselves cannot entirely rid us of these doubts. Further, any attempt to use the metaphysics in question to eliminate these doubts is bound to fail, since the plausibility of the metaphysics is supposedly established by the means of these arguments. If Putnam or Davidson were to attempt to use their metaphysics to argue for the veracity of the supporting arguments, they would find themselves in a position where they would be assuming their metaphysics in order to prove their metaphysics in a way that is viciously circular.The second problem that Foley raises is that skeptical doubts may be raised about the arguments that are used to defend these metaphysical accounts, and these accounts themselves cannot entirely rid us of these doubts. Further, any attempt to use the metaphysics in question to eliminate these doubts is bound to fail, since the

[7] See Foley (2003) p.11.

plausibility of the metaphysics is supposedly established by the means of these arguments. If Putnam or Davidson were to attempt to use their metaphysics to argue for the veracity of the supporting arguments, they would find themselves in a position where they would be assuming their metaphysics in order to prove their metaphysics in a way that is viciously circular.

2.3 Skepticism and Natural Selection

The final anti-skeptical strategy that Foley (2003) engages with is the argument that skeptical worries are at odds with the theory of natural selection. This argument is in many ways the secular version of the classical foundationalist argument that skeptical worries are at odds with God's plan. A common version of this argument proceeds from the premise that it is important for one to have accurate beliefs about the world in order to make one's way through life, to survive, and to procreate. If our faculties regularly misled us about our surroundings, the argument continues, then we would not have survived as a species; but not only have we survived, we have flourished. Thus, the argument concludes, our faculties must be generally reliable.

Foley (2003) raises two counter arguments to this strategy. The first states that a variety of intellectual faculties and methods have been employed in the generation and defence of the theory of natural selection, and these faculties and methods are not themselves immune from criticisms stemming from skeptical doubts. These faculties and methods cannot be defended against skeptical doubts by the theory itself, as this would result in vicious circularity.

The second counter argument states that the theory of natural selection lacks a number of necessary implications required for it to serve as a competent response to skeptical concerns. The list of implications that the theory of natural selection lacks are as follows:

1. Evolution is not caused solely by natural selection. Other factors, such as random genetic drift are also responsible for changes in gene frequency. These other factors need not necessarily promote the survival of the species.
2. Nothing in the theory of natural selection implies that the set of genetic options available for natural selection to choose between will be large and varied enough to promote the survival of the species. The fact that we have survived and

prospered for such a relatively short period of time is not in itself an adequate argument for natural selection having furnished us with reliably accurate faculties.

3. Nothing in the theory of natural selection implies that all, or even the majority of our intellectual powers are products of biological evolution at all - they may instead be the product of social and cultural factors, such as upbringing and education.
4. Even if it is assumed that our most characteristic intellectual powers are the product of evolution, nothing in the theory implies that they are well-designed to generate accurate beliefs and opinions in our current environment. The best that the theory of natural selection can do, according to Foley (2003) is argue that these powers and faculties were well designed to enhance our prospects of survival in the period in which human beings evolved. Furthermore, what constitutes good design for survival need not also constitute good design for having accurate opinions.[8]

An example of the fourth point is the effect of dispositional optimism - that is, having a belief that things generally turn out well, often despite evidence to the contrary. Dispositional optimism is correlated with a better functioning immune system (Segerstrom, 2007), better general physical and mental health (Andersson, 2012), and better self-reported health-related quality of life when recovering from illness (Allison, et al., 2000).

What this single example demonstrates is that there are at least some factors which positively impact the chances of survival of both the individual and the species, which do not necessarily lead us to have accurate opinions about the world. In fact, in some cases, factors which lead us to erroneously believe that we are in a better position than we are are more adaptive than having a realistic conception of the world and our place in it.

It may be argued that the example of dispositional optimism is not a biological evolutionary factor, but rather a social or cultural one. However, the pervasiveness of a bias towards optimism across humanity has been well documented by psychologists (for example Sharot, 2011). This pervasiveness across social groups and cultures gives us at least some reason to think that the reason for this positive bias is more than just a

[8] These arguments are all presented in Foley (2003) p.27-28.

cultural phenomenon. Intuitively, this makes a great deal of sense - if having false beliefs more often leads to survival, the mechanisms that lead to these false beliefs would be selected for far more often than those mechanisms that lead us to true beliefs that do not promote survival.

There is a final point to be made about the argument from evolution that Foley (2003) does not go into, and that is that even if we accept that we are evolutionarily geared towards having true beliefs about our environment, the faculties that enable us to come to conclusions about the external world are all located in the brain. If our brains were electrochemically stimulated in just the right way, we would have experiences that are indistinguishable from the real thing - as anyone who has had serious hallucinations can attest. In short, the evolutionary argument against skepticism is completely unable to deal with one of the stock examples in skeptical thought - the brain in a vat hypothesis. Since, in the case where we are simply brains in vats, those very faculties which ensure that we come to reasonable and reliably correct opinions and beliefs about the real world would lead us to consistently erroneous conclusions about the world in which we are envatted.

2.4 What This Means For Easy Knowledge

The list of skeptical hypotheses that Foley (2003) analyses is not exhaustive, however most, if not all anti-skeptical arguments seem to be able to be defeated in the same way - they must all, at some point, suppose a proposition that skeptics may call into doubt. The lesson that Foley wishes for us to take from this is not that we ought to be skeptics, but rather that what is required of us is to, at some point, make an intellectual leap of faith (Foley, 2001 p.33.) We are required to suppose a proposition that could be doubted by skeptics, but this is the price we must pay if we are to have any hope of claiming knowledge about the world. The extent of this leap of faith, however, is a matter which still needs discussion.

Skeptics refuse to make any leap of faith at all. They come to a similar conclusion to Foley, but hold that since anti-skeptics always make use of a proposition that skeptics may call into doubt, that there can be no such thing as knowledge. The problem with this position is that it is practically untenable. Thomas Reid in his *Inquiry* (1823) notes that all people, even skeptics, are under necessity to at very least act as if their skeptical

hypotheses do not obtain. Reid mentions several skeptics by name in his arguments for this point. Of Hume, Reid says:

> "Even the author of the "Treatise of Human Nature," though he saw no reason for this belief, but many against it, could hardly conquer it in his speculative and solitary moments; at other times, he fairly yielded to it, and confessed that he found himself under a necessity to do so." (Reid, 1823, pg.121)

> "[The Treatise of Human Nature] contains manifest indications that the author every now and then relapsed into the faith of the vulgar [i.e. that his skeptical hypotheses did not obtain], and could hardly for half a dozen pages, keep up the sceptical character." (Reid, 1823, pg.102)

Even the famous Greek skeptic Pyrrho seemed to have lapses in his skepticism:

> "The great Pyrrho himself forgot his principles on some occasions; and is said once to have been in such a passion with his cook, who probably had not roasted his dinner to his mind, that with the spit in his hand, and the meat upon it, he pursued him even into the marketplace." (Reid, 1823, pg.102)

The list goes on - if we truly think that skeptical hypotheses obtain[9], there seems little sense in doing a number of the acts that we do every day. If we are brains in vats, why should we eat? Surely the nefarious scientist who keeps us envatted would provide our brains with adequate nutrition to keep the illusion going. If other people do not exist, then why should we bother holding the door for the old man, or giving up our bus seat to the pregnant woman?

But, of course, the fact that we do act (or are even required to act) as if skeptical hypotheses do not obtain does not mean that skeptical hypotheses are necessarily false. Furthermore, there is a great distinction between believing that skeptical hypotheses do obtain, and believing that they might. The former faces the practical problems I

[9] Not that this is necessarily what skeptics do - see my next paragraph.

mentioned above, but the latter is compatible with an agnosticism about whether, say, the external world exists. Being agnostic to the existence of the external world is perfectly consistent with acting as if it does exist.

There is one problem with maintaining the latter though - if we are agnostic about skeptical hypotheses obtaining, how are we to make sense of the kind of everyday knowledge claims that we make on a regular basis?

Suppose I am waiting at a bus station. A bus arrives, and I enter, and ask a fellow passenger if he knows where this bus goes. The passenger, a devout skeptic, replies that he does not know. Agitated, I reply that since he is on the bus, he surely knows where it is going. The passenger responds that since he is a skeptic, he cannot claim knowledge of anything, including the destination of the bus.

Clearly this kind of discourse would never occur - unless the passenger recognised me as a student of epistemology and decided to get a rise out of me through his responses. On the converse, if the passenger were to respond that yes, he does know where the bus is going, it would be difficult to reconcile his response with his claim that he is a skeptic.

The point of this example is to illustrate that knowledge claims are not solely used in a serious philosophical context (wherein it might be reasonable to claim that we do not know things as simple as whether or not we have hands), but also in ordinary, everyday contexts (where maintaining that one does not know whether one has hands or not seems absurd.)

Followers of the common sense school of philosophy take the opposite path - they make a leap of knowledge that is too quick, and too large. Their leap of faith is so swift and so large that they assume before anything else that skeptical hypotheses do not obtain. These philosophers would respond that they do not make this assumption, rather they make a modest leap of faith - assuming nothing more than that they can gain knowledge (in our terms) through reliable belief forming mechanisms without knowing that they are reliable, and it is through this basic knowledge that they can infer the negation of skeptical hypotheses.

However, to my mind, this strategy requires a tacit acceptance that skeptical hypotheses do not hold. Any assumption that we can get basic knowledge from belief forming mechanisms without knowing that they are reliable requires also that we assume that skeptical hypotheses do not obtain. In making this assumption, the common sense philosopher finds themselves in the unenviable position of not merely ignoring, but outright denying possible relevant defeaters. This move strikes me as epistemically irresponsible.

The same effect, however, can be achieved by taking the more modest path of skeptical agnosticism. Agnostics can make the same inferences based on the same assumptions. The important difference between the common sense philosopher and the skeptical agnostic is that the latter realises his assumptions as ungrounded, and is open to the possibility of potential relevant defeaters undermining his knowledge claims.

The trick then, is to find an appropriate leap of faith somewhere between these two extremes; to avoid complete skepticism and its everyday impracticality, and at the same time avoid the common sense route and its watering down of the concept of knowledge. This seems like a challenging task, however I believe it can be overcome. I will return to this discussion in my discussion of Markie's (2005) proposed solution to the problem of easy knowledge, and later again when discussing my own proposed solution to the same. For now, however, I will draw this discussion to a close.

Section 3: Solving the Problem of Easy Knowledge

3.1 Cohen's Solution to the Problem of Easy Knowledge

Cohen's solution to the problem of easy knowledge involves drawing a distinction between animal and reflective knowledge. Cohen borrows this distinction from Sosa (1977), but makes several important adjustments to it. Cohen's (2002) version of the animal knowledge/reflective knowledge distinction goes as follows:

Reflective knowledge requires us to reflectively appreciate the reasons and justifications for our relevant beliefs. In other words, to have reflective knowledge we must not only know something, but we must be able to examine and voice how it is that we know that thing. Animal knowledge is non-reflective. To have animal knowledge, in other words, does not entail that we are able to give justifications for our beliefs. According to Cohen (2002), animal knowledge, being of a different kind to reflective knowledge, is not bound by the epistemic closure principle. Furthermore, animal knowledge cannot combine individually (that is, non-holistically) with self-knowledge to generate inferences (Cohen, 2002, p.327.)

Basic knowledge, according to Cohen, is a kind of animal knowledge. The final two points about animal knowledge effectively block the problem of easy knowledge from occurring. The stipulation that animal knowledge is not bound by the closure principle of knowledge means that the problem of easy knowledge through closure is avoided - we cannot use our basic animal knowledge that we have hands to infer that we are not handless brains in vats, and we cannot use our basic animal knowledge that the table is red to infer that it is not white with hidden red lights shining on it. The stipulation that animal knowledge cannot combine individually with self-knowledge blocks illicit bootstrapping - as the father cannot simply sit at the slide show and confirm his colour experiences by appealing to his own beliefs on the matter.

The problem for Cohen is this: earlier in his paper he dismisses modal tracking views of knowledge on the grounds that they exhibit "a seeming incoherence regarding metaknowledge:"

> "Imagine again my son worrying about whether the table is really red or just white with red lights shining on it. This time I claim to *know* the table is

> red. So my son asks me how I can be sure - do I know that it is not a white table with red lights shining on it? I reply, "Well I don't know *that*, but that's an entirely separate matter from whether I know it's red."" (Cohen, 2002 p.315)

The father's intuitively unappealing response - that he is able to maintain that he knows that the table is red while, at the same time, denying that he knows that the table is not white with red lights shining on it - is a direct result of denying the closure principle of knowledge. For Cohen, this abominable conjunction is sufficient grounds to eliminate tracking accounts of knowledge as potential solutions to the problem of easy knowledge.

But by embracing the animal knowledge/reflective knowledge distinction in the way he does, Cohen finds himself in the same boat: Let us assume that the father's knowledge that the table is red is animal knowledge. In this case, when asked, he would state that he knows that the table is red, but not that he knew that the table is not white with hidden red lights shining on it[10] - as he could not make that inference due to animal knowledge not being bound by the closure principle. I doubt that the father explaining to the son the animal knowledge/reflective knowledge distinction would offer his son any more comfort than in the case of the tracking view.

Conversely, let us assume that the father's knowledge that the table is red is reflective knowledge. By this, I mean nothing more than he has come to know that it is red based on his colour vision, while knowing that his colour vision is generally reliable. In this case, the inference goes through seemingly without issue, as reflective knowledge is bound under the closure principle of knowledge. His reasoning would be as it appears in argument (II):

(II) 1. The table looks red.

2. I know that the table is red. (from 1)

3. I know that if the table is red, then it is not white and illuminated by hidden red lights.

4. If I know that *p*, and I know that *p* entails *q*, then I know (or am at least

[10] Remember that in the case as Cohen (2002) describes it, the father is basing his knowledge that the table is red *solely* on the fact that the table appears red to him.

in a position to know) that *q* (on the basis of knowing *p*, and knowing that *p* entails *q*)

5. Therefore, I know (or am at least in a position to know) that the table is not white and illuminated by hidden red lights (on the basis of 2 and 3.) (from 2, 3 and 4)

Of course, the father could add an extra premise to his reasoning, so it appears as follows:

(III) 1. [My inductive evidence for the reliability of my colour vision.]

2. Colour vision of the sort I'm employing right now is reliable, and the table looks red.

3. I know that the table is red. (from 2)

4. I know that if the table is red, then it is not white and illuminated by hidden red lights.

5. If I know that *p*, and I know that *p* entails *q*, then I know (or am at least in a position to know) that *q* (on the basis of *p*, and *p* implying *q.*)

6.Therefore I know, or at least am in a position to know that the table is not white and illuminated by hidden red lights (on the basis of 3 and 4.) (from 3, 4 and 5)[11]

With the inclusion of the new premise 1, we have included some background supporting beliefs of a kind that we did not have previously. With these supporting beliefs at play, it is no longer true to say that the skeptical hypothesis (that the table is white and deceptively illuminated) is equally as supported as the common sense hypothesis (that the table is actually red). However, there is still a problem. The father is able to claim knowledge that the table is not white and deceptively illuminated without doing anything to rule out that hypothesis.

To me, this seems questionable - while it is perhaps *unlikely* that the table is deceptively illuminated, it seems too easy to claim knowledge of this proposition without having taken any action that would rule out that hypothesis. Thus, despite the fact that the common sense hypothesis might be better supported by the evidence, the problem remains that the father is able (under the version of reliabilism that Cohen outlines) to

[11] See Cohen (2005) and Markie (2005)

dismiss the skeptical hypothesis without having done any work to do so. The reader may think that this is perfectly reasonable, but this boils down to a matter of intuition. I, personally, am reluctant to say we can rule out skeptical hypotheses such as this without taking any further action to do so.

Since the father does not need to actually check for any deceptive illumination for this inference to go through, we are, in my mind, not much better off than we were originally. Importantly, while it might be the case that my colour vision is generally reliable, this does not mean that in this particular case we know that the table is not deceptively illuminated without first checking to see if there are hidden lights shining on it.

To put this problem another way, it seems that Cohen's argument enables us to gain knowledge that the table is red without first ruling out the defeater that the table is actually white and illuminated by hidden red lights. Worse still, Cohen allows for us to infer that the table is not white and illuminated by red lights based on the fact that it appears red to us, while the skeptical conclusion (that the table is white and deceptively illuminated) could equally explain this phenomenon. As it turns out, moving from (II) to (III) does very little to remedy this problem. Knowing that our colour vision is generally reliable does not help us here, as the ultimate question seems to be whether or not the father's colour vision is reliable *in this particular case*. To know this latter proposition, it seems as if we should do some work to rule out the potential skeptical defeater - but under this version of reliabilism, this is completely unnecessary.

According to Markie (2005), this means that in using argument (III), the father is begging the question against his son; one of the premises used in the argument - that the father's colour vision is reliable - is precisely that which the son is doubting. Looking at the argument as it stands, this is not straightforwardly obvious, but in light of my discussion above, I think we might see what Markie is gesturing at. Aside from this accusation of circularity, Markie believes that the reasoning at play in the argument above is perfectly acceptable, albeit dialectically ineffective against a skeptic such as the son. But, as Cohen points out, the problem is deeper than that; "[t]he reasoning seems unsatisfying to *us*, not merely inadequate dialectically against my son." (Cohen, 2005; my emphasis.)

Cohen's (2005) response to this problem is to turn to epistemic contextualism. By adopting a contextualist perspective, Cohen is able to say that the proposition "I know

that the table is red" is true for the father in an everyday context, but false at a higher standards context where certain error possibilities - such as the table being white and deceptively illuminated to appear red - are salient.

This strategy allows for Cohen to avoid the problems posed by the argument above. The father's reasoning in the argument above is perfectly acceptable in the everyday context, however, when dealing with a skeptic such as the son, who insists on reasoning in a higher standards context, Cohen is able to explain why it is that the reasoning is inadequate without discarding it entirely.

Adopting a contextualist response seems to me to be a reasonable way forward, however there are further problems with Cohen's solution to the problem of easy knowledge that should give us significant pause in deciding to accept his solution.

One of these further problems is that Cohen's solution is *ad hoc*. As Markie (2005) and Black (2008) point out, when we are looking at ordinary (i.e. non-skeptical) propositions, there does not seem to be any reason to deny that animal knowledge is closed under known entailment, and when we examine skeptical propositions, then we have as much reason to abandon epistemic closure with regards to reflective knowledge as we do with regards to animal knowledge.
Cohen (2002, 2005) admits that his solution is *ad hoc*, but invites us to entertain his theory despite this fact. While his acknowledgement of the problem does remove some force from this criticism, it does not solve it: The *ad hoc* nature of Cohen's solution, whether acknowledged or not, still provides us with some reason to reject it.

Markie (2005) raises an objection to Cohen's solution to the bootstrapping case. Markie's objection calls into question the soundness of Cohen's second distinction between animal and reflective knowledge: that animal knowledge is unable to combine individually with self-knowledge to generate inferences. The example does as follows:

(IV) 1. That's a shade of red, and I prefer it to this shade of blue.

2. That's another shade of red, and I prefer it to this shade of blue.

3. That's still another shade of red, and I prefer it to this shade of blue.

4. Etc.

5. Therefore, I generally prefer shades of red to this shade of blue.
(Markie, 2005)

The point that Markie is raising here is that in many cases other than the bootstrapping case raised by Cohen (2002) we find that we can and do allow for animal knowledge to combine individually with self-knowledge in order to generate inferences. There is nothing that strikes us wrong with the reasoning that takes place in the argument above and others like it, so why should we accept Cohen's second distinction as a principle

governing animal knowledge? In Cohen (2002) the answer is clear - it allows Cohen's solution to the problem of easy knowledge to avoid the problem posed by bootstrapping. This is another example of the *ad hoc* nature of Cohen's solution to the problem of easy knowledge.

Cohen (2005) presents a solution to this objection. Cohen's strategy is to adopt the independence principle - a principle briefly considered, and then discarded by Markie (2005) - as a principle governing animal knowledge.

> (IP) Where a belief gains it's *prima facie* justification for S just from the fact that it was produced by a particular faculty (given, e.g., the faculty's reliability, proper function, ability to provide the subject with evidencing experiences), the belief is not supporting evidence for S for beliefs concerning the reliability of that very faculty. (Markie, 2005)

This principle, as Cohen (2005) notes, would block bootstrapping in his slideshow example. However, as Cohen (2002) points out, it seems impossible to establish the reliability of a belief-forming mechanism without basing this knowledge, at least in part, on evidence gained by the use of this mechanism. This principle, taken as a principle governing animal knowledge, would block our ability to reason from basic animal knowledge to higher-order knowledge of the reliability of our belief forming mechanisms. This being the case, it seems that Cohen (2005) has taken a step back: If we cannot use basic knowledge to come to knowledge of the reliability of our belief forming mechanisms, then how are we to come to know that they are reliable? Skepticism once again threatens.

There are four possible ways for Cohen to escape this dilemma. The first is for Cohen to accept that we can come to know that our faculties are reliable *a priori*. This possibility is rejected in Cohen (2002).

The second is to maintain that (to use the example we have been using) my knowledge that the table is red is reflective rather than animal knowledge. This solution only succeeds if we tacitly accept the first solution - we can only come to reflective knowledge

without knowing that the relevant knowledge forming mechanism is reliable, and the only way to come to knowledge of the reliability of our faculties under IAP is if this knowledge is acquired *a priori*.

The third solution is for Cohen to accept that we can gain knowledge of the reliability if our belief-forming mechanisms without basing this knowledge on evidence gained through the use of this mechanism. This seems impossible, given that any kind of independent verification would have no relevant experiences which it could non-illicitly verify.

This point requires some explanation. Suppose that I look at a red table, and note that it appears red to me[12]. I then ask my friends what colour the table is. Each of them in turn replies that the table is red. However, while their testimony would support my belief that the table is red, it could not (on its own) provide any evidence that my colour vision is reliable. This is the case because IP explicitly blocks my using of my belief that the table is red in any inference to the mechanism that generated that belief - in this case, my colour vision.

The fourth solution is for Cohen to revise or refine IP in the following way:

> (IP2) Where a belief gains it's *prima facie* justification for S just from the fact that it was produced by a particular faculty (given, e.g., the faculty's reliability, proper function, ability to provide the subject with evidencing experiences), the belief is not *on it's own* supporting evidence for S for

[12] Remember, according to IP, I am unable to use this evidence to support any inferences to the reliability of my colour vision.

beliefs concerning the reliability of that very faculty.

If Cohen were to accept IP2 over IP, he would still be able to block illicit bootstrapping of the kind shown in the slideshow example, and maintain his ability to gain knowledge of the reliability of his knowledge-forming mechanisms through non-illicit bootstrapping[13]. Of course, this strategy would not eliminate the problem of easy knowledge through closure.

If there are any risks posed by Cohen accepting IP2 as a principle governing animal knowledge, I cannot find them at this point. Since Cohen (2002, 2005) has already committed himself to other *ad hoc* distinctions between reflective and animal knowledge, the inclusion of IP2 can do no more damage to his theory than the inclusion of IP. But perhaps there is a way to make IP2 non-*ad hoc*.

If we accept IP2 as a principle governing knowledge as a whole, rather than one that only governs animal knowledge, it would no longer be *ad hoc*. Markie's (2005) reasoning to abandon IP is that it violates the following intuitively attractive principle:

> (IAP) If it is reasonable for us to believe *p*, and if *p* counts in favour of *q*, then *p* is a reason (perhaps defeasible) for us to believe *q*. (Black, 2008)[14]

However, as Black (2008) demonstrates, IAP - no matter how appealing it might be - is false. Consider the following case:

> "Suppose that a particular car is red and that it is entirely reasonable for me to believe that it is red. Without my knowledge, however, Sarah, of whom I know nothing, strongly dislikes red cars. Its being red therefore counts in favour of her not buying the car. But its being red is not a reason

[13] Non-illicit bootstrapping involves using basic knowledge generated by our reliable belief-forming mechanisms in order to come to knowledge that these belief-forming mechanisms are reliable in a way that does not strike us as intuitively objectionable in the way that the slideshow example does. Non-illicit bootstrapping would, in my mind, involve the use of a faculty to gain some basic beliefs, and would use independent verifiers, such as another faculty or the faculties of other independent people, in order to generate evidence of the reliability of the faculty in question. Ideally the independent verifiers would be faculties (of our own, or of others) which are already known to be reliable.

[14] This is Markie's (2005) Intuitively Attractive Principle as it appears in Black (2008). I have found Black's formulation of IAP useful for formatting purposes, which is why I have used it here. The wording, however, is exactly the same as in Markie (2005).

for me to believe that Sarah will not buy the car." (Black, 2008 p.607)

This case seems to demonstrate that IAP fails in its current form - however it could be revised as follows:

> (IAP2) If it is reasonable for us to believe *p*, and *if we know* that *p* counts in favour of *q*, then *p* is a reason (perhaps defeasible) for us to believe *q*.

Revising IAP in this way seems to block the counterexample of Sarah. Since we do not know that the car being red counts in favour of Sarah not buying the car, it's being red is no longer a reason for us to believe that she won't buy the car.

The question we are now faced with is whether IAP2 is incompatible with IP2. I do not think that it is. To illustrate, let us return to the slide show example.

In the slide show example, the father looks at a screen and notes that it appears red to him. It is thus reasonable for him to believe that it is red. He knows that if the screen is red, this counts in favour of his colour vision being reliable. Thus his belief that the screen is red is a reason (perhaps defeasible) for him to believe that his colour vision is reliable, according to IAP2.
IP2, on the other hand, states is that since the father's belief that the screen is red is generated by the use of his colour vision, it is not *on it's own* supporting evidence for the reliability of that faculty.

This result seems to indicate that IAP2 and IP2 are at odds with each other, but I do not think this is necessarily the case. IP2 - despite claiming that the father's belief that the screen is red is not, on its own, supporting evidence for the reliability of the father's colour vision - could still hold that the father's belief that the screen is red is a *reason* for him to believe that his colour vision is reliable.

There is a difference between a belief being a reason to believe something else, and a belief providing evidence of something else. For example, while my belief that my friend does not like the colour red might be a reason for me to think that she would avoid choosing a red cocktail, I am sure we could all agree that this belief does not count as

evidence that she will not order a red cocktail.

Since IAP2 and IP2 are compatible, there does not seem to be any reason to state that IP2 should apply only to animal knowledge. In fact, adopting IP2 as a principle governing knowledge as a whole would remove some concerns about his theory being *ad hoc*.

Unfortunately for Cohen (2002, 2005), despite these adjustments, the theory that he has provided is plagued by significant problems that should cause us pause in accepting it as a solution to the problem of easy knowledge. As I have shown, Cohen's solution to the problem of easy knowledge through closure relies on an *ad hoc* distinction between animal and reflective knowledge (i.e. that animal knowledge, unlike reflective knowledge is not bound by epistemic closure), and forces him to commit to the kind of abominable conjunctions that led him to dismiss modal tracking views of knowledge for endorsing.

Adopting a contextualist account of knowledge is an important step in the right direction, and adopting IP2 as a principle of knowledge generally (not, as Cohen (2005) advocates, simply as a principle governing animal knowledge) would make his theory far more appealing - Cohen would no longer find himself in the position he faced by accepting IP, where it seems difficult to explain how one could gain knowledge of the reliability of one's belief-forming mechanisms at all.

Overall, while Cohen's account could foreseeably be made workable, it is not, as it stands, a persuasive solution to the problem of easy knowledge.

3.2 Markie's Solution to the Problem of Easy Knowledge

Markie's (2005) solution to the problem of easy knowledge is, in essence, to deny that the problem is as problematic as Cohen suggests. Markie broadly falls into the group of philosophers I mentioned in section 2, who maintain that easy knowledge is not an undesirable consequence of BKS theories. As such, I will reference and continue the discussion that I engaged in in section 2 in this section.

Markie's (2005) argument rests on the distinction between an inference transferring epistemic support, and it's not begging the question against skeptics. The advantage of Markie's solution are that his theory allows for basic knowledge without requiring that we

adopt a distinction between animal knowledge and reflective knowledge, that it does not require that we restrict epistemic closure in any way, and that it does not require that we deny that we can combine basic knowledge with self-knowledge in order to provide inductive evidential support for other beliefs. All of these place Markie's solution in a much better light than Cohen's (2002, 2005), which requires us to commit to all of these, and in this way comes off as *ad hoc*.

3.2.1 Markie on Easy Knowledge Through Epistemic Closure

Markie (2005) believes that when dealing with cases of easy knowledge through closure, the problem is not that we cannot expand our knowledge through the use of epistemic closure, but rather that we cannot use this reasoning to convince skeptics. In other words, Markie does not think that the problem of easy knowledge through closure is as problematic as Cohen (2002) makes it out to be. BKS theories are not required to adopt the extreme measures that Cohen takes to avoid gaining knowledge too easily, they must simply be aware that the knowledge they gain through these means will not be dialectically effective against a skeptic.

I discussed in broad strokes the problem I have with this kind of argument in section 2. Markie (2005) makes a similar move to the one Moore makes in his infamous hands argument, although Markie is, on the surface anyway, far less ambitious. While Moore concluded based on the fact that he had hands that the external world must exist, Markie's conclusion is just that, based on my knowledge that a table is red, I can gain make the inference outlined in (III) without a problem.

(III) 1. [My inductive evidence for the reliability of my colour vision.]

2. Colour vision of the sort I'm employing right now is reliable, and the table looks red.

3. I know that the table is red (from 2).

4. I know that if the table is red, it is not white and illuminated by hidden red lights.

5. If I know that *p*, and I know that *p* implies *q*, then I know (or am at least in a position to know) that *q* (on the basis of *p*, and *p* implying *q*.)

6. Therefore I know, or at least am in a position to know that the table is not white and illuminated by hidden red lights (on the basis of 3 and 4) (from 3, 4 and 5)

I can, according to Markie, based on my knowledge that the table is red, come to know that the table is not white and deceptively illuminated to appear red, through inference from my basic knowledge that the table is red, and epistemic closure. However, if Markie is correct, I can use an argument of the same structure to infer that I am not a brain in a vat, deceived by an evil demon, or any number of skeptical hypotheses that we consider hard to dismiss.

Cohen (2002) admits that this argument may sound appealing as it is unclear how it is that we know that skeptical hypotheses do not obtain. However, as I mentioned in section 2, it does not seem the case that arguments such as the ones that Markie (2005) makes actually prove that skeptical hypotheses do not obtain. Rather, as I have suggested, it seems that they are required to assume the negation of skeptical hypotheses in order to make the arguments in the first place.

A further point that I mentioned in my discussion of Cohen, is that according to Cohen (2005) it seems like it is not simply the case that this kind of reasoning is dialectically insufficient to address the concerns of skeptics, it seems to have no anti-skeptical force *even for us*. Markie (2005), and most likely all the philosophers who follow in the common sense tradition would disagree with this vehemently. My reasoning for why these kinds of arguments have no anti-skeptical force for us will become clear through the following discussion.

According to Cohen (2005), when we examine Vogel's (2000) gas gauge case, Markie's question-begging response seems to have a problem:

> "Suppose my son is worried that our car is going to run out of gas. He asks me if I know whether the gas tank is full. I say, "Yes it is - the fuel gauge says it's full and the gauge is very reliable." My son replies, "Why should I believe the tank is full, just because the reliable gauge says so?" I reply, "Look - the gauge says it's full and the gauge is reliable. So you should believe the tank is full."" (Cohen, 2005 p. 419)

In this case, the father has clearly begged the question against his son, but, according to Cohen (2005), the father's response here does not strike us as problematic. Rather,

Cohen states, his son, who refuses to accept the father's reasoning, seems to be behaving irrationally.

In order for this reasoning to be unproblematic, it seems like the father ought to have some inductive evidence of the reliability of the gas gauge - otherwise he is simply stipulating that the gauge is reliable without any reason for doing so. If this is the case, then the father is begging the question against his son in a problematic way. If the father does have inductive evidence for the reliability of the gas gauge, and were to cite it in his response to his son, *then* I believe Cohen's statement that the son is acting irrationally might hold some water. In this case, the father's reasoning would look as follows:

(V) 1. [My inductive evidence for the reliability of the gas gauge.]

2. The gas gauge is reliable, and it says that the tank is full.

3. I know that the tank is full (from 2.)

This argument should look familiar - it has the form of the first half of argument (III):

(III) 1. [My inductive evidence for the reliability of my colour vision.]

2. Colour vision of the sort I'm employing right now is reliable, and the table looks red.

3. I know that the table is red (from 2).

4. I know that if the table is red, it is not white and illuminated by hidden red lights.

5. If I know that *p*, and I know that *p* implies *q*, then I know (or am at least in a position to know) that *q* (on the basis of *p*, and *p* implying *q.*)

6. Therefore I know, or at least am in a position to know that the table is not white and illuminated by hidden red lights (on the basis of 3 and 4) (from 3, 4 and 5)

Markie's (2005) diagnosis of what goes wrong in this argument is that the father begs the question against his son by using a premise that the son is tacitly calling into doubt - that the father's colour vision is reliable. According to Markie, this makes the argument dialectically ineffective against the son, but can still have anti-skeptical force for us. Cohen (2005) disagrees, stating that the reasoning in (III) is, or at least ought to be, unsatisfying to us. This is not the case in (V), as if we have inductive evidence that the

gas gauge is reliable, then there seems to be no problem in citing this evidence in an argument against the son. Not only does it have anti-skeptical force for us, but the son appears irrational if he refuses to accept that the argument gives him reason to think that the gas gauge is a reliable indicator that the gas tank is full.

Since the argument made in (V) seems to go through without a problem, this could indicate that the problem is not with the first half of (III), but the second - i.e. that the problem arises when epistemic closure comes into play. Let us then amend argument (V) as follows:

(VI) 1. [My inductive evidence for the reliability of the gas gauge.]

2. The gas gauge is reliable, and it says that the tank is full.

3. I know that the tank is full (from 2).

4. If the tank is full, it is not nearly empty.

5. If I know that *p*, and I know that *p* implies *q*, then I know (or am at least in a position to know) that *q* (on the basis of *p*, and *p* implying *q.*)

6. Therefore I know, or at least am in a position to know that the tank is not nearly empty (on the basis of 3 and 4) (from 3, 4 and 5)

(VI) seems equally unproblematic. It seems perfectly fine to infer from the fact that the gas gauge states that the tank is full to the negation of the skeptical hypothesis that the tank is empty. This seems to indicate that it is not the inference made through epistemic closure that is the problem either. But there is one disanalogy that can be cleared up. Suppose the son accepts that the gas tank *is* full, but is skeptical as to whether it is full of petrol which is good for the car, or diesel, which is bad for it. In order to make the example more plausible, let us assume that the car was borrowed by someone, and refilled before it was returned. In this case the argument would look something like this:

(VII) 1. [My inductive evidence for the reliability of the gas gauge.]

2. The gas gauge is reliable, and it says that the tank is full of petrol.

3. I know that the tank is full of petrol (from 2).

4. I know that if the tank is full of petrol, it is not full of diesel.

5. If I know that *p*, and I know that *p* implies *q*, then I know (or am at least in a position to know) that *q* (on the basis of *p*, and *p* implying *q*.)
6. Therefore I know, or at least am in a position to know that the tank is not full of diesel (on the basis of 3 and 4) (from 3, 4 and 5)

In this case, the reliability of the gas gauge seems to have nothing to do with whether or not we can know whether the tank is full of diesel or petrol, and the son no longer seems irrational in querying how the father can know that it is full of petrol rather than diesel - rather it is the father who seems foolish in claiming to know that the car is full of petrol rather than diesel based on the gas gauge. Of course, ordinarily the gas gauge on this car would be a good measure of how much petrol is in the car - as we assume that no one would be so absent-minded as to fill up a petrol car with diesel - but in this instance the gas gauge would simply tell us that the tank was full, and once the possibility of the tank being full of diesel was made salient it is no longer a reliable indicator of the amount of petrol in the car.

This case is analogous to the table example in that in both cases the belief-forming mechanism (the father's colour vision, and the gas gauge) would ordinarily give us reason to believe the ordinary (i.e. non-skeptical) hypothesis (that the table is red, and that the tank is full of petrol), but once the skeptical hypothesis (that the table is white and deceptively illuminated to appear red, and that the car is full of diesel) is made salient, we can see that the relevant belief (that the table appears red, and that the gas gauge is full) can be equally well explained by the skeptical and common sense hypotheses. It seems irresponsible, under these circumstances, to claim knowledge of the common sense hypothesis without doing anything, or providing any argument, that would undermine the skeptical hypothesis.

This is where the problem arises in the case of easy knowledge through closure. It is not, as Markie (2005) suggests, that the kind of arguments made in (III) and (VII) are dialectically ineffective against the skeptic - they do not, and ought not be believed to have any anti-skeptical force for us because the beliefs from which we infer that skeptical hypotheses do not obtain have skeptical counterparts which have equal evidential support from the belief forming mechanisms themselves.

It may be objected that the skeptical hypotheses are very unlikely to be true, and thus that they should be discounted. The leap of faith that is required here - that we live in a world where tables are not deceptively illuminated, and friends do not absent-mindedly fill petrol powered cars with diesel - is quite small. However, while this kind of supposition might be perfectly fine to make in an ordinary context, in a more serious philosophical context where these skeptical hypotheses illuminate problems with our attitudes towards how we gain knowledge, I believe we do ourselves a disservice by discounting them off the bat - at very least, if we are to be responsible epistemologists, we should entertain them in the context of philosophical discussions about knowledge.

3.2.2 Markie on Easy Knowledge Through Bootstrapping

Markie's (2005) response to the problem of easy knowledge through bootstrapping is that the bootstrapping case, as Cohen (2002) outlines it, is impossible. To remind the reader, this is the example of illicit bootstrapping as it appears in Cohen (2002):

> "Imagine my 7 year old son asking me if my color-vision is reliable. I say, "Let's check it out." I set up a slide show in which the screen will change colors every few seconds. I observe, "That screen is red, and I believe it's red. Got it right that time. Now it's blue and, look at that, I believe it's blue. Two for two…" I trust that no one thinks that whereas I previously did not have any evidence for the reliability of my color vision, I am not actually acquiring evidence for the reliability of my color vision. But if Reliabilism [or other BKS theories] were true, that's exactly what my situation would be." (Cohen, 2002)

Cohen stipulates that the father has no evidence for the reliability of his colour vision before the slide show, and attempts to gain some through identifying the colours that are flashed on the screen. But, according to Markie (2005), in order to form the belief that the screen is a certain colour, the father must have learned to identify coloured objects

through perception. This would involve experience and supporting information from other faculties, such as, say, hearing other people refer to red objects as "red," blue ones as "blue," and so on. This would provide the father with some inductive evidence that his colour vision was reliable before the slide show began.

Markie (2005) admits that this example might hold some weight if we were to change Cohen's case such that it involved some alien creature who did not need to learn how to identify colours; a creature that entered the world with a host of colour concepts and knowledge of how to apply them in response to various colour experiences. The reason that the argument would go through here is that this creature would have no evidence of the reliability of its colour vision, no experiences which led to it being able to recognise red in the way humans do - in this way the creature would be able to go into the slide show without any inductive evidence for the reliability of its colour vision, and come to know that its colour vision is reliable through the use of illicit bootstrapping in the way that Cohen (2002) describes. As Markie (2005) notes, however, if the problem of illicit bootstrapping arises solely with regard to this kind of creature, then its importance is greatly diminished.

Cohen (2005) responds by qualifying the case such that the father and son have forgotten what evidence they once had for the reliability of their colour vision. By making this move, Cohen hopes to place the father and son in a similar position to the alien creature mentioned above - the father and son would have a host of colour concepts and knowledge of how to apply them, without having any inductive evidence that they could appeal to in order to claim that their colour vision was reliable. If this were the case, using the slide show would appear to enable the father to come to knowledge of the reliability of his colour vision through illicit bootstrapping.

The question that arises here is in what relevant way the father and son could have forgotten their evidence for the reliability of their colour vision? One possibility is that they have forgotten all supporting information from their other faculties. This would include forgetting every instance of hearing other people refer to objects as "red" or "blue." It would also entail forgetting very instance where either of them have thought to themselves "here is a red thing" or "here is a blue thing." Since these experiences and

thoughts, whether they are in the forefront of our minds or not, are so incredibly pervasive that they occur in every memory we could possibly point to, the father and son would have to be complete amnesiacs for Cohen's qualification of the bootstrapping example to work.

The next question we should consider is whether or not this kind of amnesia would allow for illicit bootstrapping. There is an argument to be made that it does not. Without supporting information the best the father in Cohen's example would be able to do would be to say, each time the screen changed colour, "the screen is now a different colour." This assumes that it is impossible for the father to retain concepts of individual colours without the supporting evidence garnered by everyday interaction with the world at large. If this were the case, then illicit bootstrapping would be impossible for the father.

Of course, thinking of real-life instances of amnesia, we can see that this argument does not hold. It is not the case that people who suffer from some or other kind of amnesia are unable to make use of faculties that they have developed prior to their amnesia; they are still able to speak, walk, and identify colours. They are, however, unable to reflectively grasp how it is that they know how to do these things. This being the case, were the father an amnesiac, he could well use the slide show to bootstrap himself to knowledge of the reliability of his colour vision in the way that we wish to avoid.

Markie could reply that if illicit bootstrapping can only occur in alien creatures and amnesiacs, despite the fact that the latter actually exist, the problem of bootstrapping is still less important, than Cohen wants us to think.

Cohen (2005) could also amend the case such that the father does not base his colour judgements on the evidence that he had for the reliability of his colour vision. The father could temporarily adopt a Cartesian skepticism, placing all of his evidence aside and withholding assent from the belief that his colour vision is reliable. In doing so, he would appear to be able to illicitly bootstrap his way to knowledge that his colour vision is reliable through using the slide show.

I am unsure as to whether this case could work. Can one truly set aside one's beliefs and evidence in this way - even temporarily? Reid (1823) notes that Descartes could not do so, he wound up using the principles of common sense in his *Meditations*, despite claiming to withhold assent from them. But the project for the father is much smaller than Descartes' - the father is not claiming to set aside all of the beliefs he has acquired, simply the experiences that relate to his colour vision. Perhaps due to the smaller scale of his project he will be able to avoid what Descartes failed to do wholesale.

If we accept that it is possible to set aside our beliefs in the way outlined above, we now have three cases where illicit bootstrapping could be a problem: Alien creatures; amnesiacs; and Cartesian skeptics. Markie's argument that illicit bootstrapping only affects an insignificant minority is beginning to look less and less appealing. Next, I wish to tackle the deeper issue of why the bootstrapping process is so problematic

Suppose that the father is (unbeknownst to himself and his son) colour blind. In this case we don't have to suppose that the father is an alien creature, or an amnesiac. We can accept that he has a host of colour concepts garnered throughout his life, through a multitude of sources. But if the father were to use the slide show in the way Cohen (2002) indicates, he would, at times say "the screen is now red, and I think it's red" at times where the screen is e.g. green. Through this process he would falsely come to the belief that his colour vision is reliable. This, even Markie would have to admit, is a problem. The problem, to be clear, is that the same test, which would supposedly give the father knowledge that he had reliable colour vision were he not colour blind, would give him a false belief that he had reliable colour vision if he were colour blind.

Markie might argue that if the father really did have the host of colour concepts and supporting information that we would think he'd have at that point in his life, he would know that he is colour blind. But this is simply not true - many people go for years believing that their colour vision is perfectly fine, not realising that they actually have some form of colour blindness. To make the argument more plausible, however, we could say that instead of the father doing the test, it was the son; who would have fewer experiences which might lead him to realise his colour blindness.

Now, not only is the possibility of illicit bootstrapping open to alien creatures, amnesiacs, and Cartesian Skeptics, but we have a reason why the process itself is problematic; i.e. the fact that it could lead to false beliefs about the reliability of one's colour vision. In all, I believe that I have sufficiently argued that Markie's (2005) argument that illicit bootstrapping is impossible, or at most poses an insignificant problem, is false.

3.3 Black's Solution to the Problem of Easy Knowledge

Unlike Cohen (2002, 2005), Black's (2008) solution to the problem of easy knowledge does not offer up a theory of knowledge; and unlike Markie (2005), Black does not

attempt to argue that the problem of easy knowledge is unproblematic. Instead, Black (2008) focuses on epistemic closure. According to Black, the problem of easy knowledge in both its forms comes about due to an inadequate principle of epistemic closure. If we have an adequate epistemic closure principle then, according to Black, we would not only evade the problem of easy knowledge through closure, but illicit bootstrapping would be blocked as well.

3.3.1 Black on Easy Knowledge Through Epistemic Closure

Black (2008) argues that all of the commonly accepted versions of epistemic closure make theories vulnerable to the problem of easy knowledge. Amongst these is the closure principle which I have been tacitly using up until this point, known entailment closure:

ECP: If S knows that *p*, and S knows that *p* entails *q*, then S knows, or is at least in a position to know that *q* (on the basis of *p* and *p* entailing *q*.)

Black (2008), after a great deal of discussion (which I have omitted for the sake of brevity) arrives at the following version of epistemic closure.

SSC*: If S knows via K that *p1, p2,... pn,* and if S knows via K+ that *p1, p2,... pn* entails *q*, and if K or K+ will allow S to reasonably believe that *q*, then S knows that *q*, where if K is a set of two belief-producing mechanisms, neither member of the set acts only to account for the qualitative states associated with the other member of the set.

If we use SSC* instead of ECP in the case of easy knowledge through closure, it seems that the father is unable to make the inference to the table being non-white and deceptively illuminated, as I will illustrate below. In this case, S is the father, K would be his colour vision, K+ would be reflection, *p* would be “the table is red,” and *q* would be “the table is not white and illuminated by hidden red lights.”

If the father knows via his colour vision that the table is red, and if the father knows via reflection that the table’s being red entails that the table is not white and illuminated by hidden red lights, and if the father’s colour vision or reflection will allow the father to

reasonably believe that the table is not white and illuminated by hidden red lights, then the father knows that the table is not white and illuminated by hidden red lights.

We need not go further than this to see why it is that SSC* does not allow and inference to the table being not white and illuminated by hidden red lights: Neither the father's colour vision, nor reflection seem to allow him to reasonably believe that the table is not white and illuminated by hidden red lights. Not only does SSC* block the inference that strikes us as problematic, but it also grasps exactly why we think it is problematic - the fact that neither the father's colour vision, nor his faculty of reflection seem to be able to give us knowledge that the table is not red and illuminated by hidden red lights *even if* the former is able to give us knowledge that the table is red.

There is an interesting consequence to adopting SSC*, however. If we assume that the father does know that the table is red - either because he knows that his colour vision is reliable, or because we adopt a BKS perspective and stipulate that his colour vision is reliable even if he does not yet know it to be so - then we wind up with a closure principle that allows for an abominable conjunction; i.e. that the father knows that the table is red, but not that it is not white and illuminated by hidden red lights.

This kind of abominable conjunction is the reason why many philosophers are opposed to abandoning closure. Black (2008) therefore finds himself in the interesting position of

having provided a solution to the problem of easy knowledge that, while preserving epistemic closure, allows the very thing that makes denial of closure so unappealing to many philosophers. If abominable conjunctions provide us with adequate reason to avoid theories which deny closure altogether, then it seems like the allowance (we might go so far as to say endorsement) of abominable conjunctions in Black's theory ought to provide us with adequate reason to reject SSC* in favour of a theory of closure which does not allow for such abominable conjunctions to occur.

Black (2008), unlike Cohen, is unwilling to appeal to contextualism in order to solve the problem of abominable conjunctions - but even if he were, this would be of no help. The abominable conjunctions are not a consequence of a shift in epistemic context, but rather a result of SSC* itself.

3.3.2 Black on Easy Knowledge Through Bootstrapping

Black (2008) fares much better with the problem of easy knowledge through bootstrapping. According to Black (2008), the process of illicit bootstrapping looks something like this:

(VIII) 1. The table is red.

2. The table looks red.

3. Therefore the table's looking red is an accurate indication - that is, it indicates in this particular case - that the table is red.

According to Black (2008), if knowledge of 1 and 2 support knowledge of 3 then there will be an epistemic closure principle which specifies how they are related. SCC* gives:

> 4. If I know via vision that the table is red and via introspection that the table looks red, and if I know via reason that its both looking red and being red entails that the table's looking red is an accurate indication of its being red, and if vision, introspection or reason will allow me reason ably to believe that the table's looking red is an accurate indication of its being red, then I know that the table's looking red is an accurate indication of its being red.

The inclusion of SCC* requires the addition of an extra premise, *viz*:

> 5. Vision, introspection or reason will allow me reasonably to believe that the table's looking red is an accurate indication of its being red.

But, according to Black (2008), premise 5 is false. While cases where vision and introspection agree are the best candidates for cases in which vision or introspection allow us to reasonably believe that the table's being red is an accurate indicator of it's being red, the table's looking red is an essential part of the process that produces our belief that the table is red. When our belief that the table is red is produced by vision alone, and the table did not look red to us, we would not believe that it is red - thus the question becomes whether vision, and vision alone, accurately indicates that the table is

red.

Black (2008) states that vision alone does not necessarily accurately indicate that the table is red - in order to have a reason to believe that the table is red, we can not rely solely on information provided by vision itself, or by introspection - as introspection "reports simply on that part of the visual process which is constituted by how things look to me." In order for us to gain knowledge that our faculty of colour vision is reliable, we need to have received, at least in some cases, supporting evidence that comes from non-visual sources.

Such evidence cannot come from our faculty of reason as, according to Black (2008), "reason alone simply is not equipped to confirm that the table is red." Furthermore, reason, far from justifying our belief that the table's looking red is an accurate reflection of it's being red, actually reminds us that the table may look red despite not being red. In other words, according to Black, reason often furnishes us with skeptical hypotheses that may serve as defeaters, rather than always supporting the common sense hypothesis that, if something looks red, then it is red.

Even Thomas Reid, who held that the principles of common sense were rational, and skeptical hypotheses are not, would agree (I think, anyway) that our reason does not always steer us to believe that if something appears a certain way, then it is that way in fact. To persuade Reid (and any philosophers of the common sense school who may be reading) I could point to the plausible "skeptical" defeater that when we see a mirage on the horizon, it is our reason that tells us that there is not a pool of water just out of reach. In this way, our reason, at least sometimes, disagrees with our vision - usually in such a way that leads us to more accurate beliefs about the external world.

The question that now stands is what kind of evidence *would* support an inference to the reliability of our colour vision? According to Black (2008) such evidence comes from induction, memory, and the testimony of others. With these independent verifiers, it seems like we might feasibly come to knowledge of the reliability of our belief forming mechanisms in a way that does not seem too easy.

One response that a skeptic could make in response to this is that each of these supporting faculties are vulnerable to skeptical concerns themselves. Adler (1981)

conjectures that for any proposition *p*, there is an actual or plausible defeater *d*, which can undermine our justification that *p*. Since the only way a defeater may itself be defeated is through the inclusion of further evidence in the form of another proposition (a defeater-defeater), and since this further proposition will itself have an actual or plausible defeater of its own, we will wind up in an endless loop of defeaters and defeater-defeaters, and any justification for *p* will be impossible.

Adler (1981) does not say much about what constitutes a plausible defeater, save that plausible defeaters are backed by specific reasons to believe that the defeating circumstance could occur. The example that Adler gives is the invention of holograms - once holograms had been invented a new range of plausible defeating circumstances for certain perceptual justifications emerged. This is an important point in favour of skepticism - often skeptical concerns are dismissed as being unlikely, but as Adler correctly points out, the more technology advances, particularly technology relating to virtual reality and perception, the less unlikely it is that we may be deceived in important ways.

Let us take the following example: proposition *p* is that I have two hands, the reasonable or actual defeater *d* is that I do not have two hands, but I am dreaming that I do have two hands. The defeater-defeater is that I know when I am dreaming. The defeater to this defeater is that I could be in an incredibly vivid dream, which is indistinguishable from reality. At this point, the anti-skeptic could claim that this last defeater is neither actual or plausible: while we may not know that we are dreaming when we are dreaming, we can know for certain when we are awake.

But if, when I am in a dream, I do not know that I am dreaming, how can it be that I can be certain that I am not dreaming when I am awake? The answer is that the qualitative experience of reality and a dream are different such that when I am asleep I may be uncertain about whether I am awake or dreaming, but when I am awake, this uncertainty disappears[15]. Importantly, it is not the case that, when we are dreaming we are sometime certain that we are awake - rather we will experience an uncertainty about our wakefulness, which we will not experience when we are awake.

Further, when we are asleep, there are certain indicators that we are in a dream that one may use to become aware of the fact that one is dreaming. Using these indicators, we

[15] See Stone (1984)

may enter a state known as “lucid dreaming.” One of the ways to become aware of the fact that we are dreaming is, in fact, to ask ourselves whether or not we are dreaming. If we are awake, we will answer “no,” but in a dream we will answer “yes.”[16]

The next step for the tenacious skeptic would be to take a different tack. Instead of proposing that we are dreaming, the skeptic might propose that we are handless brains in vats being systematically deceived into thinking that we have hands. But this potential defeater stretches the limits of what a non-skeptic might consider “plausible.” However, this kind of thing is not beyond the realm of possibility. Advances in virtual reality and the mapping of the brain have moved ahead rapidly in the last hundred years. It is not inconceivable that in the future we may have virtual reality technology so advanced that it will be indistinguishable from reality. The non-skeptic may claim that the fact that it does not exist yet is sufficient grounds for not believing the skeptical hypothesis that we are brains in vats, but while that argument may work now, the non-skeptic will find themselves on an increasingly shrinking island as these technologies advance.

However, whether Adler (1981) is correct in thinking that there will always be such defeaters is a contentious point. Adler admits that his conjecture can never be fully proven, and as such it lacks a certain amount of persuasive force. But even if Adler’s conjecture fails, this does not mean that Black (2008) does not face a problem.

The problem that Black (2008) faces is that it seems impossible to gain knowledge of the reliability of our belief forming mechanisms. The reason for this is that, for us to gain knowledge of the reliability of one faculty, we need to use evidence gained not only from that faculty, but evidence gained from other faculties which themselves need to be established as reliable.

If we use SSC* as a non-BKS theorist, then we face the same problem that Cohen (2002) initially outlines - we are unable to gain knowledge of the reliability of our faculties at all. If we use SSC* as a BKS theorist on the other hand, it seems like knowledge still comes too easily - we may use basic knowledge gained through the use of all of our faculties to come to knowledge that these faculties are reliable without first knowing that any of them are reliable. How is this any better than the case of bootstrapping where we

[16] Price and Cohen (1988) discuss this and other ways to become aware of whether one is dreaming or not.

come to knowledge of the reliability of a single faculty using only that faculty?

Well, for one thing, if we follow this procedure, we will know that our faculties agree. For instance, looking at a ball, I will use my vision and come to believe that it is round, and I will use my touch and come to believe the same thing. I can further call a friend into the room, and she will confirm that the ball looks and feels round. In this case, the agreement of these belief forming mechanisms could conceivably give some evidence that my belief forming mechanisms are reliable based on the fact that all of the tests I have used to establish whether the ball is round yield the same belief.

Of course, this does not rule out the possibility that I am a brain in a vat being systematically deceived, but overall the use of a multitude of belief forming mechanisms to establish whether these mechanisms are reliable seems to place us in a much better position than simply using a single belief forming mechanism to establish its own reliability.

If we think that this mutual support gives us reason to think that our faculties are reliable, then Black (2008) succeeds in his goal. SSC* blocks illicit bootstrapping, while still allowing us a means of coming to know that our faculties are reliable. However, as I established in 3.3.1, SSC* falls short on its account of easy knowledge through bootstrapping, as it endorses the kind of abominable conjunctions that typically result from a denial of closure. In this way, it is no better than those theories which deny closure outright - and should be rejected for the same reasons.

3.4 Klein's Solution to the Problem of Easy Knowledge

I brought Klein (2004) up in my section 2, where I presented his anti-skeptical argument (albeit in quite broad strokes.) However, the anti-skepticism in but one part of Klein's paper. In the second component, Klein addresses the problem of easy knowledge. Klein (2004) focuses exclusively on the problem of easy knowledge through epistemic closure, and rather than give a solution to the problem of easy knowledge, he instead presents arguments to try and demonstrate that it is not a problem at all. The first, and most important component of his argument is that he believes that Cohen's (2002) presentation of the problem is misleading. I outlined Cohen's presentation of the problem in my section 1.3.1, but for ease of reading, I will present it here again:

Cohen (2002) presents the problem of easy knowledge through closure by using a thought experiment involving himself and his son setting out to buy a red table.[17] The father spots a table in the shop which appears red. According to BKS theories, that is enough for him to know that the table is red (provided that his colour vision is reliable, even if the father does not know that it is.) The father points the table out to his son, who worries that the table might not be red, but may actually be white and deceptively illuminated to appear red. The father uses the epistemic closure principle to infer from his knowledge that the table is red to knowledge that the table is not white and deceptively illuminated to appear red through the following process:

(II) 1. The table looks red.

2. I know that the table is red. (from 1)

3. I know that if the table is red, then it is not white and illuminated by hidden red lights.

4. If I know that *p*, and I know that *p* entails *q*, then I know (or am at least in a position to know) that *q* (on the basis of knowing *p*, and knowing that *p* entails *q*)

5. Therefore, I know (or am at least in a position to know) that the table is not white and illuminated by hidden red lights (on the basis of 2 and 3) (from 2, 3 and 4)

If we are BKS theorists, then nothing appears wrong with the father's reasoning - however, something still seems off about the example. As Cohen (2002) points out, the father comes to know that the table is not white and deceptively illuminated to appear red from reasoning based on nothing more than the fact that the table looks red to him. Any other evidence the father may have for thinking that the table is not deceptively illuminated (knowing that it is unlikely that the shop would deceive its customers in this way, having looked carefully for any signs of deceptive illumination, etc.) turns out to be incidental to this inference - the reasoning would have led to the same result even if he had none of these other reasons.

Klein (2004) thinks that Cohen's description here is misleading. Klein's reasoning is best

[17] Once again, for the sake of clarity I will refer to the Cohen in the example as "the father" and the Cohen who wrote the example as "Cohen."

explained in his own words:

> "From, *(t) the table is red*, I cannot infer anything about the lighting conditions in which I am seeing the table. In particular I cannot deduce that the table I am seeing is not white *and* being deceptively illuminated by a red light where the "and" is not within the scope of the "not." In other words, I could not infer from t that *(~w & r)*, where "w" stands for *the table is white* and "r" stands for *the table is being illuminated by a red light*. What I can infer is that *~(w & r)*. But that, of course, is not a claim about the lighting conditions. I could just as easily have inferred that the table is not white while **not** being illuminated by a red light. That is, I could just as easily have inferred *~(w & ~r)*. The English sentence "the table is not white but illuminated by red lights" might seem to indicate that I had gained some knowledge of the perceptual circumstances by employing closure on *the table is red*. But the scope of the negation has to include the conjunction if this is to be the case of the application of closure." (Klein, 2004, p.178.)

Klein (2004) continues on the same page that one could easily substitute any proposition for *r*. For instance, *r* could be "Cincinnati is not the capital of Ohio." But Klein maintains (very plausibly) that we do not gain any knowledge about state capitals by reasoning this way. Similarly, nothing new is gained by reasoning from "the table is red" to "the table is not white and illuminated by hidden red lights." The reason for this is that the scope of the negation has to include the conjuncts if these are to be applications of closure. Logically, the statement *~(w & r)* is made true by the fact that *w* is false - it the truth value (and the content) of the conjunct *r* thus does not matter: whether it is true or false, the statement *~(w & r)* will still be true.

Reasoning through epistemic closure in this way is, in other words, non-ampliative.[18] The most the father could come to know is that, since the table is red, the table is not white. The conjunct "and not deceptively illuminated to appear red" is as unhelpful as "and Cincinnati is not the capital of Ohio." According to Klein (2004), under this understanding

[18] It is not clear whether Klein (2004) believes that reasoning using epistemic closure is never ampliative, or if it is just not ampliative in these circumstances. I am inclined to think that, for Klein, it is never ampliative - were it sometimes ampliative, Klein would need to explain why it is not ampliative in only these cases.

of closure, we can see that there is no problem of easy knowledge - the father's inference to the table being not white and deceptively illuminated to appear red is blocked. The best he can plausibly come to know from reasoning in this way is that the table is not white.

But there still seems to be something wrong with the father's reasoning. According to Klein (2004) if the problem of easy knowledge truly a problem, it must have arisen before the application of epistemic closure. Klein concludes that the problem must be the inference from "the table looks red" to "the table is red."

The relevant question here is whether S can come to know "the table is red" simply by reasoning from "the table looks red." According to Klein (2004), this question is ambiguous. In order to answer it, Klein outlines his understanding of what it means for S to come to know a proposition. Klein (2004) states that S comes to know that *p* at *t* when the following criteria are all true:

1. S did not know *p* prior to *t.*
2. *p* is true.
3. S has located good enough reasons for believing that *p.*
4. S believes that *p* on the basis of those reasoning.
5. There are no genuine defeaters ro the reasons on which S bases her belief that *p*.

The ambiguity of the question of whether S can come to know "the table is red" simply by reasoning from "the table looks red," according to Klein (2004) is as follows; there are two possible readings of the question, each with a different answer:

1. Is "the table looks red" a good enough reason, on some occasions, for satisfying one of the necessary conditions for knowing "the table looks red?"
2. On the occasions when "the table looks red" is a good enough reason for rendering "the table is red" propositionally justified and S comes to know the table is red, does S's knowledge owe its existence only to that reasoning?

I will examine both of these possible readings in turn.

3.4.1 Removing the Ambiguity: The First Reading

Klein's first reading of the question "Can S come to know "the table is red" simply by reasoning from "the table looks red?" is that it means to ask whether "the table looks red" is a good enough reason (at least on some occasions) for satisfying one of the necessary conditions for knowing that the table is red.

Klein's (2004) answer to this question is "yes." In his own words: "I take it as a mark of empirical knowledge that the justification condition can be satisfied by defeasible reasoning. Further, I take it as given that *the table looks red* provides an adequate defeasible reason for *the table is red* - at least on some occasions." (Klein, 2004, p.180)

These occasions, according to Klein (2004) are when the probative value of how things look is not "up-for-grabs." Klein is unclear about what makes things up-for-grabs, but he does not think that such clarity is required for the purposes of this essay. All he says on the matter is that prior to the son's questioning of the lighting conditions, the probative value of how the table appeared was not up-for-grabs, but during the conversation it did become up-for-grabs.[19]

Klein concludes that there are some occasions where the table's looking red is a good enough reason for satisfying one of the necessary conditions for knowing that the table is red. However, it is not the case that the table's looking red is a sufficient condition to conclude that it is red.[20] However, there is a nagging doubt in my mind about this statement: If the table was red, but illuminated by a green light such that it appeared black, then we could still come to know that it is red even if it were illuminated in this way - perhaps on the testimony of a salesperson who abashedly admits that for some reason the table is deceptively illuminated.

[19] This strikes me as a covertly contextualist response. What Klein (2004) seems to be saying is in essence that before the possibility of deceptive illumination was made salient, the table's looking red was a good enough reason for satisfying one of the necessary conditions for it being red, but after this possibility was made salient, it was not. I will say more on this in my section 3.4.3, and discuss contextualism in much greater detail in my section 3.5.2

[20] Klein's (2004) argument for this will be presented in the next section.

It seems then that the table's looking red is neither a necessary, nor a sufficient condition for us to know that the table is red. Why then do we think that we can infer the real colour of the table from its appearance?

Klein (2004) has no real answer for this. The only thing close to an answer is his following assertion: "The table's looking red is a good ,albeit defeasible, reason for believing that the table is red. We don't need additional *reasons* on those occasions when the reasoning is not defeated." (Klein, 2004, p.180-181.) But what does that mean? I can only think that sometimes, contrary to Klein's assertion, the table appearing red is a sufficient condition to know that it is red. Klein's assertion that this is not the case will make up a great deal of the next section, so I shall leave this possibility open now, and continue in the next section.

3.4.2 Removing the Ambiguity: The Second Reading

Klein's second reading of the question is whether it means to ask, on the occasions when the table's looking red is a good enough reason for rendering the proposition "the table is red" propositionally justified, and when S comes to know that the table is red, whether S's knowledge owes its existence only to that reasoning.

Klein's answer to this question is "no." Klein (2004) says the following:

> "We have said that knowledge is true belief based upon defeasible, *but undefeated* reasoning. So, if the lighting conditions are misleading or if S's perceptual equipment is not working properly, then S would not have gained knowledge that the table is red even if the belief is doxastically justified on that occasion. More generally, if the circumstance is not propitious for obtaining the truth, then evidence about how things look is defeated evidence. In other words, when reasoning is defeated by a proposition describing the infelicitous circumstance, the reasoning cannot produce knowledge." (Klein, 2004, p.180)

In other words, the table's appearing red is not always a sufficient condition for knowing that it is red. Those times where it is not sufficient are times where circumstances are

"infelicitous," and a proposition describing these circumstances is raised.

This reasoning puts Klein (2004) in a bit of a Gettier-like problem. Part of the problem that Cohen (2002) outlines, we can assume, is that the father does not know (at least initially) if the lighting conditions are misleading. In this case, Klein seems to imply that if

the lighting conditions are not misleading, then the father knows that the table is red, but if they are misleading then he doesn't know that the table is red.

This brings to mind the barn facade county example from Goldman (1976). The example goes as follows: Henry is driving along a motorway, along which there are many barn facades - buildings which are not barns, but which have been built to give the impression of being barns from the perspective of drivers on the motorway. With each facade he passes, Henry states "that is a barn" - he is justified in believing that this is the case, but as his belief is false, this does not count as knowledge. However, along the way, there is a real barn, which prompts Henry to say "that is a barn." In this case, Henry's belief is true, but we do not think that it counts as knowledge because his being correct seems to be purely a matter of luck.

The case is not identical - Klein could maintain that driving through barn facade county would constitute a case of infelicitous circumstances being such that Henry's reasoning can not produce knowledge. But, according to Adler (1981) there will be many cases where there are many plausible skeptical hypotheses which would easily count as unpropitious circumstances for the purpose of gaining knowledge[21] - and by Klein's (2004) own admission, in cases where circumstances are not propitious for obtaining the truth, the reasoning at play is defeated.[22]

As I discussed in section 2, Klein's (2004) argument that skeptical defeaters can be safely ignored does not hold water. This being the case, Klein (2004) may find himself in situations where infelicitous circumstances in the form of skeptical defeaters force him to admit that we do not have knowledge - and this could occur far more often than Klein seems to think, if Adler (1981) is correct that the more technology advances, the more

[21] See my discussion of Klein's (2004) anti-skepticism in section 2.1, and my discussion of Adler (1981) in section 3.3.

[22] "[I]f the circumstance is not propitious for obtaining the truth, then evidence about how things look is defeated evidence." (Klein, 2004, p.180)

plausible skeptical defeaters are generated.

3.4.3 What This Means For Klein

So far, I have looked at Klein's (2004) argument that the problem of easy knowledge is not, in fact, a problem. The first component of Klein's argument is that Cohen (2002) misrepresents or misunderstands how closure functions in the case of the red table. According to Klein, the most we can come to know through closure is that the table is not white.

However, as Klein (2004) tries to explain why the reasoning process that the father engages in seems troubling, he finds himself in difficult circumstances. Klein first asserts that the table's appearing red is enough to satisfy one of the necessary conditions for the table being red. But, as I have shown, this is not the case - we can know that the table is red without it appearing red, which means that the table's looking red is not a necessary condition for it being red.

Despite asserting that the table's looking red is not a sufficient condition for knowing that it is red, Klein also asserts that the table's looking red is a good enough reason for believing that it is red, and that we need no further reasons to believe that it is red so long as this reason is not defeated. Since knowledge, for Klein, is true belief based on defeasible, but undefeated reasoning - this seems to imply that the table's looking red might be sufficient for us to know that it is red, provided that the table is red, and that there is no defeater that undermines the table's looking red being a reason to think that it is red.

There are two related problems with this, however. First, Klein (2004) admits that infelicitous circumstances - such as deceptive lighting - would defeat our reasoning that the table's looking red was a good reason for believing that it is red. Second, Klein's relies on skeptical hypotheses being discarded as potential defeaters. However, Klein's argument for this point does not hold water.[23] Furthermore, as Adler (1981) points out, as technology advances there will be ever more plausible skeptical defeaters which could undermine our knowledge attributions.

[23] Once again, see my discussion of Klein's anti-skepticism in section 2.1.

As a result of these two problems, if we follow Klein's (2004) reasoning, we will wind up with very little knowledge. Foreseeably - as virtual reality technology becomes more and more lifelike - we might wind up having no knowledge at all. This is not a good position for Klein, as if we follow his reasoning, we seem to succumb to skepticism, rather than avoid it.

What this means for the problem of easy knowledge, is that we will be unable to get from the table looking red to knowing that the table is red. This certainly blocks the later problem of gaining easy knowledge through epistemic closure, and will also block the problem of bootstrapping.[24] But in this case we find ourselves right back at the beginning - how could be possibly come to know that our faculties are reliable without basing this knowledge at least in part on evidence gained through the use of said faculties?

That said, Klein (2004) does show a great deal of promise. His outlining of what goes on in the closure case, particularly his reasoning why the father cannot come to know that the table is not deceptively illuminated from the fact that it appears red is quite convincing. This shows that the problem of easy knowledge through closure might have nothing at all to do with epistemic closure after all. Unfortunately, there is still a problem - even if it arises at the step before epistemic closure is used. Furthermore, Klein (2004) is unable to adequately solve this problem within the framework he outlines, as I have shown above.

A possible route for Klein (2004) to take would be to adopt epistemic contextualism. As I mentioned in section 3.4.1,[25] Klein already seems to have made a covertly contextualist step when he mentioned that when the son mentions the possibility of deceptive lighting, the probative value of how things look was made up-for-grabs - which meant that the justification condition for "the table is red" was defeated. Before the son's questioning the possibility of deceptive illumination, the probative value of how things look was not up-for-grabs - meaning that the table's looking red was an adequate, defeasible (but undefeated) reason for believing that the table is red.

This strikes me as contextualist as the standards for knowledge seem to change

[24] If the father cannot come to know that the screen in the slide show example is red on the basis of its looking red, then he will be unable to use this knowledge in order to bootstrap our way to knowing that his colour vision is reliable.
[25] See my footnote 19.

depending on the context in which the subject finds themselves. The justification condition varies depending on the probative value of how things look, which in turn appears to depend not only on whether or not the circumstances are propitious for obtaining truth - but on possibilities of error being made salient. Perhaps I am dead wrong in my reading of Klein (2004) here, but in any case a contextualist adjustment on his theory would help it a great deal. Aside from the hints of contextualist thought already being present, there are two other reasons for Klein to accept contextualism.

First, Klein (2004) largely relied on the fact that skeptical hypotheses can be safely ignored as potential defeaters. As I argued in my section 2.1, Klein's argument for this does not hold water, and, as I argued in my discussion of Adler (1981), there exist a rapidly growing number of plausible skeptical defeaters for our everyday knowledge claims. Thus, if Klein insists on operating in a single high-standards context, he will find himself unable to claim much knowledge at all - less and less as time and technology progress.

Second, Klein (2004) could avoid the unclear discussion surrounding whether the table looking red is a necessary, or a sufficient condition for knowing that the table is red. As I pointed out, he claims that sometimes the table being red is good enough to satisfy one of the necessary conditions for the table being red, but I have shown that this is not true. At other points, he claims that the table being red is a good, defeasible reason for believing the table is red, and that we need no other reasons provided it is not defeated. Remembering Klein's understanding of what it means to know, this seems to imply that the table's looking red is sufficient to know that it is red, provided that the table is red in fact, and that there are no defeaters. In my opinion, if Klein wants to take an invariantist approach, he needs to drop the argument that the table looking red is at any point a necessary condition for the table being red - as I have argued, it is simply not the case that the table appear red for us to know that it is red.

While Klein's (2004) statement of when the table looking red is sometimes a sufficient reason for us to believe that it is red is unclear, it does not clearly require a contextualist

treatment to work as intended. However, a contextualist approach might help clear the waters and make more clear where and how the table appearing red is a sufficient condition for knowing that it is red.

With adjustments along these lines, Klein (2004) could be a very convincing solution to the problem of easy knowledge. However, I will not explore these possibilities further here. I simply do not have the space to discuss these issues much further and furthermore Klein's account is a foundationalist one, whereas I am specifically looking for a reliabilist solution.

3.5 Becker's Solution to the Problem of Easy Knowledge

Becker (2013) states that the problem of easy knowledge only affects actual world reliabilism, a theory that he claims has been abandoned by most serious reliabilists. Becker claims that under a proper understanding of reliabilism - i.e. his theory of modal reliabilism, or something close to it - a simple and elegant solution to the problem of easy knowledge emerges.

Unfortunately, Becker's theory suffers one key issue which ought to give us pause. Becker (2013) advocates a denial of epistemic closure. By denying closure, Becker is able to avoid the problem of easy knowledge through closure, but this comes at the cost of endorsing the kinds of abominable conjunctions that I have criticised others in this paper for allowing. Fortunately, by departing slightly from Becker (2013) and adopting a contextualist stance, we are able to preserve epistemic closure while at the same time explaining apparent cases of closure failure and blocking the endorsement of abominable conjunctions. Before entering into this discussion, however, let us see how Becker (2013) deals with the problem of easy knowledge through bootstrapping.

3.5.1 Becker on Easy Knowledge Through Bootstrapping

Becker (2013) draws a distinction between actual world reliabilism and modal reliabilism. The difference between the two is this; actual world reliabilism counts a belief forming mechanism as reliable if it yields mostly true beliefs in the actual world. Modal reliabilism,

on the other hand, counts a belief forming mechanism as reliable if (by using the same mechanism) in relevantly close possible worlds where a relevant proposition *p* is the case, we believe that *p* based on that mechanism, and in relevantly close possible worlds where *p* is not the case, we don't believe that *p* based on that mechanism.

In essence, what Becker (2013) does is take Nozick's (1981) sensitivity condition and applies it to belief forming mechanisms rather than beliefs. If these belief forming mechanisms reliably lead us to true beliefs in not only the actual world, but relevantly close possible worlds as well, they meet Becker's standards for reliability.[26]

Before we go any further, it is important to establish what is meant by "relevantly close" when talking about possible worlds. The way I understand it is as follows: possible worlds are a thought experiment, and much like scientific experiments there is a control group - worlds which are identical to ours in all relevant respects (i.e. to use the colour vision example, worlds where my colour vision works correctly, but not necessarily worlds where I decided to wear a white shirt rather than a black shirt today) - and an experimental group - worlds where everything relevant is held fixed except that which we are trying to test (once again, to use the colour vision example, worlds where my colour vision does not work correctly, but where my other faculties e.g. my induction work as well as they do in the actual world, but not necessarily worlds where I am wearing a black shirt rather than a white one.) This gives us a vague, but serviceable idea of what a relevantly close possible world would be. Again, as with real experiments, the method must remain constant across groups.

Becker believes that there are several obvious reasons to reject actual world reliabilism in favour of modal reliabilism. The demon helper example that he raises in Becker (2013) is one of these, and bootstrapping, as I will show, is another. Becker (2013) does not engage directly with Cohen's (2002) slide show example. Instead, he chooses to focus on the gas gauge example put forward by Vogel (2000). Regardless, the takeaway is the same from both examples; the bootstrapping process is not a reliable way of coming to true beliefs about the world. Rather than rehashing Becker's (2013) analysis of the gas gauge case, let us examine how his theory deals with Cohen's slide show example instead.

Let us assume that it is the case that in the actual world the father's colour vision works correctly - that is to say that it leads him to correct beliefs about the colour of the screen at any given moment. According to actual world reliabilism, the father's colour vision is a reliable means of coming to true beliefs, and thus there is nothing wrong with him using

[26] See my discussion of tracking views of knowledge and abominable conjunctions in section 1.1.

the slide show to bootstrap his way to knowledge that his colour vision is reliable.

In relevantly close possible worlds where the father's colour vision functions correctly, this process would yield the same results - he would come to true beliefs about those possible worlds. But, in relevantly close possible worlds where his colour vision does not function correctly, if the father were to use the same process, he would still come to the same conclusion - i.e. that his colour vision is reliable. This indicates that the process that he is using to gain knowledge of the reliability of his colour vision (illicit bootstrapping) is not reliable, and thus cannot give him knowledge. This outcome will be the same whenever the process being used to establish the reliability of a belief forming mechanism relies solely on evidence gained through the use of the belief forming mechanism that is to be examined.

One interesting implication of this is that if there is some kind of independent verifier present - for example, if the father were to have his colour judgements verified by his son and they consistently agreed on the colour of the screen, this would (according to Becker (2013)) count as evidence for the reliability of the father's colour vision (provided that the son's colour vision is reliable.) As Becker denies the KR principle, the father does not have to know that his son's colour vision is reliable in order to use his son's colour vision to come to knowledge that his own colour vision is reliable.

This fact - that the father does not need to know that the son's colour vision is reliable - might appear to give us some reason to doubt that the son's verification can provide the father with evidence of the reliability of his (the father's) colour vision, but these concerns, according to Becker (2013) are misplaced. When we are considering whether the process in question is reliable in establishing the reliability of the father's colour vision, we do not have to consider possible worlds in which the son's colour vision is not reliable, only those in which the father's colour vision is not reliable.[27]

But if we accept that this process of getting the son to verify his father's colour judgements can lead the father to knowledge that his colour vision is reliable, surely the son could just as easily use the same process (that is, to get his father to verify his (the son's) colour judgements) to come to knowledge of the reliability of his own colour vision.

[27] The *ad hoc* nature of this response does not escape me. However, since the solution to this problem will present itself in the next section, I will let it stand for now.

If these two processes were to take place one after the other, modal reliabilism would seem to indicate that both the father and his son will have come to knowledge of the reliability of their individual faculties of colour vision - since the process that each of them used would reliably lead them to true beliefs. Again though, something rings false about this example. The father and son have gone from having no knowledge of the reliability of their colour vision to both knowing that their colour vision is reliable by using each other's faculties to give evidence that each of their faculties of colour vision is reliable. In this way, it seems that Becker (2013) has simply pushed the problem of bootstrapping up a level.

The reason these problems arise is due to Becker's (2013) denial of the KR principle - which allows him to use faculties to gain knowledge without knowing that they are reliable, so long as they are reliable - and due to Becker's insistence that we do not have to examine possible worlds in which the son's colour vision is unreliable when establishing whether the father's colour vision is reliable. These two concerns are linked, and while they might be solvable within the framework Becker (2013) has laid out, for the sake of brevity (and because I wish to make adjustments to Becker's (2013) theory in any case), I will address them in the next section - where I discuss the implications of Becker's (2013) denial of closure, and introduce Ichikawa's (2011) contextualist analysis of modal tracking views of knowledge as a means by which we may come to a suitable reliabilist theory of knowledge which avoids both flavours of the problem of easy knowledge without committing itself to abominable conjunctions.

3.5.2 Becker, Ichikawa, and Epistemic Closure

One of the great disadvantages of Becker's (2013) modal reliabilism (aside from the problems I raised in the last section) is that it requires us to abandon epistemic closure, and thus commit ourselves to the same kind of abominable conjunctions that I criticised Cohen (2002), and Black (2008) for allowing within their respective theories. As such, it seems like I should disregard Becker (2013) and other modal tracking views of knowledge off the bat, since they all appear to require a denial of epistemic closure. However, as Cohen (2005) suggests, the answer to this problem lies with epistemic contextualism. Jonathan Ichikawa (2011) offers an interesting contextualist analysis of Nozickean modal tracking views of knowledge, which ought to work equally well for modal reliabilism since, as Becker (2013) admits, there is little difference between the

two.

Ichikawa (2011) aims to solve the problem of abominable conjunctions which arise from the denial of closure in tracking views of knowledge. His solution to this problem avoids denying epistemic closure, and (to avoid succumbing to skepticism) instead adopts a contextualist perspective on knowledge. The inner workings of Ichikawa's solution are best explained by examining the following example:

> "All eighteen members of the department are in the seminar room. The chair looks around to ascertain whether they're ready to begin the meeting. 'Is someone in the library?' the chair wonders aloud. She counts the faculty present and concludes, 'no, no one is in the library; everyone is here.' She speaks truly. The domain includes the members of the department; everybody is in the seminar room and no one is in the library, because there are no department members in the library; they're all in the seminar room, right where they belong. There is a librarian in the library, but he doesn't falsify the chair's assertion. He's outside the domain, properly ignored. An utterance of 'there is a librarian in the library' would, annoyingly, expand the domain to include him, and introduce a context in which 'everyone is here' is false and 'no one is in the library' is true." (Ichikawa, 2011 p.306)

I am uncertain about the second half of Ichikawa's conclusion (i.e. that 'no one is in the library would be true in the new context.) It seems more likely to me that if there were a disagreement between the two statements, it would be that "everyone is here" is true in the new context, and "no one is in the library" is false. It would be more accurate, I think, to say that in the new context both statements are false as a result of expanding the domain to include the librarian.[28]

Regardless, the point that Ichikawa (2011) is trying to make is that a statement which is true (and unproblematically so) in one conversational context can be made false by a shift in conversational context which widens the domain relevant to assessing the

[28] I am unsure if this strange conclusion was a slip-up or typo on the part of Ichikawa, or if it was in fact his intended conclusion. In either case, I reject the second half of his conclusion as it appears in Ichikawa (2011), and will maintain instead that both "everyone is here" and "no one is in the library" are rendered false by the widening of the domain in this particular example.

statement's truth. Supposed cases of closure failure in knowledge claims take a similar form; consider the following example:

> "I know that I see Laura - if I didn't, it wouldn't appear to me that I did; but I don't know that I don't see a perfect imposter duplicate Laura - if I did, I'd still think that I saw Laura." (Ichikawa, 2011 p.307)

This is an example of the kind of abominable conjunction that I criticised Cohen (2002) and Black (2008) for allowing in their theories. Ichikawa (2011) acknowledges that statements of this form are problematic, however, unlike Nozick (1981) or Becker (2013), Ichikawa is not prepared to simply accept that such statements are an inevitable, if undesirable, consequence of embracing a modal epistemology.

Ichikawa (2011) explains why these abominable conjunctions are problematic: conjunctions of this kind constitute an illicit change in conversational context which widens the domain of the initial statement. This, in modal terms, is reflected by an expansion of the band of possible worlds required to assess *both* statements. This is a departure from Nozick and Becker, who maintain that the band of possible worlds required to assess the truth of the former claim is different, smaller, than the band of possible worlds required to assess the latter claim. The reason Nozick (1981) makes this claim is in order to avoid skepticism. In his eyes if we are required to examine possible worlds where we are e.g. brains in vats when assessing whether we know everyday statements such as "I have two hands" then we will be forced to admit that we know nothing. Becker (2013), who follows closely in Nozick's footsteps, thinks the same is true when assessing whether a faculty is reliable. A necessary consequence of this attitude is the denial of epistemic closure, and the endorsement of abominable conjunctions.

Ichikawa (2011) rejects this line of reasoning. According to him, when the second half of the conjunction - to use the example above: "I don't know that I don't see a perfect imposter duplicate Laura - if I did, I'd still think that I saw Laura" - is made salient, this widens the domain of the first half of the conjunction as well. Once the possibility of a duplicate Laura is made salient, it is no longer correct to say that we know that we have seen Laura, or that if we did not see her then it would not appear to us that we did.

When we apply the same logic to the red table case, we can see that once the the

possibility of the table being white and deceptively illuminated to appear red has been made salient by the son, it is no longer correct for the father to say that he knows that the table is red. This is because in the example, as Cohen (2002) outlines it, the father is basing his knowledge solely on its appearing red to him. The band of possible worlds that we would have to inspect in order to assess whether the father had knowledge of whether the table is red is narrower before the son makes salient the possibility of deceptive illumination - we can need only look at worlds where the table is, say, green or blue, or some other colour than red to determine whether his colour vision is a reliable means of coming to know that the table is red.

Once the possibility that the table is deceptively illuminated to appear red is made salient, the band of possible worlds we need to inspect to determine whether or not the father's colour vision is a reliable means of coming to know that the table is red expands to include worlds where the table is deceptively illuminated. At this point, it should be obvious that his colour vision alone is not a reliable means of coming to know that the table is red - as in worlds where it is deceptively illuminated to appear red, the father will still believe that it is red based on his colour vision alone.

If the father were to carefully inspect the area for deceptive lights, or use his hand to cast a shadow on the table and observe that the shadowed part looks no less red than it did before, he would be in a position to claim knowledge that the table is red, and that it is not white and being deceptively illuminated. This is because even in worlds where the table is deceptively illuminated, looking for hidden lights and passing his hand over the table will yield true beliefs - the father will believe that the table is deceptively illuminated in worlds where it is so, and that it is not deceptively illuminated in worlds where it is not.

If the son were to take things a step further and ask how the father knew that he was not a brain in a vat being systematically deceived into thinking that the table was red, the father would once again be forced to admit that *in the context of that statement*, he did not know that the table was red after all. But in our everyday lives, such possibilities are rarely made salient, and our use of the term "to know" has a domain that does not include brain-in-vat worlds, evil demon worlds, or any other worlds where skeptical hypotheses obtain. As Reid (1823) points out, even the most radical skeptics claim knowledge (tacitly or openly) in everyday contexts - this understanding of what it means to know makes these claims consistent with their philosophical opinions about how much

we know.

Ichikawa's (2011) contextualist treatment could appeal to skeptics and non-skeptics alike - it allows the skeptics to claim that in heavyweight contexts we know nothing, while at the same time allowing non-skeptics to claim that we know many things. Ichikawa arguably respects skeptical hypotheses better than Nozick (1981) or Becker (2013), since Ichikawa admits that in the context of skeptical hypotheses it would be incorrect to claim that we know anything about the external world.

But non-skeptics who wish to claim that we can know that skeptical hypotheses do not obtain might be reluctant to accept this conclusion, as it means that they could not know (in contexts where skeptical hypotheses are made salient) that skeptical hypotheses do not obtain, and would be forced to accept that (in context where skeptical hypotheses are made salient, they cannot claim knowledge of anything at all.)[29] To these philosophers, I will point to Foley (2003), and invite them to make the same leap of faith that I have tacitly made - that skeptical hypotheses do not obtain in the actual world. This, I believe, is the best we can do if we are to preserve any sense of what it means to know anything.

On the other hand, radical skeptics might take umbrage with the fact that I have made this leap of faith regarding the actual world. To these radical skeptics, I will state that the only way for them to remain consistent in their day to day lives is either to make the same leap of faith that I have done, or to avoid ever claiming to know anything - a task that will be at very least extraordinarily difficult, and (to my mind at least) most probably impossible.

Ichikawa's (2011) contextualism allows us to embrace epistemic closure, while at the same time explaining cases of apparent closure failure. We can hold on to the idea of closure in that in cases such as the following, closure holds:

> I know that this mug is full of coffee. If it is full of coffee, then it is not full of

[29] It has been suggested to me by Dr. Dean Chapman that we could know that skeptical hypotheses do not obtain in ordinary contexts, but would not be able to truthfully assert that they had such knowledge because such an assertion would change the context by making skeptical hypotheses salient. This conclusion seems perfectly reasonable to me, although perhaps no less frustrating to non-skeptics, as they would likely never be able to defend their non-skepticism against a skeptic (if they were to embrace this version of contextualism.)

> tea. Therefore I know that this mug is not full of tea.

Cases of apparent closure failure, such as this one (borrowed from Dretske) can also be explained:

> I know that there is a zebra in the pen. If this creature is a zebra, then it is not a mule cleverly made up to look like a zebra. Therefore I know that this creature is not a mule cleverly made up to look like a zebra.

In this case, there is an illicit shift in conversational context. Before the possibility that the "zebra" is actually a cleverly disguised mule is made salient, it might be correct to claim that I know that the creature in the pen is a zebra - but once the possibility that it is a cleverly disguised mule is made salient, it is no longer true to claim that I know that the creature in the pen is a zebra, and thus I cannot infer from this fact and closure that I know that the creature in the pen is not a cleverly disguised mule.

At this point, let us return to the problems with which we left Becker (2013). If the son supports the father's beliefs about the reliability of his colour vision, by verifying the father's responses to the colours flashed on the screen; and the father supports the son's beliefs by the same process, both are able to come to know that their colour vision is reliable.

As I mentioned in the previous section, this problem might arise due to Becker's (2013) denial of the KR principle. Becker's denial of KR allows for statements of the following form - "the son knows that his colour vision is reliable based on his father's verification of his (the son's) colour experiences, but the son does not know that his father's verifying his (the son's) colour experiences is a reliable means to gain knowledge of his (the son's) colour vision."

The form of this statement should be familiar - it has the same structure as Ichikawa's (2011) example of seeing Laura. Since this problem has the same structure, the same solution ought to apply. When the possibility that both the father's and the son's colour-vision are unreliable is made salient, it is no longer correct for the son - or the father, for that matter - to claim knowledge that his colour vision is reliable. In this case, we would not be permitted to hold fixed that the son's colour vision is reliable when using

it to establish whether the father's colour vision is reliable, and *vice versa*.

This does not mean that in order to have a workable theory of modal reliabilism we have to accept KR. In fact, doing so would lead us to the same problem that started this all - that we don't seem to be able to gain knowledge of the reliability of our faculties without basing this knowledge at least in part on evidence gained through the use of said faculties. There is nothing in the contextualist version of modal reliabilism that blocks us

from knowing e.g. that an object is red without knowing that our colour vision is reliable - so long as the possibility that our colour vision is unreliable is not made salient. And if this possibility *is* made salient, there are other independent verifiers we can use to establish that our colour vision is reliable.

In the context of our everyday lives, we implicitly assume that we have reliable independent verifiers in the form of other people who have agreed with us on colour judgements. When we question whether our verifiers' colour vision is reliable or not, we broaden the domain of the question to include possible worlds in which all of our faculties of colour vision are unreliable in the same way.

One solution to this is to keep adding more and more independent verifiers until the extent of the domain of the question reaches a point where we have a majority (i.e. more than half of the world's english speaking population) agreeing on the screen being red, or blue, or whatever colour it may be. At this point we may turn to the intuitively appealing idea that the meaning of a word for a population depends on how the majority of the population uses that word. In this case, the meaning of the word "red" would be nothing more than the colour experience that we are having right now.

This may sound like a lot of work, but in fact we (at the point where we are reading this) already have a multitude of independent verifiers for our colour vision. These independent verifiers take the form of not only other people, but also of children's books which label the colour shown on the page, descriptions of paintings which analyse the use of colour by the artist, those little coloured strips you find in paint shops, which give increasingly poetic names to the shades of blue, and many other things which we have experienced and take for granted in our everyday lives. Of course, all of these have human origins and each reflects an agreement between a multitude of people who have

had their colour vision corroborated by the same kinds of independent verifiers.

And if we should still have doubts about our colour vision despite all of these independent verifiers, there are specific tests designed to check how well our colour vision works - such as the Farnsworth-Munsell 100 hue test[30] - which have been designed and established as a reliable means of determining not only whether one has colour blindness, but also the extent and type of colour blindness one has. Should the father and son have made use of all of these independent verifiers, it seems like they would certainly be able to claim knowledge that their colour vision is reliable - at least until some or other radical skeptical hypothesis is made salient.

The use of these independent verifiers to establish the reliability of our colour vision certainly does not seem to allow us to come to know that our colour vision is reliable too easily and, on the other hand, it does not seem too difficult either. In fact, I believe it truly reflects how it is that we come to know that our colour vision is reliable. As it is with colour vision, so too should it be with our other faculties.

I mentioned previously[31] that Becker's (2013) claim that, when we are examining the reliability of a belief forming mechanism, the band of possible worlds that we need to examine is wider than when we are assessing lower level knowledge is *ad hoc*. By adopting contextualism, this problem would disappear - the size of the band of possible worlds that we need to assess when dealing with a proposition is not arbitrary, nor is it different for different propositions within the same claim; rather, the domain of a conversation determines the size of the band of possible worlds relevant to assessing all propositions in the same conversation. In a limited context, we might say that the father knows he sees a red table, however, if someone were to broaden the domain by an utterance of "but is his colour vision reliable?" then the band of possible worlds relevant to assessing *both* whether the father knows his colour vision is reliable, and whether he knows that the table is red expand by the same degree.

At this point, one might wonder why I have not advocated for Ichikawa's (2011) theory as a solution to the problem of easy knowledge. In all honesty, I believe Ichikawa's theory is

[30] See Kinnear and Sahraie (2002)
[31] See my footnote 27.

equally capable of overcoming the problem - but my project, as I stated in my introduction, was to find a *reliabilist* solution to the problem of easy knowledge. Ichikawa's theory, for all its merits, has a strong evidentialist slant, which makes it unsuitable for this purpose. However, for those who advocate evidentialism over reliabilism, one need look no further than Ichikawa (2011) for a promising solution to the problem of easy knowledge.

Conclusion:

In this paper, I have examined five philosophers' solutions to the problem of easy knowledge. While three solutions showed promise, the rest fell prey to a number of difficulties and problems which, I think, makes them untenable. Two of the solutions which showed promise were those of Klein (2004), and Becker (2013) - each of which offered a decent, albeit still problematic, solution to the problem of easy knowledge. In both cases, I suggested these philosophers adopt a contextualist approach.

With regards to Klein (2004), I was vague on this point - mainly because my project in this paper was to find a reliabilist theory of knowledge which could avoid the problem of easy knowledge, and Klein's theory is foundationalist. With regards to Becker (2013), I brought in Ichikawa (2011) in order to fix some of the problems I found with Becker's solution. Ichikawa (2011) was the third promising theory, and is perfectly capable of solving the problem of easy knowledge in its own right - however, I rejected Ichikawa's solution for the same reasons I did Klein's - Ichikawa's solution if evidentialist, and I was looking for a reliabilist solution.

While I initially planned to include a further section exploring contextualism - as it is one of the main adjustments I suggested to improve those theories which failed - I was eventually unable to find the space for it in this paper. Instead, I chose to explore the theories themselves in greater depth. As such, while the discussion on contextualism is sorely missed, I have contented myself with the thought that, were I to have included it, I would not have had the space to discuss each of these philosophers in the depth that I have.[32]

[32] My warmest thanks to Dr. Dean Chapman for his tireless supervision, particularly over the final weeks of this project; and to the reader for engaging with this work. I hope that it was as interesting to read as it was to write (though hopefully much less stressful.)

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