THE EPISTEMIC BASING RELATION

DISSERTATION

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The epistemic basing relation is the relation occurring between a belief and a reason when the reason is the reason for which the belief is held. It marks the distinction between a belief's being justifiable for a person, and the person's being justified in holding the belief. As such, it is an essential component of any complete theory of epistemic justification.

I survey and evaluate all theories of the basing relation that I am aware of published between 1965 and 1995. These include causal theories, (such as those discussed by Paul Moser, D. M. Armstrong, etc.), theories involving pseudo-overdetermination (counterfactual) relations (as discussed by Marshall Swain, Jonathan Kvanvig, George Pappas, etc.), theories involving what a person would appeal to in defense of her beliefs (Keith Lehrer), and doxastic theories (Robert Audi, Joseph Tolliver, Richard Fumerton, etc.), involving an appeal to meta-beliefs. My discussion of these theories includes a detailed analysis of variations of Lehrer's case of the gypsy lawyer which, I show, can be reformulated to pose a decisive objection to causal theories, if not causal analyses, of the basing relation.

Rejecting all published theories, I present a new kind of causal analysis of the basing relation which I call the causal-doxastic theory. This theory states that a belief is based on a reason if the reason bears an appropriate causal relation to the belief, or, it does not bear such a causal relation, but an appropriate meta-belief is present. A causal analysis of
which meta-beliefs are appropriate is given, so as to count as inappropriate rationalizations, mistaken meta-beliefs, etc. In developing the causal-doxastic theory, I present a solution to the problem of deviant causal chains, a discussion of the causal sustaining of beliefs, an account of rejecting reasons, and a partial analysis of showing that one is justified. I then discuss implications of my theory regarding foundationalism, inference, basic and non-basic belief, holistic and linear coherentism, process reliabilism, (accessibility) internalism and externalism, and various closure (transmission) principles.
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CHAPTER 1

INTRODUCTION

A belief is epistemically justified when it is based on adequate reasons. Accounts of epistemic justification may be understood to involve two distinct projects. The first, and the most widely discussed, project is the development of a theory of adequate reasons. Theories of adequate reasons attempt to answer the question "What makes a reason sufficient to justify a belief?" Theories about the structure of justification, such as versions of foundationalism or versions of coherentism, are examples of theories of adequate reasons. The internalist/externalist debate also occurs largely within the project of developing a theory of adequate reasons. Internalists hold that a person’s reasons are adequate to justify her belief only if she has some sort of access to them, whereas externalists deny this.

The second project involved in giving any complete account of epistemic justification is the project of developing a theory of what it is for a belief to be based on reasons. This second project has been somewhat neglected by epistemologists, and this is unfortunate because the two projects, while at times orthogonal, are nonetheless related to each other
in important ways. My aim in this dissertation is to provide a detailed
discussion of theories of the basing relation.

As Gilbert Harman has noted, a belief is based on a reason when
that reason is the reason for which that belief is held (Harman 1973, 26).
While the basing relation is widely recognized as a necessary condition
for a belief's being justified, it has never been the subject of a proper
detailed treatment in the literature. As William Alston recently observed,
"the role of post-origination bases in justification is a complex matter, one
not at all adequately dealt with in the epistemological literature." (Alston
1989, 229).

The following example illustrates why a belief must be based on a
reason if it is to be justified. Suppose Schubert knows that lemons are
yellow and that lemons are fruits. But when asked whether any fruits are
yellow, she, being distracted by more pressing thoughts at the time, draws
a blank. So she consults her Magic Eight Ball which reports "Outlook
Good" when asked if some fruits are yellow. Thus Schubert comes to
believe that some fruits are yellow not by means of inference from her
knowledge of lemons or anything else, but merely as a result of consulting
her thoroughly unreliable Magic Eight Ball. Schubert has the true belief
that some fruits are yellow, and she possesses good reasons for believing
that some fruits are yellow, but she is not justified in believing that some
fruits are yellow. This is because her reasons bear no appropriate relation
to her belief. That she came to believe something she has good reasons to
believe is a mere coincidence of the sort we take to indicate a lack of
justification.
In general, it is not enough that I merely possess good reasons for a true belief for me to know it or to be justified in believing it: in addition, those reasons must be the reasons for which that true belief is held. In other words, there is a distinction to be made between justified and justifiable belief (Pollock 1986, 81). A belief is justifiable for a person S when S possesses reasons sufficient to justify the belief, but has not made any appropriate connection between the reasons and the belief, and consequently those reasons do not justify her belief. The appropriate connection would be the belief's being based on the reason. A belief is justified for S when S possesses reasons sufficient to justify the belief and has made an appropriate connection between her reasons and her belief. Thus, a necessary condition of a belief's being justified is that that there be a basing relation from adequate reasons to the belief. The relation which exists between a belief and a reason when that reason is the reason for which the belief is held is the basing relation.

Thus, one thing an adequate theory of the basing relation must provide is an explanation of why it's the case that a person S's merely possessing good reasons for the belief that p is not sufficient for the belief that p to be justified or known by S. Any theory of the basing relation that fails to provide such an explanation should be rejected.

The following overview should provide a useful road map to the issues discussed in this dissertation.

There are four main types of theories of the basing relation presented in the literature.¹ I survey all four types in chapter two. The first

¹My discussion of the literature begins (chronologically) with discussions in the mid-1960's by Harman and Lehrer. There are a few earlier discussions from the 1950's which I do not address in the text. These are found in (Brown, D. G. 1955a, b), (Brown,
type I call appeal theories. Appeal theories, suggested (then later rejected) by Keith Lehrer, state that a person bases her belief on a reason when she is disposed to appeal to that reason in support of her belief, e.g., in response to the question "How do you know that?" (Lehrer 1965). One difficulty in developing such a theory is determining exactly under what conditions the appeal must be made. Certainly the appeal must at least be sincere, but sincerity is not enough for at least two reasons, both suggested by George Pappas (Pappas 1979b, 55). The first reason is that one might appeal to evidence for some audiences but not others. For example, one might give the reasons for believing that one's marriage was going to break up one way to a child, another way to one of the spouses relatives, and yet a third way to a close buddy after a few drinks. Each explanation might differ significantly from the other two, yet all be equally sincere. Intuitively, the reasons given to the buddy could be the basis of the belief even though he would not appeal to those reasons in front of children. The second reason that sincerity is not enough is that one might be mistaken about the basis of one's own beliefs, hence unable to appeal to one's real reasons. For instance, suppose I have complete faith in a charlatan psychologist who tells me that my belief that UFOs are coming to take me away is based on my subconscious belief that illegal aliens will take my job. I might thus appeal to my belief that illegal aliens will take my job to support the belief that UFOs are coming to take me away even though I in fact have no subconscious belief that illegal aliens will take my job and my belief that UFOs are coming to take me away is actually

R. 1957), (Welsh 1957), (Lenz 1958), and (Joske 1963). Some of the foregoing are discussed in (Longino 1978). The earliest discussion of the basing relation I cite is G. E. Moore's, dating from 1919, in (Moore 1962, 7-8).
based on my belief that everything on "The X-files" is true. Given the number of ways an appeal can be mistaken, it looks as if appeal theories will not be successful.

The second type of theory of the basing relation, and the most widely discussed, is the causal theory. Roughly, causal theories state that a belief is based on a reason when that reason helps to cause the belief to exist or to continue existing. On the terminology I am using, causal *theories* of the basing relation are a subclass of causal *analyses* of the basing relation. Causal theories assert not only that the basing relation is to be analyzed in causal terms, but that it is to be analyzed only in terms of a very narrow class of occurring causal relations: those involving a causal chain of events from a reason to a belief. There are other kinds of causal analyses of the basing relation. What I call pseudo-causal theories of the basing relation analyze the basing relation (at least in part) in terms of counterfactual causes. Causal-doxastic theories of the basing relation involve appeal to occurring, but more complicated (compared to causal theories) causal chains relating reasons and beliefs.

Causal theories of the basing relation face two main problems: the problem of deviant causal chains and the problem of gypsy lawyer style counter-examples. We can illustrate the first problem this way. Suppose I see Cindy enter the room, am stunned by her beauty (and come to believe that Cindy is quite beautiful), so stunned that I fall down a flight of stairs and land at the feet of the host of the party and thus come to believe that my host is wearing cowboy boots. My belief that Cindy is beautiful plays a causal role in my coming to believe that my host is wearing cowboy boots, but the latter belief is clearly not based on the former. I
argue that this sort of objection can be avoided if we require that the causal relation in question be internal to the cognitive structure of the believer.

A further difficulty faced by the causal theorist involves counter-examples such as Keith Lehrer's case of the gypsy lawyer (Lehrer 1971, 311). In the case of the gypsy lawyer, the lawyer is initially caused to believe that his client is innocent by a card reading. He later discovers a complicated line of reasoning proving his client innocent of the crime. The complicated line of reasoning bears no causal relation to the lawyer's belief that his client is innocent, due to the emotional factors surrounding the case. However, the lawyer recognizes that the complicated line of reasoning provides a good reason to believe that his client is innocent. That is, he has a meta-belief to the effect that the complicated line of reasoning shows that his client is innocent, and he takes the reasoning seriously. He does not doubt the quality of the reasoning at all, and he is not rationalizing. It seems clear that the complicated line of reasoning is one of the reasons for which he believes his client is innocent, even though there is no appropriate causal relation from the reason to the belief. Such counter-examples show that causal theories of the basing relation are inadequate.

A third type of theory of the basing relation is the pseudo-causal theory. Pseudo-causal theories state that a belief is based on a reason if either the reason causes the belief or the reason would have caused the belief under the appropriate circumstances. Pseudo-causal theories may thus avoid the difficulties posed by Lehrer's gypsy lawyer example by granting that there need not be an occurrent causal relation between
reason and belief for the latter to be based on the former, and account for the fact that the lawyer's belief is based on the complicated line of reasoning by stating that the reason would have caused the belief (under certain circumstances). For instance, on Marshall Swain's version of the pseudo-causal theory, one supposes that both the reason and the belief had occurred, nothing else had caused the belief, and the lawyer's epistemic situation is as little changed as possible from that of the actual world. If, in this situation, the reason would have caused the belief, then the belief is based on the reason in the actual world (Swain 1981, 82-92)).

The objections to Swain's theory in the literature have foundered as a result of misconceiving the nature of the counterfactual involved in specifying pseudo-overdetermination. For instance, Lehrer apparently thought that the case of the gypsy lawyer was an effective counterexample to Swain's theory because if the actual cause (the card reading) had not caused the lawyer to believe that his client was innocent, then the complicated line of reasoning would not have caused him to believe it, because it is his belief that his client is innocent that caused the lawyer to discover the complicated line of reasoning. But Swain's theory does not merely say "the reason would have caused the belief if nothing else had," but rather it says that "the reason would have caused the belief if nothing else had and both the reason and the belief occurred." I argue that Jonathan Kvanvig makes a similar mistake in presenting a very complicated objection to Swain's theory (Kvanvig 1985).

In clarifying the relevant counterfactual (i.e., the counterfactual "would have caused the belief"), Swain suggests that it is crucial that the lawyer's epistemic situation in the possible world specified by the
counterfactual contain as few changes as possible from that of the actual world. It seems, however, that there may be two possible worlds containing the same number of changes in the lawyer's epistemic situation, yet in one world the lawyer's belief is based on the complicated line of reasoning and in the other world it is not, as I shall argue by means of a rather complicated example in chapter two. Simply minimizing the quantity of changes in the lawyer's epistemic situation is not sufficient. Rather, some qualitative account of the changes must be added to Swain's theory. The remaining difficulty is that it is not at all clear exactly which is the correct account of qualitative changes.

A fourth type of theory of the basing relation I call doxastic theories of the basing relation. According to doxastic theories, S's belief that p is based on a reason only if S has a meta-belief to the effect that the reason is a good reason to hold the belief that p. The meta-belief need not involve any sort of sophisticated knowledge of epistemology: it may involve non-technical concepts functionally equivalent to the relevant technical epistemic concepts. Richard Fumerton, Helen Longino, Joseph Tolliver and Robert Audi all defend doxastic theories of the basing relation.

One difficulty for doxastic theories is that young children and perhaps some non-human animals base beliefs on reasons though lacking any concept of something's being a good reason. Another undesirable feature of doxastic theories is that they cannot account for some beliefs being based on sensory or perceptual states. For example, I could see an elephant and thereby come to believe that there is an elephant before me even though I have no beliefs about seeing the elephant.
Having reviewed all of the various types of theories of the basing relation discussed in the literature (and all of the particular theories discussed), I conclude that none of them are adequate as they stand. Consequently, I turn to the development a new sort of theory of the basing relation.

My own theory of the basing relation, the causal-doxastic theory, is presented in chapter three. I begin with the strategy of modifying Swain's theory by replacing the element of pseudo-overdetermination with a doxastic requirement, creating what I call the causal-doxastic theory of the basing relation. According to the causal-doxastic theory, a belief is based on a reason if either the reason bears an appropriate causal relation to the belief, or, the reason does not bear an appropriate causal relation to the belief but the person has an appropriate meta-belief to the effect that a reason is a good reason to hold the belief. So the causal-doxastic theory includes both causal and what I call doxastic basing relations.

It is paramount to note that giving by up the causal theory of the basing relation, I am not giving up a causal analysis of the basing relation. As I argue in chapter three, doxastic basing relations are analyzable in terms of states of persons and the causal relations among them. Although those causal relations are more complicated than those suggested by causal theories of the basing relation, it is still a causal analysis that is being offered.

In developing my own theory of the basing relation, I begin with a discussion of the problem of deviant causal chains and I sketch a solution to it. Briefly, the solution involves identifying types of deviant causal chains. The first type involves causal relations transitive over non-reason states,
such as physical states external to the person or emotional states. Since
there cannot be epistemic reasons for or against such states, I argue that
basing relations are not transitive over them. Another type of deviant
causal chain involves causal relations which involve the transferring of
beliefs or reasons, e.g., recollections of beliefs from memory to
consciousness. I argue that the basing relation is also not transitive over
such recollection causes.

A second issue facing any causal theory of the basing relation
corns concerns reasons one acquires for a belief one already possesses. In such
cases, the newly acquired reasons cannot cause the belief to exist
because it already exists. Some have argued that this shows that causal
theories of the basing relation are flawed (Lehrer 1990, 169). I respond
by developing an account of such cases according to which the reason
causes a reinstatement of the belief state which is appropriately related to
the same proposition as the original belief state. I explain in some detail
the causal structure of such cases.

Next, I turn to arguments for the claim that certain meta-beliefs can
establish basing relations. One argument I present for this claim involves a
comparison of two examples: the case of the gypsy lawyer (discussed
above) and the case of the doubtful gypsy lawyer.

The case of the doubtful gypsy lawyer is just like the case of the
gypsy lawyer except that the lawyer doubts (does not believe) that the
complicated line of reasoning is a good reason to believe that his client is
innocent. In such a case, it seems clear that the lawyer does not base his
belief that his client is innocent on the complicated line of reasoning. Thus,
when the meta-belief to the effect that the complicated line of reasoning is
a good reason to believe that his client is innocent is present, so is the basing relation. And when the meta-belief is removed, and all else is kept the same, the basing relation is not present. This is evidence that meta-beliefs are sometimes sufficient to establish basing relations.

An important feature of the foregoing argument is that it does not rely on any account of justification. Rather, it relies merely on our pre-analytic intuitions regarding the presence of a basing relation. This is important because, in chapter four, I shall argue that the causal-doxastic theory poses a problem for process reliabilist theories of justification, according to which a belief is justified only if it is produced by a reliable process. (It can also be plausibly argued that the gypsy lawyer's meta-belief makes it the case that he is justified in believing that his client is innocent, and since a beliefs being justified by a reason entails that it is based on that reason, the relevant basing relation must exist).

Another argument that meta-beliefs can establish basing relations, by contrast, does depend on an internalist account of justification. I argue that, under some circumstances, showing that one is justified in holding a belief is sufficient to make it the case that one is justified in holding the belief. I then argue that one can show that one is justified in holding a belief even though there is no causal relation from one's reasons to one's belief.

Having established that meta-beliefs can establish basing relations, I then offer a causal analysis of such meta-beliefs which distinguishes meta-beliefs which establish basing relations, from those that do not.

Finally, I offer an account of what it is to reject a reason. I suggest that, roughly, a reason ceases to be a reason for which one believes p
when one has a meta-belief to the effect that a reason is no longer a good reason to hold the belief that p. I also respond to some potential objections to my theory of the basing relation.

In the fourth and last chapter, I discuss some of the implications of the causal-doxastic theory of the basing relation. For example, I show that the causal-doxastic theory of the basing relation provides an account of both inferential and non-inferential basis relations. In short, a belief is inferred if it is based on another belief, whereas a belief is not inferred if it is based on a perceptual or sensory state. My account of the basing relation thus permits an account of both basic and non-basic beliefs. I also argue that holistic coherentism need not be vulnerable to the charge that it cannot distinguish justified from justifiable belief. I argue, for example, that the causal-doxastic theory of the basing relation can be combined with a coherentist theory of justification in order to avoid this charge (although I do not defend a coherentist theory of justification).

Next, I turn to the debate between accessibility externalists and internalists. The accessibility internalists hold that, in order to be justified in holding a belief, one must (at least potentially) be aware of one's reasons for a belief as well as their being sufficient to justify the belief. Accessibility externalists deny this. I develop an exhaustive typology of kinds of accessibility internalism and externalism, and argue that, given the causal-doxastic theory, a number of them must be rejected. Although the causal-doxastic theory does not determine what sort of accessibility internalism or externalism is correct, it sets the stage for further discussion of the issue. I go on to argue that a particular sort of accessibility internalism is true.
Another implication of the causal-doxastic theory of the basing relation is that process reliabilism is false. Process reliabilism is the view that a belief is justified if it is produced by a reliable process. It is unusual among theories of justification in that a causal theory of the basing relation is built into its theory of adequate reasons. Since, according to the causal-doxastic theory, a belief may be based on a reason which does not cause it, and since the reason may be an adequate one, it follows that a belief may be justified even if it is not produced by a reliable process.

Finally, I turn to a discussion of various formulations of the principle of closure. One version of the principle of closure, the principle of closure for knowledge, asserts that if a person S knows p, and also knows that p logically entails q, then S knows q. Since knowledge that p entails q does not entail that one actually believes q, the principle is false. This argument against the principle can be defended by appeal to the causal-doxastic theory of the basing relation. The causal-doxastic theory analyzes the basing relation in terms of causal relations, and it is logically possible for the relevant causal relations to go awry. One may know that p and know that p entails q, but to know that q by virtue of knowing p and knowing that p entails q, the belief that q will have to be based on the belief that p as well as the belief that p entails q. But knowing that p and knowing that p entails q does not imply that there is an appropriate causal connection involving the belief that p and the belief that p entails q such that the belief that q is based on the belief that p. Since knowing q requires the presence of the appropriate basing relation, the principle of closure for knowledge is seen to be false. I go on to argue that the principle of
closure is properly understood as a logical principle, not a psychological principle.
CHAPTER 2

A SURVEY AND EVALUATION OF PROPOSED THEORIES OF THE BASING RELATION

2.0 Introduction

Despite the importance of the basing relation, there are few published analyses of it. Those analyses that have been published fall into four different families. First, it is sometimes suggested that a belief is based on reason if one is disposed to appeal to that reason in support of the belief (Lehrer 1965, 56-57). I shall label such theories of the basing relation appeal theories of the basing relation. A second family of theories of the basing relation are the causal theories. According to such theories, a belief is based on a reason if that reason causes one to hold the belief. Such theories I will call causal theories of the basing relation.

A third sort of theory of the basing relation holds that a belief is based on a reason if that reason would, in the appropriate circumstances, have caused the belief. I shall call such theories pseudo-causal theories of the basing relation. The fourth kind of theory asserts that a necessary condition for a belief that p being based on a reason is that one possess a meta-belief to the effect that the reason is a good reason to hold the
belief that p. I shall call such theories doxastic theories of the basing relation.

In this chapter I shall survey all four kinds of theories. Since there are a limited number of theories that have been published, I will not be at all selective in choosing which theories to discuss. I will present and evaluate every theory presented in the literature that I am aware of. As I review the different theories, I will construct a set of criteria for testing whether a belief is based on a reason. These criteria will not themselves be part of an analysis of the basing relation, but will describe what may count as at least circumstantial evidence of the presence of a basing relation. These criteria will then be used to help guide us regarding problem cases. In addition, in this chapter I will present some essential background for my own theory of the basing relation.

2.1 Appeal theories: Lehrer's early suggestion

In the mid-1960s, Keith Lehrer offered, in passing, a kind of appeal theory which he has since rejected (Lehrer 1971, 311). He wrote,

What I mean by saying that a person's belief is not based on certain evidence is that he would not appeal to that evidence to justify his belief. (Lehrer 1965, 56).

Perhaps what Lehrer intends to express is the view that a person S bases her belief that p on evidence if and only if S would appeal to that evidence to justify her belief. Initially, such a theory may seem plausible given the sort of example Lehrer discusses. For instance, suppose a
detective hears truthful testimony from a reliable witness that Brentano committed the crime, but rejects that testimony in favor of testimony from an ignorant meddler who also claims that Brentano committed the crime. The detective's belief that Brentano committed the crime is not justified because it is based on his belief about the testimony from the ignorant meddler and not that of the reliable witness. The appeal theory seems to account for such examples. Since the detective would appeal only to the testimony of the ignorant meddler, his belief is not based on the testimony of the reliable witness, and this explains why his belief that Brentano committed the crime is not justified (Lehrer 1965, 56-57).

Lehrer suggests this theory as an aside and does not spell out exactly what conditions must obtain for the counterfactual condition ("would appeal") to hold. This makes the view difficult to evaluate. Interpreted most literally, Lehrer's comment suggests that if there is any situation in which a person would not appeal to some evidence to justify her belief, then her belief is not based on the evidence. But such an interpretation is uncharitable, for certainly there are some situations in which one would not appeal to one's evidence for a given belief even though the belief is clearly based on the evidence. For example, I might have numerous reasons to believe that Wittgenstein's ordinary language argument against the skeptic is unsound, yet be unwilling to appeal to any of my reasons because a deranged epistemologist is threatening to shoot me if I do so. I might even be unwilling to appeal to my reasons in my own thoughts if the deranged epistemologist has a Brain-o-scope® which tells him exactly what I am thinking. There are also less dramatic situations in which I might be unwilling to appeal to my reasons for my beliefs, e.g., if I
think that appealing to my real reasons might offend my audience or that my audience might not understand my real reasons (Pappas 1979b, 55).

A more charitable interpretation of Lehrer's theory is that the appeal to one's reasons must occur only under certain circumstances if it is to indicate the presence of a basing relation. The problem then is determining the circumstances under which the appeal must take place. For instance, must it be a sincere appeal? Could the circumstances be such that a person is mistaken about the real basis of her belief? Must one appeal to the evidence at the time the basing relation obtains, or can a basing relation obtain even if one never appeals to one's evidence? It is not clear whether all the details can be worked out in a satisfactory way.

In addition, any attempt to develop an appeal theory by means of an account of the circumstances in which an appeal must take place is going to have to avoid the following three potential difficulties. The first is an argument that appeals to reasons are not sufficient to establish basing relations. As noted by Gilbert Harman, there may be situations in which I appeal to reasons for my belief even though they are not my real reasons (Harman, 1973, 26-27). This might occur, for example, when I believe that my audience will not accept the reasons for which I believe, but I think they will accept some other reasons which I happen to reject.

A second difficulty for the appeal theory noted by Harman is that an individual might not have conscious access to her reasons for what she believes, hence be unable to appeal to them (Harman 1973, 27-28).

George Pappas presents a similar objection which purports to show that a person might not appeal to his evidence for any audience despite the fact that his belief is based on that evidence (Pappas 1979b, p. 55-56). He
suggests that this might occur where someone mistakenly believes that he knows something non-inferentially when in fact he knows it on the basis of some propositional evidence.

Pappas does not give a detailed example of such a case, but perhaps the following illustration will suffice: Suppose that Wiley comes to know many propositions concerning the nature and appearance of road runners: he reads books about roadrunners, he looks at drawings of road runners, he looks at pictures of road runners, he watches movies of road runners, he goes to the zoo and watches the road runners, to the point that his head is swimming with images of road runners. Wiley then goes on a drive in the desert in search of road runners and sees a blur across the road. Wiley’s propositional evidence tells him that any small blur across the road is probably a road runner, and on the basis of this he comes to know that he saw a road runner. But since his head is swimming with images of road runners, Wiley mistakenly believes that he actually perceived a clear image of the road runner (when all he actually saw was a blur). When asked (by someone else or reflectively) to justify his belief that he saw a road runner, he appeals not to his propositional evidence, but rather to the clear image he mistakenly believes is of the road runner he saw. Yet Wiley’s belief that he saw the roadrunner is actually based on (and justified by) his propositional evidence about roadrunners, and this is so even though he would never appeal to his propositional evidence (because he has unknowingly deceived himself regarding the reasons for his belief).

A defender of the appeal theory could respond to this objection that the appeal would have occurred in the absence of any self-deception.
regarding one's reasons, and that this is sufficient, in the example of Wiley, for his belief about the roadrunner to be based on his propositional evidence. The problem with such a response is that it requires the appeal theorist to develop an account of the circumstances under which the counter-factual "would have appealed" holds that does not presuppose an account of the basing relation, lest the proffered analysis beg the question. As I shall argue below against the pseudo-causal theory, such appeals to counterfactuals appear unable to provide an independent analysis of the basing relation.

One final difficulty affecting appeal theories concerns cases where one would appeal to certain reasons for a belief only when pressed to justify the belief. For instance, one might be asked "How do you know that?" or one might simply reflect "What are my reasons for believing this?," and appeal to newly created reasons only when so pressed. The difficulty is that the reasons appealed to may not be the actual reasons for which one believes prior to being pressed. For example, suppose I currently believe that God does not exist *solely* because The Bible seems to me to be on par, in terms of it's reliability, with the *Weekly World News*. I have never in the past nor do I currently believe that God does not exist on the basis of any version of the argument regarding evil. I may currently be disposed, however, to create and appeal to a version of the argument regarding evil to support my atheism whenever I am pressed to justify it. My belief that God does not exist is not based on any belief about the argument regarding evil prior to the time I am pressed, but the appeal theory appears to count it as so based.
In conclusion, I do not believe an appeal theory can be made to work. I stated in section 2.0 that I will try to draw from my evaluations of theories of the basing relation criteria to help inform our intuitions regarding the basing relation. One such criterion is that if there is a disposition to spontaneously appeal to a set of reasons one currently possesses in support of a belief, then, in the absence of defeating evidence, this is prima facie evidence that the belief is based on those reasons. Of course, this is not conclusive evidence of the presence of a basing relation (and, in certain circumstances, it may not be any evidence at all). While, because of the difficulty of determining when all else is equal, this criterion will not provide an adequate analysis of the basing relation, the presence of the appropriate disposition to appeal to reasons in a given situation may serve as circumstantial evidence of the presence of a basing relation. We will simply have to determine whether the sorts of difficulties facing appeal theories are relevant to a given hypothetical example and, if not, then we may assume that all else is equal.

2.2 Causal theories of the basing relation

2.2.1 Background for causal theories of the basing relation

Reasons, as I shall use the term, are certain kinds of causally efficacious intentional states of persons, including beliefs as well as perceptual and sensation states. Examples of perceptual states include the state of there being a red patch in my visual field, the state of my being audibly appeared to in a high-C like fashion, and other such states
resulting from the five senses. Perceptual states are private states of persons, and one may be directly aware of them, but they do not entail that what seems to be perceived (e.g., an apple) actually exists. Examples of sensation states include being in pain, being thirsty, feeling feverish, feeling woozy, feeling nauseous, and feeling tired. Sensation states need not be (and usually are not) the result of the stimulation of nerve endings in our sensory organs.

Reasons are capable of causing beliefs, much as they are capable of causing actions (Davidson, 1963). For instance, my feeling pain might cause me to believe that I am in pain, or my seeing a certain red patch in my visual field may cause me to believe that there is an apple before me. Similarly, my beliefs about the meanings of various words might help cause me to believe that all bachelors are unmarried men. Note that what I am calling reasons are actually potential reasons, states of a person which could (logically, at least) cause some belief, but need not actually cause any belief in order to be a reason. Although the terms 'belief' and 'reason' are sometimes used in a different way, understanding beliefs and reasons as causally efficacious states of persons does correspond to a common usage of those words.

It is very common to cite a person's reasons when explaining why they believe what they do. Such causal explanations are often useful and reliable predictors of a person's beliefs and actions. Consequently, any plausible theory of human reasoning or behavior (construed broadly to include belief formation) will have to account for the apparent causal relations among reasons and beliefs. For this reason, it is legitimate to treat reasons as causally efficacious states of persons.
Causal reasons as I have described them may be distinguished from epistemic reasons. Epistemic reasons are propositional reasons which we take to be relevant to whether a person is justified in what they believe. Epistemic reasons may be good reasons to believe or bad reasons to believe. The relation between a person's (propositional) belief and her epistemic reasons for it is the basing relation. Thus, the basing relation is the relation holding between a reason and a belief when the reason is the reason for which the belief is held.

According to causal analyses of epistemic reasons, epistemic reasons supervene on causal reasons. Causal theories of the basing relation offer a causal analysis of the basing relation according to which a belief is based on a reason if the reason produces or causally sustains the belief. It is possible to have a causal analysis other than a causal theory if the causal analysis occurs in terms of causal relations other than those involved in the production or sustaining of the belief. An example of such an analysis is offered in chapter three.

Causal theories of the basing relation analyze the basing relation in terms of certain causal relations. Causal theories explain, among other things, how one could possess adequate reasons for a belief, and yet not be justified in holding the belief. This can happen when one fails to make any connection between the reasons and the belief. On a causal theory of the basing relation, this would be explained by the fact that the reason played no role in causing the belief.
2.2.2 Causal theories of the basing relation

A common view among epistemologists is that a belief's being based on a reason somehow involves the reason's causing or causally sustaining the belief (Plantinga 1993, 69; Adams 1993, 54; Millar 1991, 53; Alston 1989, 228; Moser 1989, 157; Pollock 1986, 37; Goldman 1986, 207; Goldman 1979, 8-9; Davidson, 1986, 311; Audi 1986, 237; Fumerton 1985, 51-52; Swain 1981, 74; Dretske 1981, 90; Dretske 1971, 58; Firth 1978, 219; Armstrong 1973, 81; Armstrong 1968, 203; Deutscher 1969, 97). However, some have claimed that all purely causal theories are inadequate (Kvanvig 1992, 106; Lehrer 1990, 168-170; Lehrer 1974, 124-125; Lehrer 1971, 311-313; Pappas 1979b, 56), and others prefer to withhold judgment (Conce and Feldman, 1985, 345n22). No one, to my knowledge, has presented a detailed analysis of the basing relation solely in terms of causal relations.

One feature of causal theories of the basing relation that makes them appealing is that they can provide a natural account not only of beliefs based on other beliefs, but also of beliefs based on various non-belief states, such as perceptual or sensation states (Swain 1981, 81). One advantage to providing an account of beliefs based on such non-belief states stems from the fact that such states often justify one's holding certain beliefs. My perceiving an apple, for instance, may result in my justifiably believing that there is an apple before me. A theory of the basing relation which accounts for beliefs based on perceptual and sensation states will

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2 Kornblith also seems to sympathize with the causal account, although he is careful to state that there is a dependence relation from belief to reason, and only suggests that this dependence relation is causal (Kornblith 1985, 118-119).
thus help to explain how it is that such states can provide us with justified beliefs. Another advantage has to do with the undesirability of infinite linear chains of justification. One way to stop such regresses is by means of appeal to basic beliefs, and on most accounts of basic belief, perceptual and sensation states are an important source of their justification. Thus, an account of basing relations which explains how basic beliefs are based on non-belief states such as perceptual or sensation states will help explain how it is that such states can be relevant to the justification of basic beliefs.

A second reason why it is desirable to account for the basing relation in terms of causal relations concerns process reliabilism, the view that a belief may be justified or known by virtue of being caused by a reliable process. An account of how reasons are related to beliefs might help explain how a belief could be justified by such a process.

We might formulate an initial (and problematic) version of a causal theory of the basing relation as follows:

(CT 1) S's belief that p is based on a reason r\(^3\) at time t iff either r causes, causally overdetermines or causally sustains, at or prior to t, S's belief that p, or r contributes to the cause, causal overdetermination or causal sustaining, at or prior to t, of S's belief that p.

Two reasons causally overdetermine a belief when each is sufficient to cause the belief and there is an appropriate causal chain of events\(^4\) from each to the belief. The need to include overdetermination as

\(^3\)r being a member of the set of reasons R, having one or more members, and consisting of all the reason(s) upon which S's belief that p is based. Thus, a belief may be based on several reasons.

\(^4\)I take the phrase 'causal chain of events' as primitive.
a form of causation is illustrated by the following situation (based on Pappas 1979b, 56). Suppose that Roy completes a proof of hypothesis h and, just as Roy completes the proof, Reliable Ronette tells him that h. Roy's belief that h was caused by (and based on) both the testimony of Reliable Ronette and the proof he did. If the causal theory excluded cases of overdetermination as a form of genuine causation, then Roy's belief that h would get counted as uncaused and this would constitute a counter-example to such a theory.

A reason causally sustains a belief when it maintains the belief in existence after it has been caused. Causal sustaining is thus a kind of causal overdetermination. It is listed separately, however, for reasons I shall discuss in chapter three.

Often, a reason that has caused a belief will produce a causal chain of events or states which will causally sustain the belief. This explains, among other things, how it is that we may maintain a belief in light of reasons which would otherwise cause us to reject the belief. For instance, suppose my perceptual state resulting from reading in a reliable magazine that 500 million Elvis stamps were printed by the U.S. Postal Service has caused me to believe that the U.S. Postal Service printed 500 million Elvis stamps, and that the latter belief is based on the perceptual state. Some time later, I mention my belief to Zelda, and Zelda then tells me that I am mistaken, that in fact 800 million Elvis stamps were printed. Since I believe the magazine to be more reliable than Zelda, I insist that only 500 million stamps were printed.

The perceptual state which caused my belief about the 500 million stamps has ceased to exist, yet it is (in part) the reason I maintain my belief
in light of contrary testimony. My belief about the 500 million stamps is based on my belief that I read in the magazine that 500 million stamps were printed, and that belief is in turn based on the perceptual state. My belief that I read in the magazine that 500 million stamps were printed is what sustains my belief that 500 million stamps were printed. The former belief is based on the perceptual state, but is not sustained by it as the perceptual state no longer exists.

A reason contributes to the cause, causal overdetermination or causal sustaining of a belief if there is a causal chain of events from the reason to the belief, yet the reason alone is not sufficient to cause, causally overdetermine or causally sustain the belief. Thus, a belief does not contribute to a cause merely by permitting it to occur. Rather, the contributing reason must be an active cause, along with other reasons, of the belief.

(CT 1) faces a number of difficulties which I shall discuss in the next three sections.

2.2.3 Three causal theories of the basing relation

There are three published causal theories of the basing relation I am aware of: Max Deutscher's theory (Deutscher 1969, 97-118), D. M. Armstrong's theory (Armstrong 1973, 77-98), and Paul Moser's theory (Moser 1989, 156-158). I shall discuss each of these theories in chronological order. While none of these theories provide the details of the causal connection that (CT 1) does, each theory is compatible with those details and may be understood to include them.
2.2.3.1 Deutscher's theory

Deutscher's rather quaint article, entitled "A Causal Account Of Inferring," provides a more detailed, if slightly less sophisticated, discussion of inference than either Armstrong or Moser offer (Deutscher 1969, 97-118). Deutscher's article is the earliest I am aware of that discusses most of the major difficulties facing causal theories of the basing relation (albeit usually in terms of particular examples).

Strictly speaking, Deutscher offers not a theory of the basing relation but a theory of inference. One bases a belief on another belief or on a perceptual or sensation state, or some other intentional state of a person. By contrast, one infers from one proposition to another. However, since one infers by means of beliefs (e.g., the belief that p), any adequate theory of inference will subsume some theory of the basing relation. That subsumed theory of the basing relation will ordinarily be limited to beliefs based on other beliefs, rather than on perceptual or sensation states, and the theory Deutscher subsumes is no exception. Deutscher's theory of inference makes it quite clear that he subsumes a causal theory of the basing relation.

Deutscher's theory of inference is as follows:

A person S inferred that p at time tX from q's being the case, or from the 'supposed' fact that q, if and only if:

(1) S came to believe that p at tX,
(2) S already believed that q at tX,
(3a) S's state of belief that q was an operative condition [cause] of his coming to believe that p at tx,

(3b) If some observation X is an intervening factor between the belief that q and the belief that p, then the belief that q must be operative in producing the belief that p, in the circumstance that X obtains, and not merely operative for producing the circumstance X,

(4) At tx, S believes, in light of what he already believes, that r: the fact (or supposed fact) that q makes it at least not completely unreasonable to believe that p,

(5) The belief that r is a condition of S's coming to believe that q.

Condition (3b) is designed to avoid the problem of deviant causal chains. Deutscher's illustration of the problem is as follows (Deutscher 1969, 109). Suppose I believe that q, and I tell my friend that q. This causes my friend to infer that p from q, and my friend then tells me that p. I come to believe that p solely on the basis of my friend's claim that p is true. My belief that q has initiated a causal chain which results in my belief that p, but clearly my belief that p is not based on my belief that q. Deutscher's response is to rule out any causal chains involving "intervening factors," such as my friend's inference, unless the reason which caused the intervening factor has also produced the belief independently of the intervening factor. For example, if I was caused to believe p both by my friend's testimony and by my belief that q, then p would have been inferred from q by virtue of the uninterrupted causal relation from my belief that q to my belief that p.
One potential difficulty with condition (3b) is that it is not clear what Deutscher has in mind by 'observation X' other than it's involving a friend's inference. Is observation X simply any intentional state of a person? This would exclude a belief about my friend's inference occurring in the causal chain from the belief that q to the belief that p, but it would also have the counter-intuitive result that inference relations are not transitive. It seems clear that if I infer p from q and q from r, then I have inferred p from r. Similarly, my belief that p would be based on my belief that r.

Is observation X simply any event occurring between my belief that q and my belief that p? But suppose a belief's causing another requires a series of neuro-chemical reactions from one belief state to another. Such neuro-chemical reactions would include events occurring between my belief that q and my belief that p, but surely they would not prevent my inferring p from q.

To sum up, Deutscher does not make clear the distinction between a reason's being operative in producing the belief that p in the circumstance that X obtains, as opposed to the reason's merely being operative in producing the circumstance X which itself produces the belief that p. Deutscher's formulates condition (3b) in light of a single case, and fails to explain the general principles involved in the condition. Thus, it is not clear how to interpret this part of Deutscher's theory.

Deutscher includes condition (4), which requires that one believe that one's inference is not completely unreasonable, in order to avoid two counter-examples. The first counter-example, which I'll call the example of the spineless underling, involves a person who hates his boss but believes that he is rude to anyone he does not respect and also believes that he
will not be promoted if he is rude to his boss. As a result of these beliefs and a desire to succeed, he comes to believe that his boss is not such a contemptible person after all. However, he has not made any inference from the former beliefs to the belief that his boss is not contemptible. Rather, his beliefs have resulted in his pretending to like his boss, and this has led him, through force of habit, to revise his opinion of his boss. According to Deutscher, this example suggests that a person who infers should think his inference reasonable, as this would rule out the counter-example.

However, the second counter-example shows, according to Deutscher, that a person need not think her inference reasonable in order for it to be an inference. The example is a person who has come to believe that all Belgians are rogues because she was twice cheated by Belgians (Deutscher 1969, 112-113). Nonetheless, she recognizes that she has made an inference and that it is unreasonable.

So we have what Deutscher describes as a "pretty pickle": the first example suggests that a person who infers should think the inference reasonable, and the second suggests that a person who infers need not think the inference reasonable. Deutscher proposes to overcome the problem by adding condition (4) which requires that the person who infers must believe that it is not completely unreasonable to believe q given the fact that p. Deutscher claims that this condition is not satisfied in the first example, hence it is not a case of inference, and this seems to accord with our intuitions. Then Deutscher claims that the condition is met by the person who hates Belgians, and that this also accords with our intuition that she has made the inference (Deutscher 1969, 114). Deutscher
apparently assumes that when you recognize you are making an inference, you believe it is not completely unreasonable, at least at the time you make the inference. The person cheated by Belgians may think her inference unreasonable, but not completely unreasonable at the time she makes her inference.

Deutscher considers an objection to condition (4), and provides an unusual solution to it (Deutscher 1969, 114). The objection is that it seems clear that children can make good inferences even if they lack the epistemic concepts needed to formulate beliefs about what is or is not completely unreasonable. For instance, a child might reasonably infer that when its mother offers a teaspoon of food with an unusually bright smile, the spoon holds something nasty. Deutscher's solution is to waive condition (4) in situations in which the inference seems reasonable, and to require it where the inference seems unreasonable.

Condition (5), which states that the belief that r is a condition of S's coming to believe that q, is motivated by yet another example. Suppose you find that whenever you hear birds twittering, you could not help thinking that the third world war is imminent. You recognize that you are being unreasonable, but this has no influence over your belief. Since, according to Deutscher, it must be possible to say of someone's inference that it is reasonable or unreasonable, and this cannot be done in the case at hand, "it would be incorrect and unfair to say that you had inferred" (Deutscher 1969, 113). Deutscher claims that you "would be a subject of pity and commiseration rather than of criticism and logical education" (Deutscher 1969, 113). In this example, your belief that the move from reason to belief is not completely unreasonable exercises no control over
your belief that war is imminent, and so your thinking about birds causing you to believe war is imminent is not counted as an inference on Deutscher's theory. This is an idea taken up by Audi in his arguments against the case of the gypsy lawyer, so I shall pursue this issue when discussing Audi's arguments in section 2.2.5.

Deutscher's theory is developed in a rather ad hoc fashion and faces numerous problems, some of which I have pointed out. However, the issues he raises are central and important to discussions of the basing relation, and we will return to them throughout this dissertation. I now turn to two more recent theories of the basing relation, those proposed by D. M. Armstrong and Paul Moser.

2.2.3.2 Armstrong's theory

Armstrong's discussion of his causal theory of the basing relation begins with an informal account of sustaining causation. He writes, "In sustaining causation ... one state of affairs simply maintains another state of affairs in existence. Sustaining causation does not entail that anything changes. Pillars may sustain a roof. The pillar's presence underneath the roof is one state of affairs. It sustains, that is, maintains in existence, another state of affairs: the roof's staying up. Nothing need be happening." (Armstrong 1973, 80). On Armstrong's view, the relata of sustaining causes are states of affairs. The wording of the example suggests that Armstrong understands sustaining causes to be such that the
causal relation exists only if the relata exist. Armstrong's view seems to be that a reason cannot sustain a belief if the reason has ceased to exist.\footnote{This interpretation of Armstrong's account of sustaining is compatible with other illustrations of sustaining he uses, e.g., the brain probe objection which he discusses on p. 83 and which I discuss below. The alternative interpretation would be that a state of affairs may causally sustain another state of affairs even if the former state of affairs has ceased to exist. Moser seems to allow for this possibility, as I shall note below. It should be noted that Armstrong never explicitly decides the issue, and his examples are arguably ambiguous between the two interpretations of causal sustaining.}

Noting that a sustaining cause of a state of affairs need not be necessary for that state of affairs to occur, Armstrong introduces the notion of a weak sustaining cause. A weak sustaining cause is a sustaining cause which is sufficient, but which may or may not be necessary, to maintain a further state of affairs (Armstrong 1973, 80-81).

With these distinctions in mind, Armstrong presents his initial, rough suggestion: 'q' functions as (one of) [a person] S's reason(s) for believing p if, and only if, Bs[q S's belief that q] is a weak sustaining cause of Bsp [S's belief that p] (Armstrong 1973, 81).

Armstrong offers an argument for his theory involving what he calls "the method of subtraction." In the case at hand, the method of subtraction is the process of trying to think up a case where the reason does not cause the belief, yet the reason is a reason for which the belief is held. Armstrong notes that a person could put forward a reason as the basis of her belief, or that the person might believe that a reason was one of her reasons for holding her belief. But, Armstrong asks, if the reason did no work in the person's mind to support the belief, how could it be one of her reasons for what she believes? Satisfied that the answer to such a rhetorical question supports his view, Armstrong moves on to consider five objections to his view. The first objection is ineffective and so I shall not
discuss it. The fifth objection is that meta-beliefs may establish basing relations. I shall defer discussion of such meta-beliefs to the section of this chapter on doxastic theories of the basing relation, and I will return to this issue yet again in presenting my own theory of the basing relation. The three remaining objections result in Armstrong modifying his view, so I shall consider those next.

The first objection I’ll call the brain probe objection (Armstrong 1973, 83). Suppose S believes p and believes q, and there is no ordinary causal connection between the two beliefs. The two beliefs may even be completely unrelated to each other, e.g., one being about peas and the other about goats. However, there is an unusual connection between them. If S stops believing q, this will result in a brain probe which has been implanted in S's brain to seek out and destroy a few neurons in S's brain making it the case that S no longer believes p. Thus, S's belief that q weakly causally sustains her belief that p, but clearly her belief that q is not a reason for which she believes p.

Armstrong replies to this objection by noting that the problem stems from causal relations which occur outside one's mind. So he modifies his view as follows: 'q' is (one of) S's reason(s) for believing p if, and only if, Bsq is a weak sustaining cause, operating wholly within S's mind, of Bsp.

The next objection Armstrong considers is attributed to John Watling. Suppose that S believes p, but is preoccupied with another belief of his, the belief that q. S's belief that p is rather dubious, and were S not distracted by his (completely unrelated) belief that q, he would evaluate p and reject it. S's belief that q thus serves to causally sustain his belief that
p by preventing S from rejecting p, but S's belief that q is not a reason for which she believes p.

Armstrong notes that in this case, were the belief that q to have occurred prior to the belief that p, the former belief would have had no tendency to cause the latter belief. So part of what makes a belief a reason for another belief is that one has a general (if not infallible) disposition to form the latter belief whenever one forms the former belief.

The third objection I'll call the brain circuit objection. S might have two completely unrelated beliefs, for instance a belief that Socrates is snub nosed and a belief that there is water on Mars, and due to a brain circuit mis-firing, the former caused (and sustains) the latter belief. It is counter-intuitive to hold that the latter belief is based on the former.

Again, in the brain circuit objection there is no general disposition to form beliefs about Mars on the basis of beliefs about Socrates, hence the belief about Mars is not based on the belief about Socrates although the one caused the other. If the person did have such a disposition, then, odd as it sounds, the one would be based on the other according to Armstrong (Armstrong 1973, 88-89).

To handle both the second and third objections, Armstrong modifies his view as follows:

'q' is (one of) S's putatively conclusive reason(s)7 for believing that p if, and only if:

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6This observation of Armstrong's motivated Marshall Swain to develop his pseudo-causal theory of the basing relation, involving counterfactual relations between reasons and beliefs. Swain's theory is the subject of section 2.3.

7Armstrong notes that this account for putatively conclusive reasons also applies to other reasons (Armstrong 1973, 78).
(1) the dispositional condition: There exists some general proposition \((x) (\text{if } Fx \text{ then } Gx)\), such that \(q\) has the form \(Fb\), and \(p\) has the form \(Gb\), and such that \(S\) is disposed so that: if \(S\) believes something of the form \(Fx\), then this belief-state will both create (if necessary) and weakly causally sustain within \(S\)'s mind the belief that the corresponding proposition of the form \(Gx\) is true.

(2) the manifestation condition: \(S\)'s belief that \(q\) both creates (if necessary) and weakly causally sustains the belief that \(p\) within \(S\)'s mind.

'Fb' denotes a certain ordering of the idea-of-\(F\) and the idea-of-a-certain-individual (Armstrong 1973, 87). Thus, the quantifier ranges over tokens of ideas of individuals. Armstrong states that there may be propositions other than \((x) (\text{if } Fx \text{ then } Gx)\) which could, in addition, serve to fulfill the dispositional condition, and that he does not intend to exclude those (Armstrong 1973, 86). Finally, Armstrong states that the proposition \((x) (\text{if } Fx \text{ then } Gx)\) need not be true for the dispositional condition to be fulfilled. Since the dispositional condition is not met in either Watling's objection or the brain circuit objection, Armstrong concludes that neither constitutes a counter-example to the revised version of his theory (Armstrong 1973, 88-89).

I believe that Armstrong's theory ultimately fails for three reasons.

First, the manifestation (causal sustaining) condition is too strong. On Armstrong's view, a reason causally sustains a belief only so long as the reason remains in existence. However, a belief may continue to be based on a perceptual or sensation state even after the state has ceased to exist. For example, suppose I see a toad, and this causes me to believe
that there is a toad in the road. I then move on and I am no longer in the
perceptual state of seeing the toad. Nonetheless, my belief that there is a
toad in a road is still based on my seeing the toad. My seeing the toad is
one of the reasons I believe (and that justifies my believing) that there's a
toad in the road. It follows that a belief may be based on a reason even if
the reason no longer causally sustains the belief. The same would hold
where the reason is a belief.

Second, Armstrong's theory faces a counter-example in the case of the
gypsy lawyer. Since the case of the gypsy lawyer is a problem for all
causal theories, I shall defer discussion of it until later in this chapter.

Third, Armstrong does not specify what sort of disposition is
involved, at least not in terms of when it is activated. Without an adequate
restriction of the range of possible worlds in which the disposition gets
activated, virtually anyone will fulfill the dispositional condition regarding
any belief pair. As we shall see in some detail, what I call pseudo-causal
theories of the basing relation, which also involve such counterfactuals,
suffer from a similar problem. I now turn to Paul Moser's theory.

2.2.3.3 Moser's theory

Moser's theory is the most recent and the least detailed of the three
causal theories I examine (Moser 1985, 156-158). Moser distinguishes
between nonpropositional reasons (e.g., sensation or perceptual states)
and propositional reasons (e.g., beliefs), and offers a distinct definition of
the basing relation for each. For propositional reasons, Moser's definition
is this (Moser 1985, 157):
S's believing or assenting to P is based on his justifying propositional reason \( Q = \text{df.} \) S's believing or assenting to P is causally sustained in a nondeviant manner by his believing or assenting to Q, and by his associating P and Q.

For nonpropositional reasons, Moser offers this definition (Moser 1985, 157):

S's believing or assenting to P is based on his justifying nonpropositional reason X, consisting of S's subjective nonconceptual experiential contents = df. S's believing or assenting to P is causally sustained in a nondeviant manner by his experiencing X, and by his associating P and X.

Moser's account of the basing relation is distinct from (CT 1) in at least two important ways. First, he offers distinct definitions for propositional and nonpropositional reasons, even though his definitions of the two amount to largely the same thing. (CT 1) avoids the need for (virtually) redundant definitions by utilizing the definition of 'reasons' given above, which includes both propositional and nonpropositional reasons. Second, Moser limits his account of basing to justifying reasons, excluding reasons that fail to justify a belief, unlike the general characterization of basing relations I gave above. This is presumably because Moser motivates his discussion of the basing relation by appeal to a distinction between a belief's being justified for a person and a belief's being justifiable for a person (Moser 1985, 141). A belief is justifiable for a person, but not justified for that person, according to Moser, when she possesses adequate reasons for it, and does not base her belief on those adequate reasons but rather on some inadequate reasons.
Of course this motive is a good one, but an alternative approach would be to subsume it under the larger motive of developing an account of reasons for which one believes. This would lead one to develop a theory of the basing relation that accounts for beliefs based on inadequate reasons as well as adequate ones, as in (CT 1). The advantages of this approach as opposed to Moser's are that it provides a theory of the basing relation with greater explanatory power and it discourages one from building into one's account of the basing relation conditions necessary for justification but not necessary for a belief's being based on a reason. One thing I hope to accomplish with my own study of the basing relation is an account of it which will be neutral among all adequate theories of justification. Such a theory would describe a necessary condition of a belief's being justified, rather than a necessary condition according to some particular theory of justification. Moser is interested in developing his own particular account of justification, and utilizes his account of the basing relation to those ends. Of course, I do not mean to suggest that this is any criticism of Moser: I only wish to note that Moser's project differs from mine in some important ways.

Moving now to a discussion of the particulars of Moser's definitions (I'll focus on his definition regarding propositional reasons, with the understanding that my comments apply mutatis mutandis to the definition in terms of non-propositional reasons): each of Moser's definitions contains two conditions for a belief's being based on a reason, which I will refer to, respectively, as a causal sustaining condition and an associating condition. I'll discuss the associating condition first. The idea behind it is that the individual must be aware (and thereafter be disposed to become
aware) of the support a reason provides for the belief it justifies. Moser defines this associating condition as follows:

S currently satisfies an association relation between evidence E and belief $P = \text{df. (i) S has a } de \, re \text{ awareness of E's supporting } P,$ and (ii) as a nondeviant result of this awareness, S is in a dispositional state whereby if he were to focus attention only on his evidence for $P$ (while all else remained the same), he would focus his attention on E. (Moser 1985, 141).

The $de \, re$ awareness is presumably a non-propositional, direct awareness of S's own mental state (Moser 1985, 142). Corresponding to occurrent association relations are non-occurrent association relations, where condition (i) obtained at some time in the past and condition (ii) currently obtains. Both sorts of relation are sufficient to meet the associating condition in Moser’s definitions of basing.

One difficulty for the association requirement is the internalist requirement that in order to base a belief on evidence, one must at some time have been occurrently aware of the evidence supporting the belief. This condition seems vulnerable to a number of counter-examples. First, it seems that we can (and often do) base beliefs on evidence when we are not aware of all our evidence. For example, I could justifiably come to believe that the sun has spots because I read it in an astronomy textbook, and then later come to realize that, all along, my belief was also based on other evidence which was necessary for me to be justified in this particular instance, e.g., that the textbook is reliable, that the sun exists, etc. A second sort of counter-example occurs where one lacks even a minimal concept of support, as in the case of young children. For instance,
Spencer, a three year old boy, could justifiably come to believe that his book is blue even though he lacks any concept of a reason’s supporting a belief.

I think the difficulties with the association requirement are sufficient to show that Moser’s analysis is problematic. However, the causal sustaining condition of Moser’s definition of the basing relation also deserves comment. According to (CT 1), the causal theory discussed in the previous section, a belief may be based on a reason at time t if the reason caused the belief prior to t, even though the reason does not play any role in causally sustaining the belief at t. But on Moser’s account, the belief is based on the reason at time t only if the reason causally sustains the belief at time t. I objected to Armstrong’s manifestation condition (which also requires that the reason causally sustain the belief) that it seems intuitively clear that a reason may be the basis of a belief even though the reason no longer causally sustains the belief. Moser’s theory is not vulnerable to the same objection because Moser uses a different account of causal sustaining. Moser states that “We can understand causal sustenance as follows: barring causal overdetermination, if one had not associated P and Q, and believed or assented to Q, one would not continue to believe or assent to P” (Moser 1989, 157). On Moser’s account of causal sustaining, it is clear that a reason can causally sustain a belief even once the reason has ceased to exist.

Moser states that reason Q must causally sustain the belief P in a "nondeviant manner", but gives no account of nondeviance. Capturing what nondeviance amounts to here is a major problem for causal accounts of the basing relation, and so in this respect Moser’s account is
incomplete. I shall reserve discussion of this problem and my solution to it for chapter three.

I have argued that each of Deutscher's, Armstrong's and Moser's causal theories of the basing relation is problematic in ways (CT 1) is not. A further objection all four theories face is the problem posed by counter-examples such as the case of the gypsy lawyer.

2.2.4 The case of the gypsy lawyer

(CT 1) faces insurmountable problems. In particular, there are situations in which there has been no causal relation from reason to belief, yet the belief is still based on the reason. One example of such a situation is the case of the gypsy lawyer, the original version of which was raised by Keith Lehrer in response to a view expressed by Harman (Lehrer 1971).

The original case of the gypsy lawyer is this:⁸ The gypsy lawyer's client has been accused of eight very similar murders, and the lawyer has conclusive evidence that his client is guilty of seven of those eight, and everyone is convinced that the client committed all eight crimes. But the gypsy lawyer has absolute faith in the cards and happens to consult them with regard to his client. The cards tell him that his client is innocent of the eighth murder, and his faith in the cards convinces the lawyer that his client is innocent of the eighth murder. As a result of the card reading, the lawyer reviews the evidence and discovers a complicated line of reasoning showing that his client is innocent of the eighth murder. Thus,

⁸Other versions of this objection appear in Pappas 1979b p. 57-58; Lehrer 1990, 169-170.
the lawyer comes to know that his client is innocent. As Lehrer puts it, "This reasoning gives the lawyer knowledge. Though the reasoning does not increase his conviction - he was already completely convinced by the cards - it does give him knowledge. Moreover, he claims that it is this reasoning that gives him knowledge" (Lehrer 1971, 312). But the emotional factors surrounding the case are so strong that the complicated line of reasoning could not (and does not) cause the lawyer to believe that his client is innocent; only the lawyer's unshakable faith in the cards can do that.

The case of the gypsy lawyer is quite complicated and potentially misleading in several respects. First, it may be thought that the lawyer's believing that his client is innocent on the basis of his faith in the cards is unjustified, hence that the complicated line of reasoning cannot give him knowledge as Lehrer claims. This may be Alvin Goldman's concern. Goldman, in a footnote, states that "...I find this example unconvincing. To the extent that I clearly imagine that the lawyer fixes his belief solely as a result of the cards, it seems intuitively wrong to say that he knows - or has a justified belief - that his client is innocent." (Goldman, 1979, p. 22n8).

Unfortunately, this is all Goldman writes.

I don't believe that Goldman's concern addresses the ultimate point of the case of the gypsy lawyer. The point of the case is that a belief can be based on a reason even if the reason did not cause the belief, and this point is preserved even if we suppose that the cards are completely reliable, that the lawyer knows this, and that the lawyer's trust in the cards is epistemically justified rather than mere blind faith. The lawyer's motive for searching for the complicated line of reasoning would be the desire to
find evidence presentable in court. In this situation, the complicated line of reasoning could still increase the degree to which the lawyer is justified in believing that his client is innocent.

Another potential confusion is to hold that it would be impossible for the lawyer to recognize that the complicated line of reasoning is a good reason to believe that his client is innocent if the complicated line of reasoning cannot cause him to believe that his client is innocent. Such situations can and do occur. A good example of their occurrence would be a person who believes that there are good reasons to believe that God does not exist, but yet who cannot bring herself to believe that God does not exist.\(^9\)

Note that the complicated line of reasoning is not a cause, a causal overdeterminant or a causal sustainer of the lawyer's belief that his client is innocent, although the lawyer's belief that his client is innocent is based on the reasoning. It follows that the conditions for the basing relation described in (CT 1) are not jointly necessary for the existence of a basing relation.

We can see that the lawyer's belief about his client is based on the complicated line of reasoning, but not if we interpret Lehrer's comments literally. The lawyer claims that his belief about his client is based on the reasoning, but such claims are often mistaken. Why think the lawyer's claim is not mistaken? I think that the reason we want to say that the lawyer's belief is based on the complicated line of reasoning is that we take the lawyer's claim to be a clear indication that he recognizes that the

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\(^9\)This example was suggested to me by Calvin Normore.
complicated line of reasoning is a good reason to believe that his client is innocent.

One objection to assuming that the lawyer's claim (that the reasoning provides good reasons to believe that his client is innocent) is accurate is that people are often mistaken about the bases of their beliefs. It is certainly true that people are often mistaken in attributing reasons to themselves, and there is a good deal of psychological literature illustrating how this can happen.\textsuperscript{10} However, we are certainly sometimes correct in such attributions, and I see no reason for not stipulating that the lawyer is correct in the example at hand. To fill out the picture, we can suppose that the lawyer is being objective and careful when it comes to determining the quality of potential reasons for his belief that his client is innocent. Whatever factors which cause people to mistakenly attribute reasons for their actions, such as social pressure, emotional factors, etc., we may suppose are absent. Although the lawyer is subject to emotional factors which prevent the complicated line of reasoning from causing his belief that his client is innocent, we can suppose that, for whatever reason, these emotional factors do not effect the lawyer's ability to recognize that the complicated line of reasoning is a good enough argument to present in court.

In light of all these issues regarding the case of the gypsy lawyer, we can formulate a version of it, which I'll call the case of the persistent lawyer, which avoids the above criticisms. Like the gypsy lawyer, the persistent lawyer's client has been accused of eight very similar murders, and the lawyer has conclusive evidence that his client is guilty of seven of

\textsuperscript{10}See Vollmer 1993 for examples and discussion.
those eight, and everyone is convinced that the client committed all eight
crimes. But the persistent lawyer has absolute trust in the cards and
happens to consult them with regard to his client. The lawyer's absolute
trust in the cards, we may suppose, is completely justified: the cards have
always been right and the lawyer knows this. The cards tell him that his
client is innocent of the eighth murder, and his trust in the cards convinces
the lawyer that his client is innocent of the eighth murder. Thus, the lawyer
justifiably believes that his client is innocent.

However, the lawyer knows that the cards cannot be appealed to in
court. So the lawyer reviews the (legally presentable) evidence and
discovers a complicated line of reasoning showing that his client is
innocent of the eighth murder. The complicated line of reasoning gives
the lawyer an additional good reason to believe that his client is innocent.
More importantly, the lawyer recognizes that the complicated line of
reasoning is a good reason to believe that his client is innocent, and he
fully accepts the reasoning and its implication. The lawyer is being careful
and objective in his evaluation of the quality of the complicated line of
reasoning, and none of the factors which would lead the lawyer to be
mistaken in his belief that the complicated line of reasoning is a good
reason (or his reason) to believe that his client is innocent are present.

At this point in the example, I think it is clear that the lawyer bases
his belief that his client is innocent on the complicated line of reasoning.
The situation is such that we would ordinarily attribute to him, as one of
the reasons for which he believes his client to be innocent, the
complicated line of reasoning. Note that such an attribution is not
dependent on any particular conception of justification, relying, as it does,
solely on our pre-analytic intuitions regarding reasons for which one believes.

There is a second reason to believe that the lawyer bases his belief that his client is innocent on the complicated line of reasoning. The complicated line of reasoning seems relevant to the degree to which the lawyer is justified in believing that his client is innocent. The facts of the situation indicate that the lawyer is, in part, justified in believing that his client is innocent on the basis of the complicated line of reasoning. The degree to which the lawyer is justified in believing that his client is innocent has been increased by his recognition of the relevance of the complicated line of reasoning. But the emotional factors surrounding the case are so strong that the complicated line of reasoning showing that the client is innocent could not and does not bear any appropriate causal relation to his belief that his client is innocent. Only the lawyer's trust in the cards can cause him to believe that his client is innocent of the eighth crime.

What establishes the basing relation between the complicated line of reasoning and the belief that his client is innocent seems to be the lawyer's recognizing and fully accepting that the complicated line of reasoning is a good reason to believe that his client is innocent. The complicated line of reasoning is not a cause or a causal sustainer of the lawyer's belief that his client is innocent, yet, the lawyer's belief that his client is innocent is based on the reasoning.

So if we can provide a causal account of such cases of recognition, perhaps we can modify the causal theory of the basing relation to include such cases. This would provide us with a causal analysis of the basing
relation, if not a causal theory of the basing relation. I shall pursue this line of thought in chapter three, but for now I turn to Audi's response to the case of the gypsy lawyer.

2.2.5 Audi on the case of the gypsy lawyer.

The case of the gypsy lawyer purports to show that a belief may be based on a reason even though the reason is not a cause of the belief. Robert Audi has argued against this claim (Audi 1983, 221-227). If he is right, the door would be open for a causal theory of the basing relation. However, I believe his arguments are mistaken.

Audi focuses on the question of whether the lawyer is justified in his belief that his client is innocent. Of course, there is an important distinction between a belief's being justified by a reason and a belief's being based on that reason, because a belief may be based on a reason even if the belief is unjustified. However, if a belief is to be justified, it must be based on some reasons.

In the case of the gypsy lawyer, there is no doubt that if the lawyer bases his belief that his client is innocent on the complicated line of reasoning, then he is justified in believing that his client is innocent. As Audi notes: "Granted, what (impersonally) justifies the belief that $p$ [here, the gypsy lawyer's belief that his client is innocent] would, other things being equal, justify $S$ [here, the gypsy lawyer] in his belief that $p$ should $S$ believe $p$ on that basis" (Audi 1983, 222).

So Audi's strategy is to show that the lawyer is not justified in believing that his client is innocent in the case as described, in order to
show that his belief is not based on the complicated line of reasoning.
Note that the complicated line of reasoning, we are supposing, is the only
evidence that the lawyer has that can justify him in believing that his client
is innocent. Audi’s strategy presupposes an argument something like this:

P1 If the lawyer bases his belief that his client is innocent on the
complicated line of reasoning then he is justified in believing that
his client is innocent.
P2 The lawyer is not justified in believing that his client is innocent.
C The lawyer does not base his belief that his client is innocent on
the complicated line of reasoning.

This argument is valid, being an instance of *modus tollens*. Although it is
not always the case that the justification of a belief depends *solely* on
whether a basing relation is present, the circumstances of the gypsy
lawyer are such that P1 is true. In any case in which it may be supposed
that all of the necessary conditions for the justification of a belief have
been met except the condition that the belief be based on the relevant
reason, a claim like P1 (but about the person and belief in question) will
be true. So Audi’s discussion focuses on the question of whether P2 is
ture. If P2 is true, then the case of the gypsy lawyer fails to show that a
belief may be based on a reason where the reason is not a cause of the
belief.

Audi argues that the lawyer is not justified in his belief that his client
is innocent in order to defend what he calls the sustaining requirement,
the thesis that if a belief is indirectly justified by another belief, then the
latter belief at least in part causally sustains the former (Audi 1983, 215). Here, I shall be concerned with the similar issue of whether a belief may be based on a reason where the reason is not a cause of the belief.

Audi presents three reasons to believe that the gypsy lawyer is not justified in believing that his client is innocent:

...even though S (here the gypsy) has (objectively) good evidence for \( p \), given a contrary verdict from the cards he would (other things equal) have had the false belief that not-\( p \). Second, given his faith in the cards, he would have believed \( p \) even if it had been false, indeed, even if, on the basis of the cards, it had not been rendered so much as objectively likely (to any degree) to be true, i.e., very roughly, likely to some degree given the actual facts relevant to \( p \) (I leave open how relevance is to be specified). Third, \( S \) would have believed other falsehoods about the crime, had the cards pointed to them, e.g. that the client’s spouse committed them. These points, especially the second, strongly suggest that \( S \) does not justifiably believe \( p \). (…) Surely if one’s belief that \( p \) is justified by good evidence, it cannot simply be good fortune that one did not believe something false instead. (Audi 1983, 223)

I do not believe that any of these three considerations are sufficient to show that \( S \) does not justifiably believe \( p \). Audi’s first argument seems to be that one cannot be justified in believing something if at some point in the (recent, presumably) causal history of that belief an event occurs such that the event is "not actually relevant to \( p \)" and that as a result of that event it is just as likely that you will come to believe \( p \) as not-\( p \) (Audi 1983, 223). An event is not actually relevant to \( p \), I presume, if it is not a reliable indication of the truth of \( p \). In the case of the gypsy lawyer, the event is the card reading ("the cards" as Audi says on p. 223), which in turn causes the lawyer to believe that the results of the card reading indicated that his
client is innocent, and this belief causes the lawyer to believe \( p \), that his client is innocent.

Audi's argument falls to counterexamples. There are situations where an event is not actually relevant to \( p \) and that as a result of the event it is just as likely that you will come to believe \( p \) as \( \neg p \), but you may become justified in believing \( p \). For instance, consider the example of the indecisive agnostic. Suppose Judas cannot decide whether he should believe in God or not. He decides to flip a coin: heads, he'll believe that God does not exist and tails he'll believe that God does exist (while it is highly questionable whether beliefs can be so easily chosen, this fact should not effect the point of the example, and it makes the discussion less complicated). It comes up heads, so he comes to believe that God does not exist. Because of the results of the coin toss, Judas decides to study philosophy of religion (perhaps only for a very brief time) and he acquires several excellent reasons to believe that God does not exist. In this situation, an event (the coin toss) is not actually relevant to the proposition that God exists and as a result of the coin toss (we may suppose), and all else being equal, it is just as likely that Judas will come to believe that God exists as not. But certainly Judas may nonetheless be justified in believing that God does not exist on the basis of his excellent reasons (we may suppose that the reasons causally sustain his belief that God does not exist). So Audi's first argument is mistaken.

Audi's second argument is that the lawyer would have believed that his client is innocent on the basis of the cards even if his belief had been false and even if the cards did not make it objectively likely that the belief be true. It follows, according to Audi, that the lawyer is not justified in
believing that his client is innocent. The example of Judas above is also a counter-example to this claim. Judas would have believed that God did not exist on the basis of his belief about the results of the coin toss even if the former belief were false and even if the coin toss did not make it objectively likely that the former belief be true. But this does not prevent Judas being justified on the basis of his excellent reasons for believing that God does not exist.

A second difficulty with Audi's second argument is that we may be justified in believing what we do even if our reasons do not make it objectively likely that what we believe is true. As Stewart Cohen has argued, even if we're all brains in vats and all of our beliefs false, we can still plausibly claim that some of us are better at reasoning than others, hence that some of us may be justified in what we believe whereas others are not (Cohen 1984, 283).

Audi's third argument was that the lawyer would have believed falsehoods about the crime had the cards pointed to them. But surely we can justifiably believe something on the basis of what we take to be a reliable source even if we would have believed something false coming from the same source. Suppose you happen to be wondering what year Samuel von Pufendorf died. You look it up in what you take to be a reliable source, *Chamber's Biographical Dictionary* for instance, and it gives the year as 1694. You now have objectively good evidence for believing that Pufendorf died in 1694 and we will suppose that you are justified in your belief. But you may be justified in believing that Pufendorf died in 1694 even if you would have believed *Chamber's* if it had said (incorrectly) that Pufendorf died in 1964.
It appears that none of Audi's three arguments alone is sufficient to show that the lawyer is not justified in believing that his client is innocent. Perhaps, however, Audi is to be interpreted as presenting a cumulative case argument, such that even if each of the three alone is insufficient to show that the lawyer is not justified, all three together are. I do not think such a cumulative case argument is persuasive, and we can see this by combining the foregoing counter-examples to Audi's three arguments. Audi's first two arguments each fall to the same counter-example, the point of which is that a person may come to believe that p on the basis of bad reasons, later acquire good reasons and then become justified in believing p on the basis of those good reasons. So suppose you believe that Pufendorf died in 1694 on the basis of some bad reasons, and you then read Chamber's, thereby acquiring good reasons to believe Pufendorf died in 1694. Clearly you may be justified in your belief that Pufendorf died in 1694, even though you would have believed that Pufendorf had not died in 1694 had your bad reasons indicated this (Audi's first argument), you would have believed Pufendorf died in 1694 even if he had not (Audi's second argument), and you would have believed other falsehoods about Pufendorf had your bad reasons pointed to them (Audi's third argument).

Audi also appeals to two of what he calls more general considerations to support his claim that the gypsy lawyer is not justified in believing that his client is innocent. Roughly, the first is that justification by good evidence should provide a measure of protection against false belief and the second is that justification by good evidence should provide a positive tendency to believe something at least likely to be true. Although

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both considerations face essentially the same difficulties, for the sake of clarity I shall deal with the two separately and in order.

Regarding the first, we need to observe Audi's distinction between what he calls personal and impersonal justification. Personal justification is the justification of a particular person's belief of a specific proposition whereas impersonal justification is the justification of a belief in the abstract whether or not anyone holds it, i.e., the justification of a proposition (Audi 1983, 216-217).

Audi states that there is a widely recognized connection between impersonal justification and truth such that where the proposition $p$ is justified by good evidence $q$, then in virtue of $q$, $p$ is at least likely to be true (Audi 1983, 223). But there is also, according to Audi, a less recognized, but important, connection between personal justification and truth, namely that justification by good evidence provides a measure of protection from false belief (Audi 1983, 224, 225). Audi states that usually where someone's belief that $p$ is justified by good evidence, she would have not believed $p$ if $p$ were not true or at least objectively likely to be true (Audi 1983, 223). Audi goes on to suggest that this may in part explain the plausibility of the idea that if $S$ justifiably believes $p$, $S$ is reliable regarding $p$ (Audi 1983, 224). But as I argued above with the example of Judas, there are often situations in which we believe something on the basis of bad reasons and only later become justified in believing it. So even if Audi is right about what usually happens, this gives us no reason to suppose that in every case where $S$'s belief that $p$ is justified, $S$ would not have believed $p$ if it were not true or at least
objectively likely to be true. The case of the gypsy lawyer is just such a case.

Audi's second general consideration supporting his claim that the gypsy lawyer is not justified in his belief that his client is innocent is roughly that "such indirect justification embodies a positive tendency to believe p, hence - since p is supported by good evidence - to believe something at least likely to be true" (Audi 1983, 224-225). Audi states that, "because his evidence beliefs play no sustaining role with respect to his belief that the client is innocent, it is simply good fortune that he holds it: relative to his evidence beliefs, his holding it (rather than no beliefs, or a false one, on the subject) is lucky" (Audi 1983, 225). But I think Audi is mistaken about this because the lawyer recognizes that his good evidence (the complicated line of reasoning) shows that his client is innocent. The lawyer's holding the belief is lucky in the sense that the cards led him to believe that his client was innocent, but given his evidence beliefs it is no coincidence that he recognizes that he has good reasons to believe that his client is innocent. This is why we want to say that the lawyer knows that his client is innocent.

A common theme in Audi's discussion of the case of the gypsy lawyer is a concern about whether a reason controls the presence of the belief it justifies. For instance, in his discussion of the second general consideration, Audi states that "...it is absolutely essential that we distinguish between (a) the evidence he has for believing the client is innocent guaranteeing that this proposition is true or objectively likely, and (b) what justifies his belief of this truth guaranteeing that he will (or has some tendency to) believe it. Since his evidence is good, (a) clearly holds.
Our question concerns his belief. The point here is that because his evidence beliefs play no sustaining role with respect to his belief that his client is innocent, it is simply good fortune that he holds it..." (Audi 1983, 225).

(a) is a characterization of impersonal justification, and presumably (b) is to be understood as a characterization of personal justification. Is (b) correct so understood? If personal justification merely requires that reasons for which a belief is held have some tendency to cause the individual to hold the belief, then the gypsy lawyer arguably has such a tendency, although that tendency will only be expressed when the influence of the emotional factors has been removed.  

Audi could argue that the lawyer lacks any such tendency at all, but this does not seem to follow from the case of the gypsy lawyer as Lehrer describes it. As Lehrer describes the case, the only thing preventing the complicated line of reasoning from causing the belief that his client is innocent are the emotional factors surrounding the case. Were these emotional factors absent, the reasoning would have caused the belief (assuming the lawyer still possessed the reasoning).

The foregoing shows that the gypsy lawyer does meet the conditions Audi describes in (b), namely that what justifies the lawyer’s belief must either guarantee that he will (or guarantee that he has some tendency to) hold that belief. I want to point out why it would be a mistake to argue that the reason must in fact guarantee that the lawyer hold the belief. It seems clear that a belief can be justified by a reason even if it is not under the

\[11\] Swain’s account of pseudo-overdetermination, to be discussed in section 2.3, captures such tendencies nicely, for the complicated line of reasoning would have caused the lawyer to believe that his client was innocent under the appropriate circumstances.
causal control of the reason. For instance, perhaps I am such that I cannot help but believe that everything is equal to itself. Thus, my belief is not under the control of any reason. Regardless of what reasons I have, I am such that I will always believe this. But surely it does not follow that I cannot be justified in believing that everything is equal to itself, as Audi notes (Audi 1986, 258-259). I can have reasons for believing that everything is equal to itself, reasons including the testimony of reliable expert ontologists or beliefs about what it means to say that everything is equal to itself, and I can recognize that those reasons justify my belief. Someone could consistently maintain that any such belief that is not under the control of reason is unjustified. But I think that such a person would also have to conclude that many, and perhaps most, self-evident, analytic and fundamental beliefs are unjustified, and I am not willing to accept this conclusion.

Audi interprets Lehrer's example of the gypsy lawyer such that we are supposed to infer from the fact that the lawyer has a reason to believe that his client is innocent, and the fact that the reason objectively justifies the belief, that the lawyer justifiably believes p (Audi 1983, 223). (Audi notes that Lehrer may not be committed to this argument (Audi 1983, 223)). Audi then argues that this inference is invalid. But this is not the most generous way to read Lehrer's example.

In the first appearance of the example (in Lehrer 1971), Lehrer has the lawyer claiming that the complicated line of reasoning gives him knowledge that his client is innocent (hence the lawyer's belief will be justified). As noted above, it is obviously not sufficient for S's belief that p to be based on a reason r that S claim r is his reason for believing p: for
example, S could be trying to deceive his audience. So I am inclined to interpret the lawyer's claim as an indication that the lawyer believes that the complicated line of reasoning is one of his reasons for believing his client to be innocent. I do not believe that such a meta-belief is always sufficient to establish a basing relation for reasons I shall describe later. But in many cases, someone's believing that r is her reason for believing p is surely a reliable indication of the basis of her beliefs. Indeed, ordinarily, when someone says something to the effect of "r is my reason for believing p", we plausibly take their assertion at face value, as long as we think that it reflects their belief that this is the case.

I think this is what Lehrer hopes we will do in the case of the gypsy lawyer\footnote{In fact, Lehrer states that the lawyer "sincerely and correctly that on the basis of evidence, he knows that his client is innocent of the eighth murder" (Lehrer 1974, 124).} (and, at any rate, this is how I shall interpret the example): when the lawyer claims that the complicated line of reasoning gives him knowledge, our pre-analytic intuitions about knowledge tell us that the complicated line of reasoning is the basis of the lawyer's belief. It is only when we later discover that there is no causal relation between the complicated line of reasoning and the belief that we are to realize that this fact, along with our pre-analytic intuitions, should lead us to conclude that basing relations do not always require that the reason cause the belief. Thus, the example, as I understand it, does not involve the sort of inference Audi claims it does, hence the question of whether that inference is valid is moot.

My replies to Audi overlook a flaw in Audi's overall approach to the case of the gypsy lawyer. The gypsy lawyer initially believes that his
client is innocent for bad reasons (the card reading) and later acquires good reasons to believe that his client is innocent. What seems to bother Audi about the case is that even after he has acquired the good reasons, his belief is still based on the bad reasons, and Audi seems to think that this undermines the lawyer's justification. This is the same sort of concern Goldman seemed to have, as discussed above. As was argued there, regarding the case of the persistent lawyer, the case of the gypsy lawyer can be altered to avoid this objection while still showing that a belief can be based on a reason even if the reason does not causally produce the belief.

Others besides Audi have found the case of the gypsy lawyer counter-intuitive. Goldman's footnote comment was discussed above. John Pollock's footnote is even more brief and concise: "... I do not find his counterexample persuasive." (Pollock, 1986, 81n9). Without an indication of the reasons the case of the gypsy lawyer is thought to be counterintuitive, it is difficult to give a response. Perhaps the comments in the preceding paragraphs will allay Pollock's intuitions. Alternatively, a concern might be that the gypsy lawyer is just rationalizing when he appeals to the complicated line of reasoning. Although I do not know if it is what worries Pollock or Goldman, I shall address this concern about rationalizing next.

2.2.6 Is the gypsy lawyer just rationalizing?

Another possible objection to the claim that the gypsy lawyer is justified in believing that his client is innocent is that he is just rationalizing
when he claims that the complicated line of reasoning is a good reason to believe that his client is innocent. We can easily imagine the lawyer saying that "the reasoning is not the real reason I believe that my client is innocent: the real reason is that the cards said my client is innocent." If the lawyer were to claim that the complicated line of reasoning is his reason for believing that his client is innocent, his claim might seem to have the ring of insincerity. This might seem to suggest that the lawyer is just rationalizing his belief that his client is innocent.

Audi takes this view. According to Audi, S's belief that p is being rationalized if

(i) S cites q to justify his belief that p,
(ii) S believes q,
(iii) S takes q to support p, yet
(iv) S's believing q does not to any degree cause¹³ or causally sustain S's believing p.

Audi concludes that the gypsy lawyer is just rationalizing his belief that his client is innocent. I believe that the counter-example of Wiley discussed above in section 2.1 shows that this list of conditions is not sufficient for a belief's being rationalized. Wiley, recall, mistakenly believes that his belief that (p) a roadrunner crossed his path is based on his belief that (q) he saw a clear image of a roadrunner, when in fact his belief that a roadrunner crossed his path is based on (r) a perceptual blur

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¹³Audi just says "causally sustain", but I think he also needs to say "cause" because a reason can cause a belief and thereby be the basis of it even if it does not currently causally sustain the belief, as I argued above in section 2.2.3.2 against Armstrong.
in conjunction with some propositional evidence. Wiley would cite q to justify his belief that p, Wiley believes q, and he takes q to support p, and (we may suppose) his belief that q has not to any degree caused or causally sustained his belief that p (rather, r does this). But Wiley is clearly not rationalizing when he cites his belief that q in support of his belief that p. There is nothing insincere about Wiley’s appeal: he is genuinely mistaken about the reasons for his belief that p. He has simply made a mistake about what his reasons are.

Armstrong briefly discusses a case that seems to have the same import as this use of the example of Wiley, and supplements what amounts to Audi’s conditions with an additional condition (Armstrong, 1973, 96). Armstrong suggests that a condition such as the following needs to be added to the list of conditions Audi gives:

(v) S desires that p be true, and this desire is the sustaining cause of S’s belief that q is a reason to believe p.

This addition would avoid counter-examples to the five point account of rationalization such as the case of Wiley, for Wiley does not desire that p be true (and even if he did, it need not be the sustaining cause of his belief that q is a reason to believe p). However, condition (v) is not met in the case of the gypsy lawyer either, for, we may suppose, the lawyer does not desire that his client be innocent (if anything, he desires the opposite). He merely believes that his client is innocent because that is what the cards indicated. It follows that the above five point criterion does not show that the gypsy lawyer is just rationalizing his belief that his client
is innocent when he believes that the complicated line of reasoning shows that his client is innocent.

There is a second reason for believing that the gypsy lawyer is not just rationalizing. When you rationalize, at least in one sense of the word different from Audi's, you try to convince yourself or others that what you take to be bad reasons are really good reasons. The gypsy lawyer, however, recognizes that the complicated line of reasoning provides him with good reasons to believe that his client is innocent. The insincerity is of a different sort. The gypsy lawyer seems insincere because his good reasons for believing his client is innocent do not cause him to believe this. But then to assume that this insincerity shows that the lawyer's belief that his client is innocent is not based on the complicated line of reasoning would beg the question.

To sum things up regarding the case of the gypsy lawyer, it seems that the lawyer believes that his client is innocent in part on the basis of the complicated line of reasoning, regardless of whether the lawyer is justified in what he believes. The fact that the lawyer recognizes that the complicated line of reasoning supports his belief and the absence of factors which might undermine this recognition lend significant intuitive support to the claim that the lawyer so bases his belief. It follows that a belief may be based on a reason even where the reason plays no role in causing the belief, hence that causal theories of the basing relation are mistaken. Next, I turn to an attempt to preserve the intuitive plausibility of causal theories in the face of gypsy lawyer type examples.
2.3 Pseudo-causal theories of the basing relation

2.3.0 Overview

A serious difficulty for causal theories of the basing relation is thus presented by cases in which a belief is based on a reason but the reason appears to play no causal role in bringing about the belief. Marshall Swain, in his book *Reasons and Knowledge* \(^{14}\), responds to the problem of the gypsy lawyer by adding to the purely causal theory a condition involving counterfactual causal relations, which he calls pseudo-overdeterminants (Swain 1981, 86-87). Swain's idea is that a belief is based on a reason if either the reason bears an appropriate occurrent causal relation to the belief, or there is no such causal relation, but there *would have been* had the belief occurred, the reason occurred, and nothing else caused the belief.

Although Swain's theory is the only published theory to analyze the basing relation in terms of counterfactuals, there are several possible alternative theories of the basing relation which do so. I will call all such theories *pseudo-causal theories* of the basing relation. In general terms, pseudo-causal theories of the basing relation hold that a belief that \(p\) may be based on a reason \(r\) if \(r\), under the appropriate circumstances, would have caused the belief that \(p\). The central issue in developing a pseudo-causal theory is the question of how the counterfactual is to be specified.

In the next sub-section, I begin by presenting a detailed account of Swain's theory of the basing relation. In succeeding sub-sections, I shall

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\(^{14}\)Also in Swain (1979) and (1985).
discuss and reject numerous objections to Swain's theory, and present my own objection to Swain's theory. Finally, I shall attempt to provide an overall evaluation of the prospects of pseudo-causal theories of the basing relation in light of these objections.

2.3.1 Swain's pseudo-causal theory

Swain's theory makes many of the presuppositions the causal theory does. In particular, Swain holds that reasons and beliefs are causally efficacious states of persons, that both belief states and non-belief states may be reasons, that causal reasons are to be distinguished from evidential or propositional (epistemic) reasons, etc. (Swain 1981, 74-78). This is perfectly appropriate, since Swain is offering a causal analysis of the basing relation.

A good place to begin is with Swain's account of our direct awareness of sensation states, perception states, beliefs, and such (Swain 1981, 80):

(DDA) S is directly aware of x at t iff:
(1) S is aware of x at t; and
(2) there is no other entity y such that all the following are true of x and y:
   (a) y is neither identical with nor a component of x;
   (b) x is not a component of y;
   (c) y is not identical with S; and

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15All reasons are causal in the sense that they are potential causes of other states. One question is whether there could be an empirical test for when a reason occurs. Any such test would then be a test of when a reason is a causal reason.
(d) S's being aware of x at t is essentially dependent upon S's being aware of y at t.

This account of direct awareness is such that nothing other than S mediates S's awareness of x. Thus, being directly aware of something other than one's self on Swain's account does not entail that the thing one is aware of exists. For example, my being directly aware of (x), a visual state portraying a mug, would not entail that (y), the mug, exists because, while conditions (a) through (c) are met in this case, my being aware of the visual state, while in fact dependent upon being aware of the mug, is not essentially dependent upon my being aware of the mug. I could in fact have been in the visual state even if the mug had not existed, e.g., due to an hallucination.

Many states that we are directly aware of are reason states, but some are merely potential reasons. For example, I may have had a sensation state of the movement of air over my skin as I was going to prepare a mug of hot chocolate a few minutes ago, but this sensation state may have produced no beliefs in me. I may have simply been in the state and then forgotten it. However, such states are at least potentially reason states for some belief, whether we currently have the belief or not. Swain suggests that we define potential reason states as follows (Swain 1981, 81):

(DPR) State r is a potential reason state of person S at time t with respect to some actual or possible belief state of S iff:
(1) r is a state of S at t; and
(2) either r is a belief state of S at t or r is such that, possibly\textsuperscript{16}, S is directly aware of r at t (or both); and
(3) no entity, e, whose existence is entailed by 'S is in state r at t' is such that, possibly, e exists at t and neither r nor S exists at t.

Condition (2) utilizes the account of direct awareness just discussed. Perceptual and sensation states, being the sorts of things we can be directly aware of, do not entail that what is perceived exists. For example, if one says "I am having a square-table-ish sense impression now," this does not entail the existence of a square table. However, if one says "I see that the table is square," this does entail that the table exists. Swain calls these latter sorts of states, those that do entail the existence of what is perceived, "perceivings," as opposed to "perceptual states." Swain's account of direct awareness excludes perceivings from counting as potential reason states. Condition (3) of (DPR) ensures that a belief state which is to count as a potential reason state also does not entail the existence of anything other than itself or the person having it.

In presenting his theory of the basing relation, Swain begins with an initial definition which is later elaborated. The initial definition is this:

(DB) S's belief that h is based upon the set of reasons R at t =df
(1) S believes that h at t; and
(2) For every member, r\textsubscript{j}, of R, there is some time, t\textsubscript{n} (which may be identical with or earlier than t), such that
   (a) S has (or had) r\textsubscript{j} at t\textsubscript{n}; and
   (b) there is an appropriate causal connection between S's having r\textsubscript{j} at t\textsubscript{n} and S's believing that h at t.

\textsuperscript{16}It is not clear what sort of possibility is meant here. Perhaps logical possibility, assuming that anything it is logically possible for S to directly access is a mental state of S.
The appropriate causal connection will be either an appropriate causal chain of events from reason to belief, a relation of causal overdetermination \(^{17}\) from reason to belief, or a relation of pseudo-overdetermination. Swain does not develop an account of causal chains of events from reason to belief that avoids the problem of deviant causal chains. However, there is no reason to suppose that the correct account could not be appended to Swain's theory. Swain's primary concern is to address the problem posed by gypsy lawyer type cases, and not the problem of deviant causal chains.

The only sort of causal relation mentioned in (DB) that I have not yet discussed in any detail is that of pseudo-overdetermination. Swain defines 'pseudo-overdetermination' as follows (Swain 1981, p. 70):

\[(DPO)\text{ Where } c \text{ and } e \text{ are occurant events, } c \text{ is a pseudo-overdeterminant of } e \text{ iff:}\\(1)\text{ } c \text{ is not a cause of } e; \text{ and}\\(2)\text{ there is some set of occurant events, } D = \{d_1, d_2, ..., d_n\}\text{ (possibly having only one member), such that}\\(a)\text{ each } d_i \text{ in } D \text{ is a cause of } e; \text{ and}\\(b)\text{ if no member of } D \text{ had occurred, but } c \text{ and } e \text{ had occurred anyway, then there would have been a causal chain from } c \text{ to } e, \text{ and } c \text{ would have been causally prior to } e.\]

Roughly, \(c\) is a pseudo-overdeterminant of event \(e\) if both \(c\) and \(e\) have occurred, \(c\) is not a cause of \(e\), but \(c\) would have caused \(e\) if both \(c\) and \(e\) occurred and \(e\) had not been caused by anything else. For example, suppose that you're through listening to your stereo, and at time

\(^{17}\text{Swain refers to what I have called causal overdetermination as genuine causal overdetermination, using the phrase 'causal overdetermination' to refer to either genuine overdetermination or pseudo-overdetermination.}\)
t you switch it off. Just prior to t, a bolt of lightning strikes a short distance away, causing a power surge. The power surge would have caused the power strip into which your stereo is plugged in to switch your stereo off at time t if your stereo had been on at time t. Suppose that in this situation the only way your stereo could be turned off is if you either switch it off, or there is a power surge. Then the power surge would be a pseudo-overdeterminant of your stereo being switched off, because if you had not switched off your stereo and it had nonetheless been caused to switch off at time t, the surge would have been what switched it off, and the surge is an occurrent event occurring earlier than t.

Another kind of causal relation utilized in Swain's theory he calls genuine overdetermination. Roughly, two reasons are genuine causal overdeterminants of a belief if they are such that had one not caused the belief, the other would have and neither cause preempts the other. Swain offers the more perspicuous definition:

(DGO) Where c and e are occurrent events, c is a genuine overdeterminant of e if and only if: There is some set of occurrent events $D = \{d_1, d_2, \ldots, d_n\}$ (possibly having only one member) such that

(1) if c had not occurred and if any member, $d_i$, of D had occurred, but no other members of D had occurred, and if e had occurred anyway, then there would have been a causal chain of distinct actually occurrent events from $d_i$ to e, and $d_i$ would have been causally prior to e; and

(2) if no member of D had occurred, and if c and e had occurred anyway, then there would have been a causal chain of distinct actually occurrent events from c to e, and c would have been causally prior to e (Swain 1981, 67).
Adding Swain’s account of which causal relations are appropriate to (DB) yields the following account of the basing relation:

S’s belief that h is based upon the set of reasons R at t = df.
(1) S believes that h at t; and
(2) For every member, r_j of R, there is some time t_n (simultaneous or prior to t) such that
   (a) S has (or had) r_j at t_n; and
   (b) Either
      (i) S’s having r_j at t_n is a cause or genuine overdeterminant of S’s believing h at t or S’s having r_j at t_n is a pseudo-overdeterminant of S’s believing that h at t;
   or
      (i + 1) for some r_i and t_i that satisfy condition (i), S’s having r_j at t_n is either a cause or a pseudo-overdeterminant of S’s having r_i at t_i.

Condition (2b i+1) is recursive, allowing for the basing of reasons upon other reasons indefinitely. Again, the reasons are causal and not necessarily evidential; thus reasons are causally efficacious states and a belief may be unjustifiably based on some reasons (Swain 1981, 74, 75).

One motive for including pseudo-overdeterminants is to handle gypsy lawyer type cases (Swain 1981, 90-91, 92). The element of pseudo-overdetermination avoids the problem posed by such cases. If the lawyer believed that his client was innocent, and nothing else caused that belief, then if he still had the complicated line of reasoning, that reasoning would have caused his belief. Thus, there is a relation of pseudo-overdetermination between the complicated line of reasoning and the lawyer’s belief that his client is innocent. This seems to correctly account for Lehrer’s example.
2.3.2 Other pseudo-causal theories of the basing relation

Swain's is the only published account of the basing relation I am aware of that utilizes counterfactuals such as the pseudo-overdetermination relation. However, we can imagine other theories which analyze the basing relation in terms of counterfactuals but nonetheless differ significantly from Swain's theory. It will be helpful if we contrast Swain's theory with some other pseudo-causal theories.

Swain's original account of pseudo-overdetermination given by the definition (DPO), is as follows:

\[(\text{DPO}) \; Oc \land Oe \land Ey(\text{Cye} \land (y \in D)) \land \lnot \text{Cce} \land ((\lnot \text{Ex} (Cxe \land (x \neq c)) \land Oc \land Oe) \Box \rightarrow \text{Cce})\]

where 'c' and 'e' stand for distinct occurring events, 'O\phi' means \phi occurs, 'Ey(Cye)' means "there exists some thing y such that y causes c" (and similarly for x), 'D' is the set of occurring events (consisting of one or more members) which cause e (and I assume, although this is not symbolized, that every member of D exists), 'Cce' means "c causes e" (c being the reason and e being the belief), '\sim' means "it is not the case that", and '\phi \Box \rightarrow \varphi' means that if \phi had occurred, then \varphi would have occurred.
A revised version of Swain's theory\textsuperscript{18}, which adds the stipulation that the individuals epistemic situation must remain the same insofar as this is possible, would be symbolized as follows:

$$(\text{DPO}^*) \text{ Oc & Oe & Ey(Cye & (y \in D)) & ~Cce & ((~Ex(Cxe & (x \neq c)) & Oc & Oe & s) \square \rightarrow Cce) }$$

where 's' means that S's epistemic situation (and everything else) remains the same as in the actual world insofar as this is logically possible.

The above accounts of pseudo-overdetermination may be distinguished from counterfactual involved in the following, alternative pseudo-causal theory of the basing relation, (PC 1):

(\text{PC 1}) A belief is based on a reason if either the reason bears an appropriate ordinary causal relation to the belief, or, there is no such causal relation but there \textit{would have been} had the belief occurred, the reason occurred, and nothing else caused the belief, given that those aspects of the person's epistemic situation relevant to whether the belief is known remain.

(\text{PC 1}) differs from Swain's modified theory (DPO*) insofar as it requires only that those elements of the individual's epistemic situation relevant to whether the belief is known remain the same, whereas Swain's theory requires that the individual's entire epistemic situation remain the

\textsuperscript{18}Swain has stated that this is how his theory is to be understood in conversation with the author.
same. As we shall see, (PC 1) may have a slight advantage over Swain's theory. The counterfactual relation of (PC 1), which I'll call (CR 1), may be symbolized as follows:

\[(CR\ 1):\ Oc & Oe & Ey(Cye & (y \in D)) & \sim Cce \land ((\sim Ex(Cxe & (x \neq c)) \land Oc & Oe & k) \Box -> Cce)\]

where 'k' means that all those aspects of the person's epistemic situation relevant to whether e is known remain the same insofar as this is logically possible.

Another alternative pseudo-causal theory of the basing relation is:

(PC 2) a belief is based on a reason if either the reason bears an appropriate ordinary causal relation to the belief, or there is no such causal relation, but there would have been had the actual cause of the belief been absent.

(DPO*) is not equivalent to the counterfactual relation, which we can call (CR 2), utilized in (PC 2). (CR 2) is as follows: a person S's reason would have caused the belief had the actual causes of the belief not done so. (DPO*) is not equivalent to (CR 2) because, for example, it could be the case that all the conditions of (DPO*) are met and, nonetheless, had the actual causes of the belief not occurred, S (in the actual world) would have been destroyed by a bolt of lightening, in which case (CR 2) does not hold. (CR 2) may be symbolized as follows:

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(CR 2) Oc & Oe & Od & Cde & ~Cce & (~Cde □→ Cce)

(DPO*) and (CR 2) are clearly not logically equivalent, nor does (DPO*) entail (CR 2).

A third kind of pseudo-causal theory is the same as Swain’s theory except is does away with the (arguably redundant) option that occurrent causal relations are sufficient to establish causal relations:

(PC 3) a belief is based on a reason if there would have been a causal relation from the reason to the belief had the belief occurred, the reason occurred, and nothing else caused the belief.

Surely, if there is an occurrent causal relation from reason to belief, there is also a pseudo-overdetermination relation between the two. So if pseudo-overdetermination relations are sufficient to establish basing relations, why not simply analyze basing relations in terms of pseudo-overdetermination relations?

A fourth kind of pseudo-causal theory is expressed in (PC 4):

(PC 4) a belief is based on a reason if either the reason bears an appropriate ordinary causal relation to the belief, or there is no such causal relation, but there would have been had the belief occurred, the reason occurred, and nothing prevented the reason from causing the belief (where X prevents a reason from causing a belief if a causal chain of events which would otherwise have led to the causing of the belief is stopped by X).
The counterfactual causal relation expressed in (PC 4) may be expressed as follows:

\[(CR\ 4) \ Oc & Oe & \neg Cce & (\neg \text{Ex}(Pxa & (a = Cce)) & Oc & Oe)\]
\[\square \rightarrow Cce)\]

where \(\neg \text{Ex}(Pxa)\)' means "it is not the case that there exists something x such that x prevents a." (CR 4) is not logically equivalent to (DPO*), nor is (CR 4) entailed by it.

As we shall see, revising Swain's theory to (PC 1) helps it to avoid some counter-examples. Some have confused Swain's theory for the radically different (PC 2), and (PC 3) appears to remove some redundancies from Swain's theory.

2.3.3 Kvanvig's objections to the pseudo-causal theory of the basing relation

In his paper "Swain On The Basing Relation," Jonathan Kvanvig presents some interesting objections to Swain's theory (Kvanvig 1985). First, some terminology: event c counterfactually causes event e if c does not in fact cause e, but would have caused e under certain conditions. Pseudo-overdeterminants are thus a kind of counterfactual cause. As Kvanvig notes, this account of counterfactual causation is ambiguous given the various sorts of "certain conditions" that might be relevant, and this
ambiguity plays an important role in Kvanvig's evaluation of Swain's theory (Kvanvig 1985, 154).

Kvanvig begins by observing that counterfactual causes can be buried by each other (Kvanvig 1985, 154-155). According to Kvanvig, one counterfactual cause is buried by another "if the second must fail to obtain in order for the first counterfactual cause to be the actual cause" (Kvanvig 1985, 154). For example, suppose a lamp is connected to a timer switch which will switch on the lamp at 7:00 PM, it is 7:00 PM, and the timer switch turns the lamp on. We may suppose that had the timer switch failed to switch on the lamp, I would have switched on the lamp. However, I would only switch on the lamp if the timer switch failed to do so. In this situation, the actual cause of the lamp's being switched on (namely, the operation of the timer switch) buries a counterfactual cause of the lamp's being switched on (namely, my switching on the lamp had the timer switch failed to do so). It is only if the actual cause had failed to occur that the counterfactual cause would have been the actual cause of the lamp's being switched on.

On Swain's theory, the counterfactual cause (the pseudo-overdeterminant) must be buried only by the actual cause or causes (Swain 1981, 70). But, Kvanvig notes, counterfactual causes can be buried by other counterfactual causes established by occurrent events. For instance, in the case of the gypsy lawyer, the actual cause of the lawyer's belief that his client is innocent is the reading of the cards, and the complicated line of reasoning which pseudo-overdetermines that belief is

19 Although Kvanvig's definition of 'buried by' is limited to counterfactual causes, it is clear from the context that he intends that actual causes may also bury counterfactual causes.
buried by the actual cause. But suppose, Kvanvig suggests, that the lawyer also believes in fortune tellers and has gone to a fortune teller who told him that his client is innocent. We may suppose that, for whatever reason, the fortune teller's reading is not a genuine overdeterminant but a pseudo-overdeterminant of the lawyer's belief that his client is innocent, and that the complicated line of reasoning is also buried by this counterfactual cause (the fortune teller's reading). In this situation, the actual cause (the card reading) of the lawyer's belief that his client is innocent buries a counterfactual cause (the fortune teller's reading) of the lawyer's belief that his client is innocent, and that counterfactual cause (the fortune teller's reading) itself buries yet another counterfactual cause (the complicated line of reasoning) of the lawyer's belief that his client is innocent. Thus, if the lawyer had not gone to the card reading, the statements of the fortune teller, not the complicated line of reasoning, would have caused the lawyer to believe that his client is innocent. It is clear that the lawyer's belief is still based on the complicated line of reasoning even though the requirements for pseudo-overdetermination have not been met.

As Kvanvig notes, the difficulty just described is avoidable if Swain's theory is modified to allow that buried pseudo-overdeterminants (established by occurrent events) of a given belief may count as the basis of that belief (Kvanvig 1985, 155-156). This would require that an additional condition be added to clause (2) of (DPO), as follows:

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20 In other words, if the reading of the cards did not occur, then the complicated line of reasoning would have caused the lawyer to believe that his client is innocent.
and, (c) if there is a set \( F \) (possibly containing one or more members) of occurrent events \((f_1, ..., f_n)\) which establish one or more counterfactual causes each of which buries occurrent event \( c \), then if none of the members of \( F \) had occurred, but \( c \) and (occurent event) \( e \) had occurred anyway, then there would have been a causal chain from \( c \) to \( e \) and \( c \) would have been causally prior to \( e \).

What clause (c) does is make it clear that Swain can allow pseudo-overdeterminants buried by any number of other pseudo-overdeterminants to count as the basis of a belief. Such a modification of Swain's theory is necessary, and throughout the remaining discussion I shall assume that such a modification has been made.

Kvanvig argues that even with such a modification, Swain's theory faces a further difficulty. The purported difficulty is that counterfactual causes established by occurrent events may be buried by other counterfactual causes not established by occurrent events. In such situations, the buried counterfactual cause would not be the actual cause of the belief in question were the current causes of the belief absent, for it may be the case that in their absence the belief would have been caused by a counterfactual cause not established by occurrent events. Kvanvig apparently infers from this that any counterfactual cause buried by another counterfactual cause not established by occurrent events would not be a pseudo-overdeterminant. For example, suppose that, in the case of the gypsy lawyer, if the lawyer had not read the cards, he would still have believed that his client is innocent, not because of the complicated
line of reasoning but because, instead of reading the cards, he would have read and believed a story in the National Enquirer claiming that his client is innocent. In this case, the reading of the Enquirer (a counterfactual cause not established by occurrent events) buries the complicated line of reasoning as a cause the lawyer's belief. It seems intuitively obvious that the lawyer is still justified in believing on the basis of the complicated line of reasoning that his client is innocent, but on Kvanvig's reading of Swain's theory the complicated line of reasoning is not a pseudo-overdeterminant of the lawyer's belief. Kvanvig concludes that Swain's conditions may be sufficient for a belief to be based on a reason, but are not necessary.

I think that we need not read Swain's theory as Kvanvig does. The idea behind Swain's pseudo-causal theory is to determine what would have caused (pseudo-overdetermined) the belief in question (had the actual cause of that belief been absent and had the belief still been present) while keeping the person's epistemic situation (beliefs, reasons, etc.) as little changed as possible. This last restriction regarding the person's current epistemic situation is designed to ensure that the pseudo-overdeterminants are the person's current reasons for her belief. What matters is not merely what would have caused the person's belief had the actual cause been absent (as Kvanvig assumes), but what would have caused his belief had the actual cause been absent given the person's current epistemic situation (ignoring trivial changes in the epistemic situation, such as the actual cause of the pseudo-overdetermined belief being absent). Since what is in question is the person's current basis for her belief, whether a counterfactual cause is buried by another

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counterfactual cause not established by occurrent events is irrelevant. A reason so buried may still pseudo-overdetermine a belief on Swain's theory. Thus, no problem for Swain's theory results from counterfactual causes not established by occurrent events.

This response to Kvanvig's objection highlights a crucial feature of Swain's account of pseudo-overdetermination, namely the focus on one's current epistemic situation, more or less. The "more or less" may be clarified somewhat by stipulating that, in order to determine the actual basis of the belief that p, we go to that possible world in which the counterfactual cause in question occurs, the belief that p occurs, the actual cause does not, and all other changes in S's epistemic situation are as minimal as possible. (I will give an example of how this might work in the process of presenting my own objection to Swain's theory.)

Although Kvanvig's objections to Swain's theory of the basing relation do not ultimately succeed, they are helpful in clarifying how Swain's theory is supposed to work.21 With these clarifications in mind, it is now easy to see why other objections to Swain's theory presented in the literature have failed.

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21Kvanvig’s objections are discussed further in Lemke 1986 and Kvanvig 1987, although they do not discuss the points I raise here. In this later paper, Kvanvig's objection to Swain's theory might be understood as claiming that the gypsy lawyer could be essentially such that his belief is buried, hence his belief is buried in every possible world. This objection seems to me to be slightly different from the objection I discuss here, and I find it less plausible, involving as it does an implicit appeal to controversial modal intuitions.
2.3.4 Other objections to Swain's theory

2.3.4.1 Lehrer's objection

Lehrer claims that all causal theories of the basing relation "must be rejected" in light of gypsy lawyer type counter-examples (Lehrer 1974, 123; Lehrer 1990, 169). While this sort of example poses a problem for causal theories of the basing relation, it poses no problem for Swain's theory, for such cases may be understood as instances of pseudo-overdetermination.

It might be thought that the gypsy lawyer type counter-example is a problem for Swain's theory because if the lawyer had not read the cards he would not have acquired the complicated line of reasoning showing that his client is innocent (remember it is the cards which lead the lawyer to re-examine the evidence and discover the complicated line of reasoning) (Swain 1981, 91). Thus, it may be argued, it is not the case that the complicated line of reasoning would have caused the lawyer to believe that his client is innocent if the cards had not, for if the cards had not, the lawyer would have never possessed the complicated line of reasoning. This line of argument confuses Swain's theory for a different pseudo-causal theory, which above was labeled (PC 2). According to (PC 2), a belief is based on a reason if either the reason bears an appropriate ordinary causal relation to the belief, or there is no such causal relation, but there would have been had the actual cause of the belief been absent. But according to Swain's theory, a reason pseudo-overdetermines a belief only if the reason would have caused the belief where the belief
still occurs. This counterfactual may be true even though, in fact, the
lawyer would not have believed that his client was innocent had he not
read the cards (Swain 1981, 91).

2.3.4.2 Pappas' objection

George Pappas, in his article "Basing Relations," presents an
argument, similar to Kvanvig's, against a theory of the basing relation
"something close"\(^{22}\) to Swain's (Pappas, 1979b, 57-58). Pappas describes
his target theory thus:

\[(9.1) \text{ A person } S \text{'s belief that } h \text{ is based on evidence } e \text{ which } S \text{ has }
\text{if and only if: either, (1) } S \text{'s belief that } e \text{ is a cause of his belief that }
h, \text{ or, (2) if some event or state, } x, \text{ is the cause of } S \text{'s belief that } h,
\text{ where } x \text{ is not identical to or a part of } S \text{'s believing that } e, \text{ then if } x
\text{ had not occurred or obtained then } S \text{'s belief that } e \text{ would have}
\text{been a cause of his belief that } h.\]

This theory of the basing relation is closer to (PC 2) as described
above than to Swain's theory, and in fact differs significantly from Swain's
theory, as we shall see.

Pappas' argument against (9.1) goes like this: Suppose S has signed
up for a psychology experiment, and has been connected to a machine
that can cause him to have beliefs. S can only determine whether his
beliefs are caused by the machine if the beliefs fail to cohere with his
current state of mind, which in these experiments they usually do, as S
knows. S's task is to complete a puzzle by means of a series of clues

\(^{22}\)As Pappas states in Pappas 1979b, 63n13.
about the pieces. As S pieces the clues together, his evidence mounts in favor of the proposition that a certain piece belongs in the corner. Eventually, S comes to believe, and then to know, on the basis of the evidence he has gathered, that the piece goes in the corner. In this situation, as Pappas puts it, S "has evidence which he justifiably takes to be good evidence for his belief [that the piece belongs in the corner], and he justifiably takes himself to believe that [the piece belongs in the corner] as a (causal) result of his beliefs concerning the evidence. But S is mistaken about the latter; the technicians have caused his belief that [the piece belongs in the corner]" (Pappas 1979b, 58). Furthermore, there is a series of technicians, such that if the first technician had failed to induce in S the belief that the piece belonged in the corner, the second technician would have, and so on down the line. Suppose that each technician pushes their button down at the same time. Had the first machine in the series not induced S to believe that the piece belonged in the corner, the second machine would have, and so on down the line.

This thought experiment is an effective objection to Pappas' target theory (9.1). It shows that while S is justified, on the basis of the good evidence he recognizes, in believing that the piece belongs in the corner, (9.1) counts his belief as not based on that good evidence. Pappas' thought experiment thus shows that the conditions described in (9.1) are not necessary for a belief to be based on a reason.

However, Pappas' thought experiment does not pose any threat to Swain's theory (as we might expect given that, as Pappas notes, he was objecting to a different theory). On Swain's theory, a reason pseudo-overdetermines a belief if where the reason does not cause the belief, the
reason would have caused the belief where both the reason and the belief occur and nothing else causes the belief. If we (somewhat ungenerously) interpret Pappas' thought experiment as purporting to claim that it is logically necessary that the belief gets produced by one of the technicians, then we may plausibly deny that such situations occur with ordinary human knowers, hence deny the relevance of such a thought experiment for the project of developing an analysis of what it is for ordinary humans and such to base a belief on a reason. On the other hand, if we interpret Pappas' thought experiment as not purporting to claim that it is logically necessary that the belief gets produced by one of the technicians, then the counterfactual described by Swain's theory would direct us to a possible world in which no technician causes S to believe that the piece belongs in the corner. The possible world Swain's theory directs us to is one in which the belief occurs, the reason occurs, and nothing else (e.g., no technicians) cause the belief. If there is such a world, then, all else being equal, the belief is based on the reason, according to Swain's theory.

In sum, Pappas' thought experiment is effective against theory (9.1). As Shope notes, it is also effective against a purely causal theory, such as (CT 1) (Shope, 1983, 157-158). As an objection to the causal theory, it functions as a variant of the case of the gypsy lawyer. However, it is not effective as an objection to Swain's theory.
2.3.4.3 Tolliver's objections.

Joseph Tolliver discusses two objections to Swain's theory of the basing relation (Tolliver 1982, 151-155). The first is Lehrer's objection to Swain's theory, which Tolliver endorses. I have argued above that Lehrer's objection fails. The second objection is Tolliver's own, and purports to show that Swain's theory counts as basing relations things which intuitively are not basing relations. Tolliver's argument is complicated, but I believe the following fairly represents his argument.

Tolliver represents his objection as an instance of a class of problems arising from basing relations between beliefs which imply each other. He illustrates such problems with what he calls The Pendulum Case. Suppose a physics student has learned that from the period of a pendulum (i.e., the time it takes to complete a swing) one can calculate its length and vice versa. The student observes that a particular pendulum has a length \( l \), and calculates that it must have period \( p \). The student also has two general beliefs about pendulums, namely (1) that if \( x \) is a pendulum of period \( P \), then \( x \) is a pendulum of length \( L \), and (2) that if \( x \) is a pendulum of length \( L \), then \( x \) is a pendulum of period \( P \). We may suppose that it is clear in this case that the student's belief about the period is based (at least in part) on his belief about it's length, but his belief about it's length is not based on his belief about the period. But, Tolliver claims, the student's belief about the period pseudo-overdetermines his belief about the length of the pendulum, hence gets counted, on Swain's theory, as the basis of

\[ \text{The period is proportional to the square root of the length of the pendulum (i.e., the pendulum itself, not the length of its swing) (Steele, 1872, 59).} \]
his belief about the length of the pendulum. This is so because, to paraphrase Tolliver, if no other states were causes of the student's belief about the length, and if the student still had his belief about the period, then his belief about the period would be a cause of his belief about the length (Tolliver 1982, 155).

I think Tolliver's objection is ineffective because it fails to take into account the student's current epistemic situation. The student's current epistemic situation, as Tolliver describes it, includes a calculation of the period of the pendulum on the basis of its length, but not a calculation of the length of the pendulum on the basis of its period. It is for this reason that we are inclined to say that the student bases his belief about the period on his belief about the length but not vice versa. Thus, were the belief about the period to occur and were the belief about the length to occur, and nothing else were to cause the belief about the length, the belief about the period would not cause the belief about the length because the student had not yet made the requisite calculation in order to determine whether the period is properly proportionate to the length. In other words, the student's belief about the period alone is not enough to cause him to have the belief that the pendulum has a particular length. Rather, it is only the belief about the period along with a belief about the results of a calculation of the length given the period that would be sufficient to causally sustain the student's belief about the length of the pendulum. But the student does not have the latter belief.

However, perhaps Tolliver's objection can be modified to overcome the above reply. If we think of the student's beliefs as involving particular numbers, as opposed to variables, then the student will have already done
the requisite calculations. The student's belief about the period would still pseudo-overdetermine his belief about the length of the pendulum, and it could be clear that the latter belief is not based on the former. This version of the objection appears to pose a more serious objection to Swain's theory.

2.3.4.4 Shope's objection.

Robert Shope presents a purported counter-example to Swain's account of pseudo-overdetermination as follows:

_Loss of Intellectual Nerve:_ S has several sets of reasons for believing p: 'There is no God.' He presents these in a lecture and goes home. However, the lecture was put together in haste and fatigue in order to fill in for an ill colleague, and S has never before carefully scrutinized the reasons for his habitual atheism. Nor does he regard philosophy of religion as at all his field. If, as S was about to present his reasons to the class, he had suddenly doubted all the sets of reasons but one, this would have led to a heightened sense of fallibility, and S would not have regarded the reasons in the remaining set as having any force. That set accordingly would not have supported S's atheism. (Shope 1983, 80, 157).

Shope presents the Loss of Intellectual Nerve example as an objection to a view of Gilbert Harman's, and then notes later that it also affects Swain's account of the basing relation because of Swain's appeal to pseudo-overdetermination. It is not clear to me how this is supposed to be an objection to Swain's theory of the basing relation. I assume that the reasons are supposed to be the _basis_ of S's belief that p even though he has never carefully examined those reasons and, philosophy of religion
not being his specialty, perhaps he does not feel confident that he could carefully examine them. So if S had doubted all the reasons except one (i.e., they ceased to causally sustain his belief that p) then he would not have believed that the remaining reason was a good reason to believe that p (he "would not have regarded the reasons in the remaining set as having any force"), so his belief would no longer be based on the remaining reason.

If the remaining reason was initially a cause of the belief that p, then we might say that S rejects that reason as a reason to believe p, and this might be a problem for a causal theory which offers no account of rejecting beliefs. But it's not clear how this would show that there is anything wrong with the account of pseudo-overdetermination, which Shope says is his target.

So suppose the remaining reason was a pseudo-overdeterminant of the belief that p. If S were to doubt all his reasons except that one, then that belief would be incapable of causing S to believe that p, even though prior to the doubting, it is a pseudo-overdeterminant. Perhaps Shope is arguing that what is initially a pseudo-overdeterminant would not actually cause the belief to occur if the actual causes (the other, doubted, reasons) had not occurred. But then this objection would appear to fall to the same reply given to Lehrer's argument that the case of the gypsy lawyer defeats Swain's theory. Swain is not claiming that a reason pseudo-overdetermines a belief if where the actual causes did not occur, the pseudo-overdeterminant would have caused the belief. Rather, Swain claims that a reason pseudo-overdetermines the belief if the reason would have caused the belief where both reason and belief occur, nothing else.
causes the belief, and the person's epistemic situation remains the same (insofar as this is possible). In the example as Shope describes it, S's epistemic situation does not remain the same because after he doubted his other reasons, he ceases to regard the one undoubted reason as having any "force."

Shope suggests that Swain's account of pseudo-overdetermination, if modified, may avoid the counter-example, and then presents the modified definition:

\[(2\text{bii}')\text{ there is some set of occurrent events } D = [d_1, d_2, \ldots, d_n]\ (\text{possibly having only one member}) \text{ such that (a) each } d_i \text{ in } D \text{ is a cause of } e; \text{ and (b) if no member of } D \text{ had occurred, but S's being in reason state } r_j \text{ had occurred at } t_n \text{ and S's believing } p \text{ had occurred at } t \text{ anyway without being caused by any event not identical with S's being at } t_n \text{ in reason state } r_j, \text{ then there would have been a causal chain from S's being at } t_n \text{ in reason state } r_j \text{ to S's believing } p \text{ and the former would have been prior to the latter (Shope 1983, 158).}\]

Shope then states that "It is not obvious how to ascertain experimentally the truth value of the peculiar conditional in clause (b) of this emendation ..." (Shope 1983, 158). This is odd because as far as I can tell, clause (b) of this emendation asserts the same thing as clause (2) of Swain's definition of pseudo-overdetermination (DPO). The only differences are that Shope's emendation is stated in terms of beliefs and reasons, and specifies the times at which these events may occur, but both of these changes seem to be what Swain has in mind when utilizing (DPO) in his account of the basing relation. The only real difference between Shope's emendation and (DPO) is that the emendation allows that a
pseudo-overdeterminant may also be a cause of the belief. But then it is not clear how this might avoid the Loss of Intellectual Nerve example, unless Shope is understanding Swain's theory as asserting that a reason must be both a cause and a pseudo-overdeterminant in order to be the basis of a belief. The Loss of Intellectual Nerve example might then be thought by Shope a counter-example, for it is a situation in which a reason (the one remaining reason for the belief that p) might be understood as a cause but not a pseudo-overdeterminant of the belief that p (assuming, contrary to fact I believe, that the Loss of Intellectual Nerve example shows that the one remaining reason is not a pseudo-overdeterminant). And this interpretation of Shope is supported by his claim that (2bii) may avoid the counter-example. However, on this interpretation, Shope is still mistaken in thinking that the Loss of Intellectual Nerve example shows that the remaining reason is not a pseudo-overdeterminant.

I have considered three potential interpretations of the Loss of Intellectual Nerve example (where the remaining reason is the basis of the belief first, by virtue of it's causing the belief, second by virtue of it's being a pseudo-overdeterminant of the belief, and third by virtue of it's being both a cause and a pseudo-overdeterminant of the belief), and on none of them is that counter-example effective versus Swain's theory. There is the possibility that I am misinterpreting Shope on these points, for Shope does not explain how this counter-example is supposed to work against Swain's theory. However, as far as I can tell, it poses no problem for Swain's theory of the basing relation.
2.3.5 A final assessment of Swain's theory

My objection to Swain's theory of the basing relation is that even if it is in some sense correct, and I think it is, it is not sufficiently informative. It is not sufficiently informative because the account of pseudo-overdetermination does not adequately specify the conditions under which a belief is based on a pseudo-overdeterminant. In particular, it does not adequately specify which elements of one's epistemic situation must remain constant. I shall illustrate this point with an example I call the case of the doubtful gypsy lawyer, a loose permutation of Lehrer's case of the gypsy lawyer. The case of the doubtful gypsy lawyer is intended to show that a reason may pseudo-overdetermine a belief even though the belief is not based on the reason. Although this initial version of the case of the doubtful gypsy lawyer is flawed, it can be easily modified to overcome the flaw. In discussing Swain's reply to the case of the doubtful gypsy lawyer, the difficulty with the specification of epistemic situations will become apparent.

The case of the doubtful gypsy lawyer goes like this: The gypsy lawyer's client has been accused of eight very similar murders, and the lawyer has conclusive evidence that his client is guilty of seven of those eight, and everyone is convinced that the client did all eight crimes. But the doubtful gypsy lawyer has absolute faith in the cards and happens to consult them with regard to his client. The cards tell him that his client is innocent of the eighth murder, and his faith in the cards convinces the lawyer that his client is innocent of the eighth murder. In addition, the particular manner in which the cards are read convinces the lawyer that
the only reason he should accept for believing that his client is innocent is that the client's character is such that he would not have committed the eighth murder. As a result of the card reading, the lawyer reviews the evidence and discovers a complicated line of reasoning showing that the client is innocent of the eighth murder by virtue of the fact that the client could not have acquired an eighth copy of *Philosophical Investigations* with which to strangle the eighth victim. However, while the lawyer believes as a result of going through the complicated line of reasoning that it would have been virtually impossible for his client to acquire an eighth copy of *Philosophical Investigations* the lawyer doubts (does not believe) that the complicated line of reasoning shows that his client is innocent. The lawyer nevertheless doubts the reasoning because it suggests that the client's innocence of the eighth murder has nothing to do with his character, contrary to the cards. His absolute faith in the cards leads the lawyer to dismiss the fact that it would have been virtually impossible for his client to acquire another book, viewing what seems to him to be the fact that his client must have acquired the book as surprising and unlikely, but nonetheless true. In the example as I have described it, it is clear that the lawyer does not base his belief that his client is innocent on the complicated line of reasoning. Yet on Swain's theory, the complicated line of reasoning is still a pseudo-overdeterminant of the lawyer's belief that his client is innocent.

It initially appears that, on Swain's theory, the lawyer has based (by means of pseudo-overdetermination) his belief that his client is innocent on the complicated line of reasoning because:
(1) the complicated line of reasoning r is a reason state as well as an occurrent event,
(2) r is not a cause of the lawyers belief B that his client is innocent,
(3) there is a cause of the lawyers belief B, namely the card reading,
(4) but, we may suppose, if the card reading had not occurred, but r and B had occurred anyway, then there would have been a causal chain from r to B (the only thing that prevents this is doubt resulting from the card reading) and r would have been causally prior to B (r would have caused B and not vice versa).

The doubtful gypsy lawyer certainly does not base his belief that his client is innocent on the complicated line of reasoning, but Swain's theory seems to count it as a pseudo-overdeterminant and hence at least part of the basis of the lawyer's belief that his client is innocent. As far as the lawyer's epistemic situation is concerned, it is just a coincidence that the counterfactual C: "If the lawyer did not consult the cards, but still believed his client was innocent, that belief would have been caused by the complicated line of reasoning" is true. This suggests that a reason may pseudo-overdetermine a belief even though the belief is not based on that reason.

Swain replies\textsuperscript{24} to the case of the doubtful gypsy lawyer that (4) misrepresents his theory of the basing relation. It misrepresents his theory by supposing that the only thing preventing the lawyer's belief that his client is innocent from being based on the complicated line of reasoning is the card reading, when in fact it is the doubts that the card reading gives

\textsuperscript{24}Swain's reply was made in conversation with the author.
rise to that prevent that belief being based on the reason. And the doubt is logically and epistemically distinct from the event of the card reading (even though the card reading is what causes it).

So Swain stipulates that we go, not merely to the nearest possible world in which the actual cause of the lawyer's belief (the card reading) does not occur and the belief that his client is innocent does occur, but rather to the nearest possible world in which the card reading does not occur, the belief that his client is innocent remains and the rest of the lawyer's epistemic situation also remains, including the doubts about the complicated line of reasoning.

It follows that the stipulation that the lawyer's epistemic situation remain the same involves a departure from (DPO). According to (DPO), we go to the nearest possible world in which the antecedent conditions of the counterfactual in (2) of (DPO) obtain (namely, that no member of D, the set of actual causes, occur and (reason) c and (belief) e occur anyway). But the nearest possible world in which these antecedent conditions obtain need not, intuitively, be the nearest possible world in which the antecedent conditions obtain and the lawyer's epistemic situation remains the same. For instance, as I show in the modified case of the doubtful gypsy lawyer to be discussed shortly, the possible world in which the antecedent conditions of the counterfactual obtain and the lawyer's epistemic situation remains the same may be a world in which there are uncaused causes, whereas the world (DPO) directs us to need not be such a place. In such circumstances the latter world seems, intuitively, nearer to the actual world than the former.
According to Swain's reply, the doubtful gypsy lawyer's beliefs are not based on the complicated line of reasoning because his doubt about the reasoning is taken to remain for the purposes of determining whether the belief in his client's innocence is pseudo-overdetermined, even in the absence of the cause of the doubt (namely, the card reading). Thus, according to Swain, we may rule out the complicated line of reasoning as a pseudo-overdeterminant in the case of the doubtful gypsy lawyer and retain the heart of his theory, if not all the particulars of his theory as presented in *Reasons And Knowledge*.

I now turn to the task of clarifying and evaluating this final interpretation of Swain's theory of the basing relation, according to which we go to the possible world in which the subject's epistemic situation is least changed from that of the actual world when determining whether a belief is pseudo-overdetermined. Throughout the rest of my discussion of Swain's theory it is this interpretation of it that I have in mind. Although on this final interpretation the original doubtful gypsy lawyer objection is avoided, a slightly modified version of that objection proves effective.

Although Swain does not provide a definition of 'epistemic situation,' one's epistemic situation would appear to include everything relevant to whether one knows or is justified in believing whatever one believes, including one's own beliefs and reasons, as well as certain facts about (or states of affairs regarding) one's own mind and mental operations and certain facts about (or states of affairs in) the world. Thus the fact or state of affairs of one's doubt existing uncaused would count as a part of one's epistemic situation. (This is so because basing relations supervene on such causal relations on Swain's theory.) Note that there is no corresponding
fact or state of affairs for doubts one does not have: the fact that doubts one does not have are not caused by anything would thus not be a part of one's epistemic situation.

The difficulty with Swain's theory is that it still gives the incorrect result. Swain offers the following semantics for counterfactuals, where $A$ and $C$ are any two propositions and where $A$-worlds are possible worlds in which $A$ holds and $C$-worlds are possible worlds in which $C$ holds:

(DST) The proposition that if $A$ were true, then $C$ would be true is true as a world $w$ iff:

either (1) there are no possible $A$-worlds

or (2) some $A$-world where $C$ holds is closer to $w$ than is any $A$-world where $C$ does not hold. (Swain 1981, 50)

We may modify the original case of the doubtful gypsy lawyer by supposing that two further features of the lawyer's epistemic situation are that he knows that he has no uncaused doubts and he knows $x$ number of facts. Then the features of the actual world (AW) of this modified case of the doubtful gypsy lawyer that are relevant to my objection are these:

AW:

(1) the card reading occurs

(2) the lawyer doubts the complicated line of reasoning showing his client's innocence

(3) the lawyer's doubt described in (2) is based on the card reading
(4) the lawyer knows that he has no uncaused doubts

Intuitively, the doubtful gypsy lawyer does not base his belief that his client is innocent on the complicated line of reasoning in AW. The possible world Swain picks (call it W1) to show that his theory matches our intuitions about the modified doubtful gypsy lawyer example is as follows:

W1:
(1') the card reading does not occur
(2) the lawyer's doubt about the complicated line of reasoning remains
(3') the lawyer's doubt described in (2) is not based on the card reading
(4') the lawyer no longer knows that he has no uncaused doubts\(^{25}\)
(5) everything else remains as in the actual world AW

W1 involves three changes in the lawyer's epistemic situation from the actual world AW, reflected in (1'), (3'), and (4'). However, there is a closer possible world in which the pseudo-overdetermination relation does hold, namely W2:

W2:
(1') the card reading does not occur

\(^{25}\)Note that it is logically impossible for the (4) of AW to obtain in W1 as described, given that it is logically impossible to know something that is false.
(2'') the lawyer's doubts about the complicated line of reasoning cease to exist once their actual cause is removed
(3'') there is no basing relation from the card reading to the lawyer's doubt (obviously, since there is no card reading and no doubt in W2)
(4) the lawyer knows that he has no uncaused doubts
(5) everything else remains as in the actual world AW

W2 also involves only three changes in the lawyer's epistemic situation from the actual world AW, reflected in (1'), (2'') and (3''). Yet W1 is further away from AW than is W2 because W1 contains uncaused causes whereas W2 (along with AW) does not. The result is that Swain's theory gives us the incorrect result.26

It seems that, in general, one could rig up a possible world closer to the actual world than the possible world that accommodates the pseudo-causal theorist, but that nonetheless fails to accommodate the pseudo-causal theorist. So it cannot be merely the number of changes relevant to the basing of the belief in question that determines the possible world appropriate to the needs of the pseudo-causal theorist; rather, some qualitative account of the changes must be added. This shows that the desire for an account of those aspects of the lawyer's epistemic situation that are relevant to his belief that his client is innocent is not merely motivated by an abstract desire for a complete account of the basing relation. Rather, it is crucial to the success of Swain's theory that some

26Swain could reply here that W2 is, intuitively, further away than W1, but I such intuitions would seem to me unfounded. Whatever reasonable criterion used for nearness of possible worlds, I believe the example could be made to work with modifications.
account be given of which features of the epistemic situation are relevant to a particular belief's being based on a given reason. Merely requiring that the change in the lawyer's epistemic situation be minimal is not specific enough to rule out the modified doubtful gypsy lawyer objection as illustrated above.

The pseudo-causal theorist could still try to avoid the modified case of the doubtful gypsy lawyer by giving an alternative account of which features of one's epistemic situation must be kept constant in the relevant possible worlds. However, I suspect that all such proposals will be vulnerable to further modified versions of the modified case of the doubtful gypsy lawyer. For example, suppose one proposes that only those elements of the lawyer's epistemic situation that seem to the lawyer to be appropriately related to the truth of his belief that his client is innocent need to remain unchanged. This would avoid the modified case of the doubtful gypsy lawyer, given that doubts about the complicated line of reasoning purporting to show that the lawyer's belief is true would remain but the lawyer's knowledge that he has no uncaused doubts would be irrelevant. But this version of Swain's theory would fail in the face of a counter-example, which I shall call the even more modified case of the doubtful gypsy lawyer, identical to the modified case of the doubtful gypsy lawyer except that the complicated line of reasoning involves the claims that there are no uncaused events or states and that the lawyer knows x number of facts. In this case, there are the same number of changes in W1 and W2 (which remain exactly as described above) in those elements of the lawyer's epistemic situation that seem to the lawyer to be appropriately related to the truth of his belief that his client is innocent. Yet
intuitively, in W1, the lawyer bases his belief on the complicated line of reasoning and in W2 he does not.

I suspect that any counter-example proof account of which features of one's epistemic situation must remain unchanged will simply have smuggled in an independent analysis of the basing relation. I do not see how the pseudo-causal theorist can overcome these problems. Swain's theory is in some sense correct in that any reason for a belief will at least be a counter-factual cause of the belief. However, I do not see how the counter-factual can be elucidated in such a way as to provide a satisfactory analysis of the basing relation. I think this is clearly a problem for pseudo-causal theories in general, including (PC 1) through (PC 4) as presented in section 2.3.2.

2.4 Doxastic theories of the basing relation

2.4.0 Overview

A doxastic theory of the basing relation holds that a belief that p is based on a reason if there is an appropriate meta-belief to the effect that the reason is a good reason to believe that p. A doxastic basing relation, as I shall use that phrase, obtains between the belief that p and a reason q for S at time t merely because S believes at time t that q is a good reason to believe p. A non-doxastic basing relation obtains between a belief that p and a reason q for S at time t if the belief would be based on the reason even if S did not believe at t that q is a good reason to believe p.
Defenders of doxastic theories of the basing relation have all denied that there are any non-doxastic basing relations, taking the meta-belief to be necessary for the presence of a basing relation. However, they have differed as to whether having the appropriate meta-belief is sufficient for the presence of the basing relation. Those theories of the basing relation which hold that having the appropriate meta-belief is both necessary and sufficient for the presence of a basing relation I call purely doxastic theories. As we shall see, both Joseph Tolliver and Helen Longino have defended purely doxastic theories of the basing relation. Those theories of the basing relation which hold that having the appropriate meta-belief is necessary but not sufficient for the presence of a basing relation I call impure doxastic theories. Both Audi and Richard Fumerton have defended impure doxastic theories. No one in the literature has defended the view that having the appropriate meta-belief is sufficient but not necessary for the presence of a basing relation. This is the view I will defend in chapter three.

2.4.1 Purely doxastic theories

Tolliver presents an example of a purely doxastic theory of the basing relation, which he states as follows:

A bases his belief that q on p at time t iff

1. A believes that q at t and A believes that p at t, and
2. A believes that the truth of p is evidence for the truth of q at t, and
3. Where A's estimate of the likelihood of q equals h at t (0<h≤1), if it were the case that:
(i) A's second-order estimate of the L-proposition\textsuperscript{27} "the likelihood of q is greater than or equal to h" is less prior to t than it [is] at t, and
(ii) A did not believe p prior to t, and
(iii) A came to believe p at t,
then, at t, A's second-order estimate of the L-proposition "the likelihood of q is greater than or equal to h" would be greater than it was prior to t (Tolliver 1982, 159).

Condition (2) makes Tolliver's theory an example of a purely doxastic theory. Initially, Tolliver suggests that (1) and (2) alone provide an adequate theory of the basing relation, and then argues that such a theory fails in the case of the Pendulum Case, discussed above in section 2.3.4.3. Condition (3) places a further constraint on what counts as an appropriate meta-belief and is designed to overcome the problem posed by that case. However, it is not clear that the Pendulum Case is an effective counter-example to a purely doxastic theory of the basing relation. So, it is unclear to me why Tolliver includes the condition, and I will not discuss condition (3) further.

One difficulty such a theory faces is that it seems clear that we often base a belief on a reason even though we have no meta-belief to the effect that the reason is a good reason to hold the belief. For example, it seems that I might perceive an elephant and that this perception might cause me to believe that there is an elephant in front of me. It seems clear that my belief about the elephant may be based on my perception of it even though I have no meta-belief to the effect that my perception is a good reason for believing that there is an elephant in front of me.

\textsuperscript{27}An L-proposition is any proposition about likelihoods.
Another difficulty involves mistaken self-attributions. People may be mistaken in their descriptions of their reasons for their belief, as Wiley is in the example discussed in section 2.1. Wiley thinks his reason for believing that a roadrunner crossed his path is a perceptual image when in fact it is an inference. Similarly, there is the problem of subliminal causes of belief. In such cases, one may have no access to one's reasons, yet they may still be one's reasons.

The purely doxastic theory would be even more problematic if it also required that the meta-belief be justified. For then, the second-order meta-belief would have to be based on some other reason, requiring a third-order meta-belief, which in turn will have to be based on some reason, requiring a fourth-order meta-belief, and so on to vicious infinity.

Helen Longino also presents a version of the purely doxastic theory in developing her account of inference (Longino 1978, 22). Her account is as follows:

S infers at t that p from x if and only if
1) S at t comes to believe that p, and
2) S's epistemic reason for believing that p at t is x, i.e.,
a) S takes x to be evidence that p, and
b) S's taking x to be evidence that p causes S to believe that p.

Longino's theory faces the same sort of difficulties as Tolliver's, so I shall not discuss it further. The idea that the meta-belief (S's taking x to be evidence that p) must play a causal role in bringing about the belief that p is also used by Audi, as we shall see.
Another possible kind of doxastic theory holds that doxastic basing relations are necessary, but not sufficient, for a belief to be based on a reason. Audi's theory of the basing relation is one such theory, to which I now turn.

2.4.2 Audi's doxastic theory

In his paper "Belief, Reason And Inference", Audi presents a version of the doxastic theory of the basing relation (Audi 1986). Audi equates reason states with (causally efficacious) beliefs, contrary to our use of 'reasons' to include non-belief states (Audi, 1986, 234). Reason states are not to be equated with reasons in Audi's terminology: reasons for Audi are propositions. Furthermore, since propositions may be obviously false, reasons need not be good reasons (Audi 1986, 234). In discussing Audi's theory, I will follow his usage.

Interestingly, Audi suggests that while the appropriate meta-belief is necessary for a belief to be based on another belief, such a meta-belief is not necessary for a belief to be based on a perceptual state (Audi 1986, 250). Thus, Audi would propose two distinct theories of the basing relation: a doxastic theory for beliefs based on other beliefs and (presumably) a causal theory for beliefs based on non-belief states. However, Audi only discusses the doxastic theory in detail, and so I shall focus on that.

Audi begins by developing an account of "a reason for which S believes p." Audi does not equate a reason for which S believes p with S's

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28An earlier version of this theory appears in (Audi 1978, 55).
belief that p being based on a reason for S. According to Audi, if r is a reason for which S believes p, then S’s belief that p is based on r. However, S’s belief that p may be based on r without r being a reason for which S believes p. So having a reason for which one believes p is sufficient, but not necessary, for S’s belief that p to be based on r. Audi’s strategy in elucidating the basing relation is to provide an account of what it is for r to be a reason for which S believes p, and then to extend that account in order to provide a theory of the basing relation.

The analysis that Audi presents of S’s believing p for a reason is this:

S believes that p, for a reason, r, at time t, if and only if, at t, there is a support relation, C, such that (1) S believes that p and that r; (2) S believes C to hold between r and p (or believes something to the effect that r bears C to p); (3) S’s basis belief, that r, and at least one connecting belief, i.e. his believing C to hold between r and p, or his believing something to the effect that r bears C to p, are part of what explains why S believes p, and, together, fully explain this; (4) S is non-inferentially disposed, independently of seeking reasons he has, had, or might have had, at or before t, for believing p, to attribute his belief that p to the explaining beliefs specified in (3); (5) those explaining beliefs do not (singly or together) accidentally sustain or produce S’s belief that p; and (6) those beliefs do not (singly or together) sustain or produce it via an alien intermediary. (Audi 1986, 262)

Audi adds to this already formidable theory some additional conditions to account for believing something for several reasons as well as believing something for partially supporting (contributing) reasons. Audi allows that some elements of this account will remain vague, and certainly there is much to be discussed (Audi 1986, 262). Audi’s theory amounts to
an amalgam of almost all of the other theories of the basing relation presented in the literature.

Condition (3) of Audi's account stipulates (among other things) that there must be a causal connection from reason to belief (although Audi's statement of (3) quoted above does not specify this, it is clear from his discussion that the explanation involves a causal explanation (Audi 1986, 247-8)). Complementing (3) are conditions (5) and (6), both intended to rule out the sorts of deviant causal chains I have already discussed in connection with causal theories of the basing relation. Since I will deal with these issues in chapter three, I shall not pursue what Audi has to say about them here. As condition (1) of Audi's theory merely stipulates that S must possess both reason and belief, this leaves only conditions (2), (3) and (4) as the heart of Audi's theory and the primary focus of this section.

Although Audi's theory of the basing relation initially appears to be a hodge-podge, it is the distinction between a reason's guiding a belief and the belief's merely being an effect of the reason that motivates both condition (4) and condition (2). For ease of reference, I'll call this the guide/effect distinction. I will first discuss each of these conditions, observing how the guide/effect distinction comes into play, and then turn to a discussion of the distinction.

I'll begin with condition (4), what Audi calls the subjective grounding requirement, which requires that S be non-inferentially disposed, independently of seeking reasons, to attribute his belief to both his reasons and a meta-belief to the effect that a support relation holds from the reason to the proposition believed. This is similar to the appeal theories discussed earlier, and raises some of the same problems. For
instance, if an individual is mistaken about the basis of her belief then she would not attribute the belief to her reason state even though, intuitively, the belief is based on the reason state (as in the case of Wiley discussed in section 2.1). A similar problem is raised by cases involving subliminal reasons for belief. Audi recognizes that self-deception may inhibit the disposition to appeal to one's reasons, but does not explicitly discuss a case in which either self-deception or the subliminal causing of beliefs results in there being no disposition to appeal (Audi 1986, 252).

I think Audi would reply to such an objection that if S, given his current beliefs, cannot in some sense make the connection between reason and belief, then "we do not conceive the putative reason as capable of the appropriate guiding role, and the case becomes one of believing because of, but not for, a reason" (Audi 1986, 254). And Audi thinks that one cannot make the connection without having a disposition to attribute his belief to both his reasons and the appropriate meta-belief. The guide/effect distinction, then, serves as the motivation for including condition (4). Note that in the passage just quoted Audi conflates 'reason' with 'reason state,' having earlier characterized the former as propositional and the latter as a causally efficacious state of a person. Strictly speaking, one cannot come to believe something because of a reason, but only because of a reason state. I shall explain why I think Audi conflates these two shortly.

The reply to the Wiley type objections, then, is that if the person S lacks a disposition to attribute her belief to both her reasons and the appropriate meta-belief, then her belief is not based on the reasons. The belief might be an effect of her reasons, but it would not be guided by
them in the appropriate sense. I believe this reply fails because, as I shall argue below, the guide/effect distinction does not require that one have a disposition to attribute one's belief to both one's reasons and the appropriate meta-belief.²⁹

Let's turn now to condition (2) of Audi's theory - the doxastic element of the theory - which Audi calls the connecting belief requirement. According to the connecting belief requirement, where r is a reason for which S believes p, there is a support relation C such that either S believes C to hold between r and p or S believes something to the effect that r bears C to p. The support relation C may include such things as the reason implying, confirming, justifying, entailing, explaining, indicating, evidencing, or etc., proposition p (Audi 1986, 241).

The connecting belief requirement is disjunctive, and the difference between the disjuncts is important. Audi states that the first disjunct (S believes C to hold between reason r and proposition p) is intended to account for de dicto beliefs about C holding between r and p while the other disjunct (S believes something to the effect that r bears C to p) is intended to include de re beliefs to the effect that r bears C to p (Audi 1986, 241). De dicto beliefs are about propositions whereas de re beliefs are about things out in the world. The provision for de re beliefs is meant to allow persons (such as children) with no epistemic concepts whatsoever

²⁹Another reply to Wiley type cases which Audi could make involves appeal to S's meta-beliefs. If S has a true meta-belief that the reason and the belief that p are appropriately connected, then S does not deceive herself with regard to the reasons for which she believes p. On the other hand, if the meta-belief is false, then the reason states are not the reason states for which the belief that p is held. The belief that p might be an effect of the reason states, but the reason states would not guide the belief. I don't think this reply is effective because, as I shall argue below, I think the guide/effect distinction does not require that there be any meta-belief.
to have some beliefs based on others, even though they are unable to conceptualize epistemic relations such as C by means of *de dicto* beliefs.

An illustration of how *de re* and *de dicto* connecting beliefs can arise may be helpful. Suppose I think as follows: "The candlestick was in the other room, and Colonel Mustard was in the study. The butler must have done it!" In this example, I come to believe (p) that the butler did it on the basis of my beliefs (R) about the candlestick and Colonel Mustard, but do I have a *de re* belief to the effect that R bears C to p? The expression "so" suggests that I do, that I am aware that some relation holds between R and p, and have referred to that relation, even though I have not conceptualized that relation (perhaps I could not tell you what the relation is). On the other hand, suppose I were to think "The candlestick was in the other room, and Colonel Mustard was in the study. This implies that the butler must have done it!" This line of thought requires that I possess an epistemic concept (that of implication), hence the *de dicto* belief *that* the butler must have done it.

Audi's motivation for making the connecting belief requirement part of the analysis of *a reason for which one believes* is again the guide/effect distinction. Audi states:

... believing for a reason is not just having a belief that is an *effect* of a reason (strictly, a reason state), though it is believing *on account of* a reason. It is, in a way, belief that *takes* some account of, in the sense that it is guided by, a reason. (Again, it is strictly the reason state that guides, on the assumption I am making here that abstract entities are not causal elements.) [...] The account I shall develop, then, will construe beliefs for reasons as responses to reasons, and not mere effects; as held in the light of reasons, and not merely explainable in terms of them; and as, in a special way, under the control of reasons (Audi 1986, 237).
As in his discussion of condition (4) cited above, Audi here seems to have trouble avoiding the conflation of (propositional) reasons with (causal) reason states. Audi wants to elaborate the causal theory of the basing relation so that reasons for which one believes are analyzed not simply in terms of causal states and causal chains of events, but rather in terms of those causal chains and causal chains of events that occur in and are influenced by a certain cognitive context. The cognitive context consists of the relevant meta-belief and a disposition to appeal to one's reasons. Audi seems to think that it is only if we take this context into account that we can capture the subtleties of belief formation in light of our (propositional, epistemic) reasons. Thus, he holds that only in this context do the causes of beliefs (reason states) play the appropriate role in guiding the formation of new beliefs.

I think Audi conflates reasons with reason states because, rather than attempting to analyze the cognitive context in terms of reason states, he is convinced that the only way to account for the cognitive context is to add something other than a deeper understanding of reason states to the analysis of a reason for which one believes. Thus, he develops his analysis in the process of appealing to his intuitions regarding reasons. While we do this anyway, we are not ordinarily tempted to conflate the two. Perhaps Audi conflates the two because, impressed by the mental (psychological) character of reasons guiding the formation of beliefs, he presumes that this guiding can only be captured by other mental (psychological) concepts, such as meta-beliefs and dispositions to appeal to reasons. However, I believe that causal concepts such as reason states, properly
understood, can fully account for the process by which reasons guide belief formation. I shall argue for this claim shortly.

If I am interpreting Audi correctly, he seems to have a sympathizer in William Alston, who expresses a similar point this way: "... belief formation is the result of a taking account of features of the experience and forming the belief in the light of them, rather than just involving some subcognitive transaction" (Alston 1988, 229). In discussing Audi's motivation for the guide/effect distinction, we will see some illustrations of how a reason state's guiding the formation of a belief is distinct from a belief's merely being the effect of a reason state.

Audi argues that the connecting belief requirement is necessary if the analysis of a reason for which one believes is to explain how reasons guide belief formation rather than merely assert that beliefs are effects of reasons (Audi 1986, 242). And the guide/effect distinction is motivated by an important property of believing for a reason, namely that it is discriminative. Thus, as it turns out, Audi's argument for including both the connecting belief requirement (condition (2)) and the subjective grounding requirement (condition (4)) is that they are needed to account for this property of being discriminative.

According to Audi, there are three aspects of the property of being discriminative (Audi 1986, 242-243). I will discuss each of these three aspects individually arguing that none alone are sufficient to justify the connecting belief requirement (I have already argued that the subjective grounding requirement is not a necessary condition for a belief to be based on a reason). Of course, Audi did not intend his arguments to be interpreted this way: he had a cumulative case argument in mind.
However, the question of whether any one of them is sufficient to motivate the connecting belief requirement is something that should be looked into, in order to be sure that none of the elements of the cumulative case argument are being underestimated. I shall address the cumulative case argument afterward.

The first aspect of being discriminative is that "the belief that r does not, qua reason belief ... tend to give rise to or sustain just any belief, but only those S takes r to support...." Thus, the argument goes, if the analysis of a reason for which one believes does not include the connecting belief requirement, this property of being discriminative cannot be accounted for.

In reply, a reason state will typically give rise to only those beliefs S would take it to support insofar as S has accurate introspective access to his reasons, hence knows how he goes about reasoning. But sometimes reason states can cause a person to believe something in the absence of the appropriate meta-belief. For instance, my belief that the pen before me is blue might lead me to believe that this pen is not the pen I am looking for, even though I form no meta-belief to the effect that this is so. If I were to stop and reflect on my reasons for believing that this pen is not the pen I am looking for, I might cite my belief that the pen is blue (whereas the pen I am looking for is black), thereby acquiring a meta-belief similar to the kind Audi has in mind. But at the time I continue my search for the pen, I need not have such a meta-belief. Even without the meta-belief, it seems clear that my belief that the pen before me is not the pen I am looking for is based on my belief that the pen before me is blue, and is in fact justified by it.

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The second aspect of the property of being discriminative, a property of a reason for which one believes, according to Audi, is that "... where r is the only reason for which S believes p, so far as S is disposed to explain or justify his belief that p (e.g., on being asked why he believes it), he (i) spontaneously tends to appeal to r, and (ii) does not spontaneously tend to appeal to other beliefs, in the explanatory or justificatory attempt" (Audi 1986, 242). For instance, S 's belief that his brakes squeak naturally generates or sustains his belief that his brakes are worn, but does not generate the belief that he is being a nuisance unless he believes that having squeaky brakes is sufficient for being a nuisance, in which case he has the appropriate meta-belief (Audi 1986, 242). Of course, this will not justify either the subjective grounding requirement or the connecting belief requirement, because one may have a reason for which one believes even when one is not disposed to explain or justify her belief.

The third aspect of being discriminative is that connecting beliefs explain how people are able to distinguish what they believe from what they don't (Audi 1986, 242-243). For instance, if you believe that the squeaking indicates that your brakes are worn, and you mention this to someone and they ask you "Why should their squeaking indicate that they need to be replaced?," you might reply that you don't think that they need to be replaced. Audi states that we explain, in part, your making this reply by observing that you do not have a meta-belief to the effect that a brake's squeaking implies that it needs to be replaced. It is the fact, that you do have a meta-belief to the effect that it's squeaking implies that it is
worn, that allows you to distinguish what you believe from what has been attributed to you.

In reply, it seems clear that we can have beliefs even if we lack meta-beliefs regarding those beliefs. And it seems clear that such beliefs may be distinct from our other beliefs such that each plays a full and unique role in our mental life, all without any meta-beliefs about them. But then we must be distinguishing among our beliefs, or they would not each play a full and unique roll in our mental life. And if some beliefs may be distinct from others in the absence of meta-beliefs about them, then they can be distinct from mistaken attributions without meta-beliefs about them. But then we can distinguish, by means of direct introspective awareness, what we believe from mistaken attributions without meta-beliefs about what we believe.

It seems clear that none of the three aspects of being discriminative alone will justify the connecting belief requirement. Again, I should note that Audi does not intend that they be interpreted this way.

Regarding the connecting belief requirement itself, it is clear that having the appropriate meta-belief is not a necessary condition of believing for a reason. The clearest examples of this are beliefs based on perceptual and sensation states. We frequently form beliefs on the basis of our perceptual states, and our perceptual states are the reasons for which we hold those beliefs, even though we form no meta-beliefs to the effect that the perceptual states support our belief. Of course, Audi is concerned only with reasons which are beliefs, not perceptual states or any non-belief states, so these examples are not directly relevant. However, it seems equally clear that often we hold beliefs on the basis of other
beliefs, without forming any corresponding meta-beliefs. Certainly I can be justified in believing that p on the basis of my belief that q even though I have no meta-belief to the effect that q is a good reason to believe p.

Perhaps the central issue raised by Audi's discussion of the connecting belief requirement is not whether the connecting belief requirement is a necessary condition of having a reason for which one believes, but whether causal theories of the basing relation can account for the guide/effect distinction and the intuitions, supporting the claim that reasons for which one believes have the property of being discriminative, which motivate that distinction.

I believe that causal theories can account for the property of being discriminative. To see this, one must recognize that reason states are very complex states, not simple homogenous wholes. We can account for the fact that a reason state is likely to give rise to not just any belief but only certain beliefs (the first aspect of being discriminative) in terms of the causal properties it has by virtue of being a causally efficacious state appropriately related to a particular (propositional, epistemic) reason. These causal properties will make it the case that certain parts of the reason state are likely to give rise to only certain other belief states.

Precisely what makes a reason state, e.g., a belief that my mug is blue, is that it is so constituted that it will play a certain role in my cognitive system. Thus, what makes it the case that my belief that my mug is blue will not give rise to just any belief is that it is a belief that my mug is blue and as such, it will play only a certain sort of role in my cognitive system. This role is constrained by the other elements of my cognitive system, my other reasons and beliefs, and also the processes by which I reason. Were
it to cause me to believe just anything, then it would cease to be a belief that my mug is blue. It seems clear that my cognitive system can have this effect even if contains no meta-beliefs regarding my belief that my mug is blue, as I argued above.

The second aspect of being discriminative is that where a reason is the only reason for which a belief is held, so far as S is disposed to explain or justify his belief, he spontaneously tends to appeal to his reason and not to other beliefs. Again, I think we can account for this in terms of reason states causing beliefs. Insofar as I have a disposition to explain or justify my belief, and I have access to my reasons for that belief, I will tend to associate my belief with my reasons for it. This sort of association does not seem to require a meta-belief. For instance, suppose my belief that product X is exciting is based on my belief that product X comes in a red package. My belief that product X is exciting will, like all beliefs, be associated with various other beliefs I hold. For instance, it may be associated with beliefs about where the product may be purchased, or beliefs about other similar products, or beliefs about how I discovered the product, etc. These associations will be such that thinking about product X will (in the appropriate contexts, e.g., being asked where product X may be purchased) tend to spontaneously cause me to think about the other beliefs (at least those appropriate to the context, e.g., my belief about where product X may be purchased) associated with my belief about product X. It seems clear that such associations among beliefs may occur in the absence of meta-beliefs.

Similarly, I will naturally associate my reasons for my belief with my belief, such that I have a natural tendency to spontaneously appeal to my
reasons when pressed to justify my belief. Since all kinds of associations among beliefs may occur without meta-beliefs, there seems no reason to suppose that we need to posit meta-beliefs to explain how it is that we are able to appeal to our reasons.

The third aspect of being discriminative is that we are able to distinguish false attributions of reasons from correct ones. If causal relations among reason states and beliefs are sufficient to account for the association of one's beliefs with one's reasons, as I have just argued, then there is no reason to suppose that they cannot also account for the dissociation of one's reasons from false attributions. Where the sort of meta-beliefs Audi has in mind occur, they may well be the result of the attribution rather than something that exists prior to it.

I have argued that the guide/effect distinction, understood in terms of the property of being discriminative, is a distinction that causal theories of the basing relation can account for. If I am correct in this, then Audi's cumulative case argument for the connecting belief and subjective grounding requirements fails. The cumulative case argument would be that the only way to account for all three aspects of being discriminative is to supplement a causal account of a reason for which one believes (condition (3)) with the connecting belief and subjective grounding requirements (conditions (2) and (4), respectively). However, since causal theories of the basing relation can account for the property of being discriminative, the cumulative case argument fails.

The last issue to be addressed is whether Audi's analysis of a reason for which one believes will also serve as an analysis of the basing relation. Audi claims that believing for a reason entails believing on the
basis of a belief expressing that reason, but that believing on the basis of a reason does not entail that the reason is the reason for which the belief is held.

Audi offers several examples in which a belief is based on a reason yet the reason is not the reason for which the belief is held. One such example occurs when one has a non-inferential second-order belief that one believes p (Audi 1986, 269). For instance, if you are wondering whether you believe p, where you do believe p, your introspection seems to immediately produce the second-order belief that you believe p. In this case your second-order belief is based on your first-order belief (the belief that p), but the first-order belief need not be a reason for which the second-order belief is held. It need not be a reason for which one believes because there need not be any meta-belief to the effect that the first-order belief is a good reason to hold the second-order belief. Audi states that in such cases the second-order belief may be based on the first even though there is no connecting belief between the two.

Audi also states that there may be other examples in which a belief's being based on a reason does not entail that the reason is the reason for which the belief is held, as when one believes something on the basis of wishful thinking (Audi 1986, 270). However, Audi concludes that apart from such cases, a belief's being based on a reason does entail that the reason is a reason for which the belief is held.

I have already argued that neither the subjective grounding requirement nor the connecting belief requirement are necessary conditions for a belief's being based on a reason. I now turn to condition (3) of Audi's analysis, which states that "S's basis belief, that r, and at least
one connecting belief, i.e. his believing C to hold between r and p, or his believing something to the effect that r bears C to p, are part of what explains why S believes p, and, together, fully explain this" (Audi 1986, 262). I think that condition (3) faces a serious objection. The objection concerns gypsy lawyer type cases, cases where a belief is based on a reason even though the reason does not cause the belief. Audi argues that the case of the gypsy lawyer is no counter-example to causal theories of the basing relation, but I have shown above, in section 2.2.5, that his arguments are ineffective. I believe, therefore, that the case of the gypsy lawyer still shows that condition (3) of Audi’s analysis is not a necessary condition of a belief’s being based on a reason.

2.4.3 Fumerton’s theory of the basing relation

Richard Fumerton, in his book Metaphysical And Epistemological Problems Of Perception, presents a doxastic theory of the basing relation. Before presenting Fumerton's theory, it will be helpful to discuss how he sets up its presentation.

Fumerton begins his discussion of the basing relation with a discussion of what he calls the principle of inferential justification, which states that

To be justified in believing one proposition P on the basis of another E, one must be
1. justified in believing E, and
2. justified in believing that E makes probable P. (Fumerton 1985, 40)
Recognizing that there may be situations in which a belief may reliably caused hence justified even though the person so justified has no access to her reasons, Fumerton suggests that there is also a derivative or weak sense of justification which he describes as follows:

S's belief that $P$ is inferentially justified by experience $E = \text{Df} S$'s belief was caused by $E$ and the proposition that $E$ occurred either by itself or with background evidence $S$ has confirms or makes probable $P$. (Fumerton 1985, 48-50)

Fumerton notes that the principle of inferential justification in not a fully adequate definition of inferential justification, given that it presupposes an understanding of justification (Fumerton 1985, 51). But even as an account of being inferential it is incomplete, according to Fumerton. It is incomplete because it supplies no account of the basing relation. To remedy this deficit, Fumerton proposes the following account of the basing relation. Note that this account is apparently only intended to account for basing relations in cases of justification as described by the principle of inference, not the weak sense of justification.

Fumerton initially offers this account of one belief's being based on another: "... my belief that $P$ is based on [my belief that] $E$ in the relevant sense if I believe $P$ because I believe $E$ and believe that $E$ confirms $P$." (Fumerton 1985, 52). The first conjunct requires that the reason cause the belief just as in the causal theory. Fumerton states that this causal requirement is analogous to the causal requirement given in his weak sense of justification in which an experience causes a belief.

The second conjunct of Fumerton's theory requires that one also have a meta-belief to the effect that $E$ confirms $P$ if $P$ is to be based on $E$. 120
Fumerton does not offer a developed theory of confirmation, but discusses several accounts of confirmation analyzed in terms of probability. He concludes that the two most likely alternatives are that the concept of probability is either non-existent or that it should be taken as primitive, and states that he finds both alternatives unappetizing (Fumerton 1985, 71). Fumerton recognizes that causal analyses of any relation are notoriously vulnerable to counter-examples involving deviant causal chains, but does not attempt to develop his theory of the basing relation in order to address these problems.

In an unusual move, Fumerton does not attempt to account for cases in which a belief is caused by one reason, but then later becomes based on another, in terms of causal overdetermination. He states that "If one wants to allow that E can justify me in believing P even when my belief that P was originally caused by some other belief, one can modify the analysis above, requiring only that, for my belief that P to be justified by E, I must believe E and believe that E confirms P where these two beliefs are nomologically sufficient (or are relevant parts of a nomologically sufficient condition) for my belief that P." (Fumerton 1985, 52). Nomologically sufficient conditions are distinct from causes. Fumerton writes, "... to say that X is nomologically sufficient for Y is to say that there is a law of nature L such that X together with L entails Y (where X alone does not entail Y)" (Fumerton 1985, 111). So, for example, Jones' getting a flat tire may have caused him to crash his car, but getting a flat tire is not nomologically sufficient for crashing one's car, for it is nomologically possible to have a flat tire without crashing one's car.
It appears that the initial theory and the modified theory are offered as two independent accounts of the basing relation, the initial theory being sufficient unless one wants to allow that beliefs can be based on reasons which did not initially cause them. So I shall first evaluate the initial theory, and then the modified version.

Fumerton's initial theory, oddly, reiterates one of his conditions for justification. This is odd because Fumerton offers his theory of the basing relation in order to provide elements missing from the principle of inferential justification, not as an argument for it. Since Fumerton does not present an argument for his theory of the basing relation, it's hard to see why he requires the meta-belief.

One objection to Fumerton's initial theory is that there may be situations in which a causal relation without a meta-belief may be sufficient to establish a basing relation between two beliefs. For example, suppose that Jones believes that Smithers is a schmuck, and that belief causes him to believe that it was Smithers who shot Mr. Burns. This could be so even though Jones does not believe that his belief that Smithers is a schmuck confirms his belief that it was Smithers who shot Mr. Burns. Jones could believe that his belief that Smithers is a schmuck is irrelevant to whether Smithers shot Mr. Burns, and yet the fact that his belief about who shot Mr. Burns was appropriately caused by his belief that Smithers is a schmuck seems sufficient to establish that the former belief is based on the latter.

A second objection to Fumerton's theory is that it seems that a person may base a belief on a reason even if she lacks any concept of confirmation. Since persons without sophisticated epistemic concepts may
nonetheless have reasons for what they believe, it follows that having a concept of confirmation is not a necessary condition for a belief's being based on a reason.

I now turn to Fumerton's modified theory. According to it, if I believe that $E$ and I believe that $E$ confirms my belief, and if these two beliefs are nomologically sufficient for my belief that $p$, then my belief that $p$ is based on my belief that $E$. It is not clear to me what the relevant law(s) of nature could be. What law of nature would be such that if I believed $q$ and I believed that $q$ confirmed $p$, these two beliefs would as a law of nature result in my believing that $p$? Apparently, the law of nature would have to take into account my other beliefs (which would be relevant to whether I come to believe that $p$). If so, then it looks as if there would have to be a distinct law of nature for almost every belief based on a reason acquired after the belief, and this seems to multiply the number of laws of nature in a way which seems to undermine the explanatory value of appeals to them. Laws of nature are useful insofar as we can utilize them to explain and predict phenomena. But if every belief that comes to be based on a reason after it is held is understood to fall under it's own law of nature, then any explanation in terms of such a law would appear ad hoc. Perhaps there is some general law of nature that Fumerton has in mind which would avoid this objection, but he does not specify that law, and it is not clear to me what it would be.
2.4.4 The prospects for doxastic theories

The case for the claim that an appropriate meta-belief, to the effect that a reason is a good reason to hold the belief that p, may establish a basing relation is a strong one. The gypsy lawyer style counter-examples provide examples of such basing relations. On the other hand, it is equally clear that such a meta-belief is not a necessary condition for a belief's being based on a reason, and that causal relations alone are often sufficient. In addition, not just any meta-belief, to the effect that a reason is a good reason to hold a belief that p, will be sufficient to establish a basing relation, as I shall argue in chapter three. Thus, the role of such meta-beliefs in the correct analysis of the basing relation is not yet clear.

2.5 Conclusion

With few exceptions, published discussions of the basing relation have been discussions of the causal theory of the basing relation. Even the doxastic theories of Audi and Fumerton can be understood as attempts to supplement the causal theory in order to overcome its perceived shortcomings. Many recent discussions have focused on problems involving deviant causal chains, in which some non-epistemic event, such as a recollection from memory or the dropping of a cup of tea, occurs in the causal chain of events leading from a reason to a belief. Plantinga, Pollock, Alston, Winters, Moser and others have all recently made reference to this problem, as I have already noted. I will suggest some ways this problem might be avoided in chapter three.
The remaining problem facing a causal theory of the basing relation is the problem illustrated by gypsy lawyer style counter-examples. There have been three sorts of reply to the problem posed by this case. The first is the appeal to counterfactual causes, as in Swain's theory. While I think that Swain's theory is in some sense correct, in that reasons do pseudo-overdetermine the beliefs based on them, I do not think this will produce a satisfactory analysis of the basing relation. The second has been to argue that the lawyer is not justified in believing that his client is innocent on the basis of the complicated line of reasoning. Audi's is the only sustained defense of this view in the literature (Kvanvig 1992, 104). I have argued above that his objections miss the point of the counter-example. The third response has been brief dismissal of the case, apparently on intuitive grounds, such as is done in footnotes by Goldman and Pollock. I do not find this convincing or persuasive.

I think that the main remaining problem for causal theories of the basing relation, then, is posed by cases in which a belief is clearly based on a reason even though there is no causal chain of events from reason to belief, as in the case of the gypsy lawyer. In the next chapter, I shall show how this problem can be overcome by a causal analysis, if not a causal theory, of the basing relation.
CHAPTER THREE

THE CAUSAL-DOXASTIC THEORY OF THE BASING RELATION

3.0 Overview

In this chapter, I present an original theory of the basing relation which I call the causal-doxastic theory. The causal-doxastic theory, as its name suggests, combines elements of both causal theories and doxastic theories of the basing relation. Roughly, it holds that a belief is based on a reason if either the reason bears an appropriate causal relation to the belief or there is no such causal relation but one has an appropriate meta-belief to the effect that the reason is a good reason to hold the belief. I endorse the view that the most obvious way of accounting for the basing relation is in terms of causal relations. I am thus concerned to show that the problem with deviant causal chains can be overcome, and this is the focus of section 3.1 of this chapter. In section 3.2, I further develop the causal side of the causal-doxastic theory by discussing a particular kind of causal relation, which I call causal reinforcement, upon which basing relations frequently supervene.

In section 3.3, I turn to the doxastic side of the causal-doxastic theory, arguing that there are good reasons for thinking that certain meta-
beliefs to the effect that a reason is a good reason to hold a belief are sufficient to establish basing relations. I analyze such meta-beliefs in terms of states of persons and the causal relations among them. In doing so, I confirm the view that the basing relation is to be accounted for by means of a causal analysis. It is just that the causal analysis is much more complicated than is supposed by the simple causal theories (such as Armstrong's or Moser's) discussed in chapter two.

One important part of any analysis of the basing relation is the question of when a belief ceases to be based on a reason, i.e., when a reason comes to be rejected as a reason for a belief. However, so far as I am aware, no account of rejecting reasons has ever been discussed in the literature. This is the topic of section 3.4.

In section 3.5, I present the causal-doxastic theory of the basing relation. Finally, in section 3.6 I consider some potential objections to the causal-doxastic theory, and conclude that they are ineffective.

3.1 Problems with deviant causal chains

3.1.1 Internal causation

Alvin Plantinga, John L. Pollock and others argue against causal theories of the basing relation that a reason's causing a belief is not sufficient to make it the case that the belief is based on the reason, even if such causal relations are necessary for a belief to be based on a
reason. As Plantinga puts it, "I don't believe B on the basis of A just because A is the or a cause of my believing B..." (Plantinga 1993a, 69).

Plantinga gives the following example in support of his claim:

Suddenly seeing Sylvia, I form the belief that I see her; as a result, I become rattled and drop my cup of tea, scalding my leg. I then form the belief that my leg hurts; but though the former belief is a (part) cause of the latter, it is not the case that I accept the latter on the evidential basis of the former. (Plantinga 1993a, 69n8)

Certainly, causal theories of the basing relation cannot plausibly assert that basing relations are established by every causal chain from a reason to a belief. If a causal theory of the basing relation is to be plausible, it must restrict, without being ad hoc, the class of causal chains which establish basing relations. Causal theories can avoid objections like Plantinga's by restricting the class of causes to those which occur entirely within one's cognitive structure, to what I shall call internal causes. I take a person's cognitive structure to consist only of their beliefs and reasons, understood as causal states of persons each appropriately related to an epistemic reason. Such states are, in principle, directly introspectible by the person who has them. A person S's reason r internally causes S's belief that p iff the causal chain of events from r to the belief that p occurs entirely within the cognitive structure of S. Such a restriction excludes causes such as dropping a cup of tea from counting as part of a causal

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31 An evidential basis relation is a basing relation where one's reason is itself a belief (Plantinga 1993, 70).
32 This is the same sort of reply Armstrong makes to a different objection, as discussed above in section 2.2.3 (Armstrong 1973, 83).
chain of events that could establish a basing relation on the grounds that dropping a cup of tea, being a non-mental event rather than a belief or a reason, does not occur within one's cognitive structure.

Working out the details of a criterion for internal causation in a way that does not reintroduce the problem of deviant causal chains is tricky. It will be useful to distinguish two ways in which reasons may cause beliefs: directly and via an intermediate causal chain of events.

One possibility is that reasons directly cause beliefs. A reason directly causes a belief if there are no intermediate steps in the causal chain from reason to belief. Although the direct causation of beliefs seems possible, it is difficult to imagine an example of it. One example might be the belief that p producing a meta-belief to the effect that one believes p. Another example: perhaps the sensation of pain can directly cause the belief that one is in pain, although it is not clear that this is the case.

Few of the causal relations which establish basing relations are direct. Most will be indirect, involving a causal chain of intermediate events from reason to belief. Such intermediate events would include electro-chemical changes in the brain and such. Our concern is to distinguish which kinds of these intermediate physiological events are non-deviant. A serious limitation on any discussion of this issue stems from the fact that we don't know exactly what role such intermediate events play in the formation of belief. Consequently, the following discussion is somewhat speculative.

We can begin to formulate an answer to the question of which kinds of intermediate physiological events are non-deviant by trying to discover which aspects of a reason's causing a belief are relevant to the
presence of a basing relation, and requiring that they not be interfered with in a way which effects the content of the belief they form. Clearly, the content of a reason is relevant to the beliefs based on it. More specifically, the physical properties of the reason which the content of the reason supervenes on are presumably those directly relevant in causing beliefs (or being causally related to meta-beliefs which establish basing relations).

Suppose one has a given set of reason states, each directly introspectible. Suppose these reason states indirectly cause a belief that p such that the belief is based on them. The intermediate causal chain of events will function to relate the belief causing properties of the various reasons so as to form the belief that p. The belief causing properties of a reason are just those properties of the reason by virtue of which it causes beliefs. The content of the belief so formed should be a function of the belief causing properties of the reasons if the belief is to be based on the reasons. In turn, the belief causing properties of the reasons will be a function of the content of the reasons. This is because part of what makes, for example, a belief that dogs are animals is that it only plays a certain role in one's cognitive system. Such a belief will not cause just any other belief, but only those appropriately relevant to its content. Thus, in the absence of bizarre background beliefs, my belief that all dogs are animals may cause me to believe that no dogs are not animals, but not cause me to believe that Van Gogh is a great painter. We account for this fact by supposing that the belief-causing properties of a given reason are appropriately related to its content. Call the belief causing properties of reasons 'content functional causes.'
Content functional causes serve to relate relevant aspects of the physical properties the content of the reason supervenes on to the belief being formed, as well as to the reason states which in part constitute the reasoning supporting that belief. (The reason states which in part constitute the reasoning supporting the belief will take the form of activated dispositions to form beliefs in a particular way, e.g., according to the rule modus ponens). For example, the contents of my belief that p, my belief that if p, then q, and my belief that modus ponens is a valid form of argumentation are all relevant and related (by means of supervenience) to the process of my reasoning to q as well as to my new belief that q itself. Similarly for inductive reasoning.

An oversimplified depiction of the causal picture might look something like this, where the arrows indicate intermediate physiological causal chains of events:

![Diagram of causal structure](image)

Figure 1: Example of possible causal structure of reasons causing belief.

The intermediate causal chain of events will also have belief forming properties; after all, they function to form the belief. But the intermediate physiological chain of events should not contribute to determining the content of the belief by means of its own content functional causes. The intermediate events should not effect the content of
the formed belief except by means of the content functional causes of the reasons (including both the initial reason states and the reason states involved in the reasoning).

A belief is formed by means other than the content functional causes of the reasons when something determines the content of the belief to be formed yet is not a content causing property of the reasons or the reason states involved in the process of reasoning itself. When the intermediate events do effect the content of the formed belief by means other than the content functional causes of the reasons, the intermediate causal chain of events ceases, in a sense, to be under the full control of the reasons and a deviant causal chain is formed (or, perhaps, another reason is added to the set of reasons for which the belief is held - whether the interfering state is a reason state will depend on whether it is directly introspectible and meets the other conditions (if any) necessary to its being a reason). Otherwise, the intermediate causal chain is non-deviant. The content of the formed belief is altered by the intermediate causes, and the causal chain is thereby deviant, when the content of the belief formed by the causal chain extending from the reasons to the belief is different from what it would have been had the reasons directly caused the belief.

Intuitively, a belief is based on reasons as the result of causal relations from the reasons to the belief when its formation is under the control of those reasons, and its formation is under the control of reasons only if the properties of the belief upon which its content supervenes are determined solely by the content functional causes of the reasons. This is not to say that the intermediate causes play no causal role, only that they
do not alter the content of the belief. In other words, the formation of the belief is under the control of the reasons in the appropriate sense when no intermediate causes alter the content of the produced belief from what it would have been had the reason directly caused the belief. (Note that this is not to say that it's being justified requires that it be under the control of reasons, pace Audi, for beliefs may be based on reasons by other means, as I shall argue later in this chapter).

This account of deviant causal chains is partially confirmed by consideration of various examples of belief formation. Suppose a section of one's brain is replaced with a computer functioning exactly as the missing portion of the brain would. Our pre-analytic intuitions tell us that such causal relations are not deviant. Such a causal chain is not deviant on my account because belief formation remains under the sole control of the content functional causes of the reason states. On the other hand, if the computer malfunctions and adds 'It is not the case that' to the content of every belief formed, then we simply have to decide whether the states which constitute the malfunction are reason states. If they are the result of a hardware glitch, for example, and hence are not in principle directly introspectible, then they are non-reasons which nonetheless contribute to the content of the belief formed (in part) by them, and hence we have a deviant causal chain. If the states which constitute the malfunction are directly introspectible, and meet all the other conditions of being a reason state, then they are reason states and (all else being equal) the chain is non-deviant.

This provides us with one part of my account of what it is to be appropriately internal to one's cognitive system, for it tells us when
intermediate causal chains of events involving physiological events necessary for the formation of belief are merely necessary (in the intended sense) for the formation of a belief on the basis of reasons and when they are deviant. Again, I should emphasize that the foregoing discussion is speculative. The central idea of the analysis is that the elements of a reason state relevant to its role in a causal basing relation are its belief causing properties. When a non-reason (e.g., an intermediate physiological state) influences the causal relations from reason to belief so as to effect the content (strictly speaking, the physical states the content supervenes on) of the belief formed, the causal chain is deviant. Unfortunately, spelling this idea out in any detail requires controversial assumptions regarding belief formation, so the above discussion should be understood merely as an illustration of how this might work.

This restriction to internal causes is well motivated by the intuitions which make a causal theory of the basing relation plausible. These intuitions are motivated by cases in which a person’s reasons for a belief explain both why she believes what she does and how she is justified in her belief. For example, we might say that Saul believes that Christmas is near because he knows that it is now mid-December and knows that Christmas occurs on December 25. These latter two beliefs (reasons) explain both why Saul believes that Christmas is near and how Saul knows that Christmas is near. They explain why Saul believes that Christmas is near because they caused him to believe it, and they help explain how Saul knows Christmas is near because they are appropriately related to epistemic reasons capable of justifying his belief that Christmas is near.
Epistemic reasons would include reasons such as propositional beliefs and images, both of which have content.

By contrast, events such as dropping a cup of tea play no role in understanding how someone knows something because they are not appropriately related to epistemic reasons. Such events as tea-dropping may be causal reasons for a belief, but they are not the right sort of causal reasons because they are not appropriately related to epistemic reasons. And it is causal reasons appropriately related to epistemic reasons, not just causal reasons, which are the subject of the intuitions motivating a causal theory of the basing relation in the first place. Thus, by restricting the class of causes to those that occur within one's cognitive system, we restrict them to beliefs and reasons appropriately related to epistemic reasons, thus clarifying and preserving the intuitions initially favoring a causal theory of the basing relation.

This shows that the restriction to internal causal relations is not merely an _ad hoc_ adjustment to a counter-example, but rather is well motivated by a clarification of the intuitions which support a causal account of the basing relation. The reason I limit cognitive structure to reasons and beliefs is that understanding basing relations as occurring solely within one's cognitive structure so defined seems to provide the best explication of our pre-analytic intuitions regarding the basing relation.

Note that "internal" indicates being internal to one's cognitive structure, not necessarily internal to one's brain. For instance, perhaps one's brain could be linked up to a computer which would function just as one's brain would to produce beliefs. As long as the mental processes are still those of the person in question, they may be counted as internal to
that person's cognitive structure. A number of other complications may arise here: What if the computer is plugged into two or two hundred persons? Is the same token mental state then part of all 200 person's cognitive structure? How much control does an individual have to have over his cognitive structure in such a case for it to be considered a part of her (as opposed to someone else's) cognitive structure? These are interesting questions, but they are more pertinent to a discussion of personal identity than to an essay in epistemology so I shall forego discussion of them here.

In the same vein as Plantinga, William Alston asks "How is being based on distinguished from other sorts of causal dependence?" (Alston 1989, 228). Alston states that "...not just any kind of causal dependence will do. My belief that p is causally dependent on a certain physiological state of my brain, but the former is not based on the latter" (Alston 1989, 228). Perhaps what Alston is pointing out is that my beliefs may depend causally on the existence of my brain (or a portion of it), but my beliefs are not based on my brain. If so, we have another example of a causal relation that results in a belief, but does not involve a basing relation. This example is also handled by the requirement that reasons must internally cause a belief if they are to be the basis of it, assuming that my brain state is not identical to my reason. If my brain state is identical to my reason, then I agree that it would sound odd to say that my belief is based on my brain state, but it would nonetheless be true.
3.1.2 Recollection causes

The requirement that the relevant causes be internal makes it the case that if an objection like Plantinga’s is going to work, it will have to show that there can be an internal causal relation from a reason to a belief, yet intuitively the belief is not based on the reason. One possible source of difficulty involves recollections from memory into consciousness. For instance, consider what I will call the Red Santa example: suppose I see a red house, and this causes me to remember that I owned a red three foot tall Santa doll when I was a child, which in turn causes me to remember that I had a dog that once attacked the Santa doll, and this causes me to believe for the first time that I, as a child, owned a violent dog (prior to this, I may have believed that I had a dog, but never believed it was violent). My belief that I owned a violent dog is not based on my seeing the red house, or even my remembering that the dog once attacked the Santa doll; rather, it is based on my belief that the dog attacked the Santa doll. My seeing the red house is clearly not a reason for which I believe the dog was violent, for we are supposing that I do not engage in such bizarre kinds of reasoning or belief formation.\textsuperscript{34} My seeing the red house is thus like the formation of the Milky Way galaxy: it is part of the causal chain leading to my belief about the dog, but not a reason for which I hold my belief about the dog. Similarly, my remembering that the dog attacked the Santa doll is not a reason for

\textsuperscript{33}I should emphasize that this is a fictional example and is not meant to characterize dogs in general as being violent. I encourage you to support your local humane society.

\textsuperscript{34}I am denying that every event in a causal chain leading to a belief is a reason for which the belief is held.
which I believe the dog was violent. The reason for which I believe the
dog was violent is my belief that the dog attacked the doll.\textsuperscript{35}

I'll call causes which merely result in a recollection of something
from memory recollection causes. The way to handle the Red Santa
example is to exclude recollection causes from the class of causes which
establish basing relations according to our causal analysis of the basing
relation. Of course, a belief or reason which has been recalled from
memory may then become the basis of some belief, and the same is true
of beliefs and reasons which have not been recalled from memory.

The reason we want to exclude recollection causes is that they do
not cause, causally overdetermine or causally sustain the existence of
beliefs. Rather, they merely cause one to be consciously aware of a belief
one already holds. Since the core intuitions supporting a causal account of
the basing relation are that reasons are involved in causing beliefs (or
sustaining them), recollection causes are clearly not the sorts of causes
that belong in a causal account of the basing relation.

One potential objection (which, I shall argue, rests on a confusion)
someone might present to my reply to the Red Santa example is that I
have falsely presupposed that recollecting a belief from memory does not
cause one to hold it. Certainly, if one has completely and permanently
forgotten a belief, and would not even recognize or assent to it were it

\textsuperscript{35}One possible objection to this handling of the red santa example is to argue that
seeing the red house and believing that the dog attacked the doll are a conjunctive
cause of the belief that the dog is violent. If so, then wouldn't seeing the red house be a
reason for which I believe that the dog is violent? One difficulty with this objection is
that it seems clear that this is not what happens: there would appear to be two
independent causal chains proceeding from each. Another difficulty is that attributing
such a conjunctive cause to someone attributes to them an incoherent complex reason
state.
presented now, one no longer holds it. The potential difficulty, it might be argued, is that it could turn out that recollecting a belief to consciousness actually helps to prevent one's forgetting it, thereby (causally) ensuring that one continues to hold it. Certainly, repeating a sentence while focusing one's attention on it may help to remember it, and perhaps this effect occurs whenever we remember anything, each recollection amounting to one repetition. But then wouldn't recollections of a belief cause us to continue holding it simply by virtue of preventing our forgetting it? If so, it might be thought that recollections from memory would causally sustain the existence of beliefs, making the exclusion of recollection causes from our analysis of basing relations seem ad hoc.

This potential objection involves a confusion which can be avoided if we pay attention to the distinction between merely sustaining a belief in memory and what I'll call epistemically sustaining a belief (i.e., a reason's causally sustaining a belief which is sufficient for the belief to be based on the reason). These two sorts of processes of causal sustaining are completely different, and one may occur without the other. Sustaining a belief in memory prevents loss of belief due to what we might characterize as memory attrition: the presumably biological process that gradually eats away at long term memory traces with the result that the beliefs or reasons which are appropriately related to them become more and more difficult to access, until they are finally forgotten (unless we are reminded of the memory or until the memory is so well entrenched that it cannot be forgotten by means of such attrition). By contrast, processes which epistemically sustain a belief need not prevent it's being forgotten. For instance, we would not expect my reason for believing that dogs have

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four legs to prevent my forgetting that dogs have four legs. Rather, we would expect it to either cause me to believe that dogs have four legs or that it would cause me to believe that dogs have four legs if I didn't already believe it, and perhaps that it would prevent me from disbelieving that dogs had four legs in the light of other, weaker reasons for believing no dogs have four legs. The causal relations involved in belief basing seem to be relevant only to causing me to accept or not reject a belief, that is, to sustain my belief in light of my other reasons.

The process of sustaining a belief in memory is thus a kind of process distinct from epistemically sustaining a belief. Each process involves causal sustaining, but each sort of causal sustaining has a distinct function. Sustaining a belief in memory involves sustaining the belief against the force of the process of memory attrition, whereas the epistemic sustaining of a belief involves an effort to sustain a belief in light of our current beliefs and reasons and, ordinarily anyway, against the force of other reasons (or potential reasons) which might otherwise cause us to reject it. The former sort of sustaining may occur without the latter, for we can remember claims which we take to be inadequate to justify a given belief, i.e., claims which we reject. And the latter sustaining may occur without the former, as when I cannot recollect a belief I am justified in holding.

Thus, we have two distinct, independent processes of sustaining. One (epistemic sustaining) is relevant to the basing of the beliefs sustained

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36I suppose it is at least logically possible to have a reason for a belief that is so weak that it could play no role in preventing one from rejecting the belief it is part of the basis of, regardless of which reason one had for rejecting the belief, hence the qualification.
and the other (sustaining a belief in memory) is not relevant to the basing of the beliefs sustained. Our core intuitions about the causal basing of beliefs are best understood in terms of epistemic sustaining, the sustaining of a belief in memory being a kind of sustaining that superficially resembles epistemic sustaining but which, on reflection, can be seen to be a distinct kind of causal sustaining. This, then, is the justification for excluding sustaining a belief in memory from our analysis of basing relations.

(CT 1), as described in chapter two, may now be revised to avoid Plantinga's objection as well as the Red Santa example as follows:

(CT 2) S's belief that p is based upon a reason r\textsuperscript{37} at time t iff either r is an internal cause, internal causal overdeterminant or internal causal sustainer, at or prior to t, of S's belief that p, but is not merely a recollection cause, or r contributes to the internal cause, internal causal overdetermination or internal causal sustaining, at or prior to t, of S's belief that p, but is not merely a recollection cause.

3.1.3 Emotions as causes

Another sort of deviant causal chain is one which involves an emotion causing a belief. For instance, consider Max Deutscher's example of the spineless underling discussed above in section 2.2.3.1. In that example, the underling's beliefs about what he needs to do to get ahead cause him to behave very positively towards his boss. The underling then comes to genuinely feel positive towards his boss, and this causes him to believe that his boss is not so contemptible after all. The underling's beliefs

\textsuperscript{37}r being a member of the set of reasons R, having one or more members, and consisting of all the reason(s) upon which S's belief that p is based. Thus, a belief may be based on several reasons.
about what he needs to do to get ahead result in his belief that his boss is not so contemptible after all, but the latter belief is obviously not based on the former.

Similar examples involve wishful thinking. Suppose I believe that I would enjoy winning the lottery, and my belief results in a good deal of wishful thinking. My wishful thinking then leads me to believe that if I buy a lottery ticket which includes the number 6, I shall win the lottery. Is my latter belief based on my former belief? Intuitively, it is not.

In the above two cases, and others like them involving a belief’s causing an emotion which in turn causes another belief, we certainly do not want to deny that emotions can cause beliefs. What we want to say is that basing relations are not transitive over emotional states. This is not to say that a belief which causes an emotion which in turn causes another belief cannot be the basis of the latter belief, only that, if it is, then there must be some other relation between them upon which the basing relation supervenes.

Analogous cases may also occur with perceptions in place of emotions. Suppose I believe I heard my cat jump up on the table, and this belief causes me to turn my head to the right, causing me to look out the window and see that my garage door is open, and this causes me to believe that I forgot to close the garage door. The latter belief is clearly not based on the former despite the causal relation between them.

What all three of these cases (and others like them) have in common is that the causal chain from the earlier belief to the later

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Davidson provides another example involving a belief causing an individual to become unnerved and his becoming unnerved then causes an action (Davidson 1973, 79). Plantinga’s example of Sylvia, discussed in chapter two, contains a similar element.
includes a state which serves as an interface between our cognitive system (consisting solely of beliefs and reasons) and something else. We can call such states interface states. In the case of perceptual states, the something else is the external world: our perceptual states serve as the interface between our cognitive system and the external world. In the case of emotional states, the something else is our emotional life, consisting of emotional states not reducible to merely our beliefs.

The key characteristic of interface states is that they may be the basis of belief states, but they cannot (logically) be based on anything themselves. Interface states may be caused by beliefs, perceptual states, emotions and such but when this happens the beliefs and perceptual states do not serve as epistemic reasons for the interface states. It makes no sense to talk of an epistemic reason for an emotional or perceptual state, although we often talk of causal reasons for them.\(^{39}\)

The requirement in (CT 2) that the cause be entirely internal to our cognitive system needs to be clarified to account for interface states. We need to add that basing relations are never transitive over interface states. From this point on, whenever I speak of a causal relation being internal, I understand this to mean both that it occurs only among reasons and beliefs and that basing relations are never transitive over interface states. Since the problem posed by interface states is essentially the same sort of problem posed by examples such as Plantinga's, we could, if we wished, understand both those sorts of examples as aspects of the same problem and resolve them with the same solution, namely the basing relation's lack

\(^{39}\) It may be objected that we do talk of justificatory reasons for emotions. But, in reply, this is not epistemic justification, it is some other kind of justification.
of transitivity over interface states. Again, the underlying rationale for stipulating a lack of transitivity is the fact that we are concerned with epistemic reasons for beliefs, and that it makes no sense to talk of such reasons for interface states.

Note that this clarification of something's being internal to one's cognitive system also handles cases in which interface states cause one another. My seeing starving children on TV (a perceptual interface state) may cause the emotion of sympathy (an emotional interface state), and this emotion may cause me to believe that I should send money to the children, but my belief is based on the feeling of sympathy and not my seeing the children. Beliefs may be based on emotional states, but basing relations are not transitive over them.

3.1.4 Unrelated reasons and beliefs

It might be thought that there is yet another sort of deviant causal chain, one occurring entirely within one's cognitive system. Suppose, for example, that Crazy Eddie believes (q) that the price of a pound of peas in China is $2. Then, for whatever reason, Eddie's belief that q causes him to believe (p) that there are more ways of killing a cat than choking it with butter. It seems as if a causal theory such as (CT 2) would count Eddie's belief that p as based on his belief that q. But certainly, it may be argued, this is counter-intuitive. Intuitively, it may seem as if his belief that q could not be a reason for his belief that p at all, because it would be completely crazy to believe that p on the basis of the belief that q. The argument is not that his belief that q is a bad reason to believe that p, it's that it's no
reason at all. In short, the objection is that one cognitive state of a person could cause another cognitive state of a person even though the one state is (in terms of it's content) completely unrelated to the other, and that because the two are completely unrelated, the one is not a reason for believing the other, i.e., the one is not based on the other.\footnote{My colleague Larry Sanger has suggested to me that a similar sort of difficulty might arise from free association. However, I believe that my reply to the Crazy Eddie example will handle such a difficulty. Also, it seems to me that free association does not typically involve the formation of belief, but rather recollection of formerly inaccessible beliefs from memory, in which case free association would amount to a kind of recollection cause.}

I have two replies to this objection. First, it is not clear that such a case is possible. In the case as described, it is not clear just how crazy Crazy Eddie is. If he really thinks that the price of peas in China is a reliable indication of the effectiveness of methods of asphyxiating cats, then I think it is plausible to say that his belief about cats is based on his belief about the peas. It would not be a good reason to hold his belief about cats, but it would be a reason.

On the other hand, suppose Crazy Eddie is not so crazy, and, like us, takes his belief about peas to offer no support for his belief about cats. Then, it is not clear that it is possible for the former belief to cause the latter. For the purposes of brevity, we speak of particular reasons causing particular beliefs. Part of what guides our selecting a particular reason is that we take it to be the most relevant to determining whether the belief it causes is justified. However, beliefs are never simply caused by a single reason. Rather, beliefs are the result of a whole chain of reasons, including the reasons for the reason we tend to cite as the reason for
which we believe, along with numerous background beliefs, many of which may also play a role in causing the belief.

Importantly, background beliefs will help determine which causal relations among cognitive states take place. For example, my seeming to see a pink rat might cause me to believe I have seen a pink rat if none of my background beliefs prevent this. I may know that rats are not naturally pink, but, having no adequately strong reason to discount my sensory perception, I might conclude that someone dyed it pink. On the other hand, if my background beliefs include the belief that I might have ingested a chemical which will make me see pink rats, then my seeming to see a pink rat would not cause me to believe that I have seen a pink rat, because my background beliefs would not, we may suppose, permit this. It is clear, then, that in general what we believe is in large part not just a function of the reasons we might naturally cite, but also of our background beliefs.

Furthermore, it is not clear that it even makes sense to talk of beliefs being caused without reference to background beliefs. Certainly, there cannot be a creature with just 6 beliefs. Rather, having beliefs seems to require a vast network of background mental states. This is necessary for beliefs to be what they are (at least in part), namely complex dispositions to think various thoughts under certain conditions. Thus, it is not clear that one can make an inference from one belief to another without a host of background beliefs permitting that inference and/or helping to cause it. In short, part of what makes a belief that p a belief that p is that it plays only a certain role in one's mental life, and bears only
certain relations to other beliefs one has, all this depending on the content of one's background beliefs.

Returning to the case of Crazy Eddie, if his background beliefs do not support his inference from his belief about peas to his belief about cats, then he will not make the inference from the one to the other. Part of what makes his belief about the price of peas in China a belief about the price of peas in China is that it will not cause him to have a belief about whether butter can asphyxiate a cat, given that his background beliefs will not support such an inference. Of course, there could be some glitch in the grey matter which makes Eddie such that his belief about peas causes his belief about cats, but this sort of example involves a causal chain with a link outside of one's cognitive system rather than a causal chain entirely within one's cognitive system.

A second difficulty with the argument which the example of Crazy Eddie illustrates has to do with the claim that his belief about the price of peas is no reason at all to believe that there are more ways to kill a cat than choking it with butter. The argument for this claim was that the inference would be completely crazy, hence his belief about the peas is not just a bad reason, but is no reason at all. The problem with this argument is that "completely crazy" indicates an epistemic evaluation, and only reasons can be epistemically evaluated. If the objection is interpreted in this way, it follows that Eddie's belief about the peas is a reason, although a very bad one.

If "completely crazy" is not an epistemic evaluation in this context, then it's not clear on what grounds we would claim that there is no reason at all. A clear example of believing for no reason at all would be
believing that p because of a glitch in the grey matter due to a bump on the head. Such a glitch in the grey matter may be a clear case of a non-reason if it is not the sort of thing that can have any kind of content, the way beliefs have propositional content or perceptions have imagistic content or sensations have what we might call indicator content. But in the case of Crazy Eddie, there is a cause of Eddie's belief about cats that is a paradigm case of a kind of reason, namely the belief about the peas.

3.1.5 Conclusion

The deviant causal chains I have examined are one of three sorts. Either they include states external to one's cognitive system (i.e., external to beliefs or reasons only, events such as dropping a cup of tea or neurophysiological events), or they include states within one's cognitive system but which involve what we might metaphorically refer to as the transference of belief within that system (e.g., a belief's being transferred from unconscious memory to consciousness) rather than being immediately involved in belief formation, or, thirdly, they involve interface states, states in a sense partially internal and partially external to one's cognitive system (insofar as their immediate causes are not solely within one's cognitive system). If we make the plausible assumption that the activities of one's cognitive system can involve only either the formation of reasons and beliefs (by means of external causes, interface states or internal causes) or the internal transferring of reasons and beliefs, then it would appear that we have accounted for all the possible sorts of deviant causal chains.
My accounting of each of the three sorts of deviant causal chain is generalizable to any problem of its type. For example, the solution to the problem posed by interface states is to stipulate that basing relations are not transitive over them, and this stipulation can be made for any kind of interface state. The stipulation requiring that the causes be internal to one's cognitive system excludes basing relations from being transitive over any external state the causal chain happens to pass through, regardless of what sort of external state it is. Finally, I believe that the elimination of recollection causes is generalizable to any method of transferring beliefs and reasons within one's cognitive system. If there should be some means, other than recollection from memory, of merely transferring a reason within one's cognitive system, we may also stipulate that such transference cannot establish a basing relation. I believe I have proposed a solution for every kind of deviant causal chain, and I have tried to show that each solution is both correct and intuitively well grounded.

3.2 Causal reinforcement

Up until this point, I have relied in the notion of causal sustaining in discussing causal theories of the basing relation. In this section, I want to clarify the nature of causal sustaining in terms of what I shall call the theory of causal reinforcement. My aim in this section is to trace the various ways beliefs may be caused and discuss their implications for analyses of the basing relation.

A common intuition is that a belief is based on a reason if the reason plays an appropriate role in producing the belief. However, beliefs
are often based on reasons that apparently play no role in producing the belief. This occurs whenever one acquires a new reason for a belief one already holds. This naturally leads to the question of whether the common intuition that reasons play a role in producing beliefs is compatible with situations in which the belief occurs prior to a reason for which it is held. Lehrer, for example, suggests that causal theories of the basing relation are inadequate because they do not account for reasons for a belief acquired after the belief is formed (Lehrer 1990, 169).

Some of the kinds of causes of belief discussed in the literature on the basing relation include genuine causal overdetermination, sustaining causation, pseudo-overdetermination, and simply causation. None of these concepts makes a satisfactory distinction between reasons which originate beliefs and those which do not. For example, causal overdeterminants may be simultaneous, hence the sort of situation in which a belief occurs and then, at some later time, a reason supports it, is not to be equated with causal overdetermination, although it is certainly a subclass of overdetermination. Similarly, sustaining causes may be understood to include original causes, for the original cause of a belief may also sustain that belief. None of these concepts picks out just the cases we are concerned about: those in which the belief occurs prior to a reason for which it is held.

My aim in this section is to provide appropriate terminology for discussing this issue, and to elucidate the nature of the causal relation from reason to belief in situations in which the belief occurs prior to the reason (what I shall call belief-then-reason cases or BTR cases). I will show that the common intuition, that a belief is based on a reason if the
reason plays an appropriate role in producing the belief, is not in any way undermined by the existence of such situations.

I first need to say something about what belief state are, and I shall do that in section 3.2.1. In section 3.2.2 I develop my account of BTR cases and in section 3.2.3 I extend that account to include contributing causes.

3.2.1 Belief states

I take beliefs to be states of persons which are the end result of a causal process. Sometimes, however, the word 'belief' is used to refer to the content of a person's mental state. It is in this latter sense that we may say that a human and a Martian may share the same belief even though their physiological states are very different. I shall call beliefs in this latter sense 'c-beliefs' for 'content-beliefs.' Every belief state has a c-belief supervening on it, but strictly speaking is not to be identified with the c-belief. Thus, strictly speaking, my belief that the sky is blue is not to be identified with any particular belief state of mine for, as I shall argue when arguing for what I call the re-instantiation thesis, my belief state may change considerably while I nonetheless continue to believe that the sky is blue.

Also strictly speaking, c-beliefs cannot be a part of any causal chain. Speaking loosely, we often say, e.g., that Julie's belief that Christmas is coming caused her to shop for a tree, identifying her belief in terms of the c-belief it instantiates. However, it would be more accurate to say that a state of Julie upon which supervenes the c-belief that Christmas is coming caused her to shop for a tree. I shall indicate this loose way of
speaking by stating that someone c-believes that p. I adopt this unusual convention because later I'll need to distinguish belief states from c-beliefs in order to show that different belief states of a single person may instantiate the same c-belief.

3.2.2 Belief-then-reason cases

Causal reinforcement involves cases such as the following: Suppose I come to believe that p at time t and then at some later time t+n, some reason q of mine acts so as to cause a belief that p (but is not merely a recollection cause). Call such cases Belief-Then-Reason (BTR) cases. BTR cases are distinguished from other causes of belief by the fact that the reason does not cause the belief to come into existence, because the belief existed prior to the time the reason bore any causal relation to it. Nonetheless, a causal relation extends from the reason to the belief, and had my belief that p not existed the reason would have caused me to believe that p. Such causes are presumably identical to causes which bring a belief into existence, except that no belief is produced. I'll call such causes unproductive belief causes. I shall argue that all unproductive belief causes are properly understood as what I shall call reinforcement causes.

Let me begin by describing a situation that is analogous in some respects to the way I want to understand BTR cases. I will then illustrate how BTR cases are to be understood, and finally argue that the account of them provided is plausible.
The situation analogous in some respects to the way I want to understand (BTR) cases is this: Suppose that ill-timed dramatic pauses were a crime, and William Shatner were about to be electrocuted. Shatner is strapped to a chair and connected to him are two wires (A and B), wire A hooked up to lever A and wire B to lever B. If lever A is pulled, the following effects result: (1) an electrical connection is made from power source A to wire A, (2) 50,000 volts of electricity travel down wire A, (3) at least 50,000 volts of electricity course through Shatner's body and (4) Shatner dies. Similarly, if lever B is pulled, the following effects result: (1') an electrical connection is made from power source B to wire B, (2') 50,000 volts of electricity travel down wire B, (3') at least 50,000 volts of electricity course through Shatner's body and (4') Shatner dies. Suppose both levers are pulled at exactly the same time. Events (3) and (4) will be causally overdetermined, but events (1) and (2) will not be causally overdetermined.

Now suppose that at time t lever A is pulled and events (1) - (4) occur. Then, three minutes later, at time t+3, while lever A is still being pulled down and events (1) - (3) are still occurring, lever B is pulled and events (1') - (3') occur. Then the pulling of lever B results in (1') and (2') occurring, and (4') is not caused to occur by the pulling of lever B. But (3) is in effect causally overdetermined because 100,000 volts running through Shatner's body is sufficient to make it the case that at least 50,000 volts are. I say that (3) is only "in effect" causally overdetermined because I am going to use the expression 'causally overdetermined' to refer to an effect that is the result of two causes each of which alone are sufficient to create the effect and both of which occur at exactly the same time. I will
use the expression 'causally reinforced' to refer to an effect that is the result of two causes each of which alone are sufficient to create the effect and which do not occur at exactly the same time (so named because, intuitively, the second cause reinforces the effect). (3), then, has been causally reinforced. Further stretch the analogy: suppose (contrary to fact) that event (4) amounted to nothing more than a different way of describing event (3). Speaking in this loose way, it would then make sense to say that event (4) was also causally reinforced. And given that causal reinforcement was no more mysterious, nor required significantly different explanation than causal overdetermination, we would not need much more than a theory of causal overdetermination to account for the causal reinforcement of (4).

The Shatner example is analogous to the way I want to account for BTR cases. The way I want to account for BTR cases is illustrated in the following example. Let event A be certain sound waves striking my ear, said waves being caused by a person whom I take to be reliable uttering the sentence "The state flag of Nevada is blue." Event A will have the following effects: (1) certain nerves in my inner ear will fire, (2) a series of nerves extending from those in my inner ear into my brain will fire, (3) a belief state S of mine comes into existence, and (4) I will come to c-believe that the state flag of Nevada is blue. (3) describes a belief state which instantiates the c-belief in (4). Let event B be certain light waves striking my eye, said waves resulting from my seeing the state flag of Nevada. Event B will have the following effects: (1') certain nerves at the back of my eye will fire, (2') a series of nerves extending from those at the back of my eye into my brain will fire, (3') a belief state S comes into
existence, and (4') I come to c-believe that the state flag of Nevada is blue. Again, (3') describes a belief state which instantiates the c-belief in (4').

Suppose that events A and B occur at exactly the same time. Then event (3) (and loosely speaking, event (4)) would be said to be causally overdetermined. In cases of causal reinforcement, where event A occurs and then event B occurs at some later time, the effects of event B are different. (1') and (2') are as before, but (3') becomes (3''), "a belief state S' (not identical to S) comes into existence and replaces S" and (4') becomes (4''), "I continue to c-believe that the state flag of Nevada is blue."

S' replaces S by modifying it and the modification is the direct result of the causal series of events described in (1') and (2'). This is what occurs when a belief gets causally reinforced. Technically, S is not causally sustained but is destroyed and replaced by the process of causal reinforcement. However, S plays a role in causing state S' insofar as the causal series of events described in (1') and (2') causally interact with S to result in S', and such causal relations are the sorts of internal causal relations upon which basing relations may supervene. Thus, basing relations resulting in state S will also support S' transitively. For instance, in the example above my belief that the state flag of Nevada is blue is initially based on the auditory perceptual state H resulting from my hearing this. Later, when I see the flag, I acquire a new reason for my belief, namely my visual perceptual state V. Although the causal chain of events from V to my belief state S alters S into S' (as it must if my reason is going to be causally connected to my pre-existing belief, as I shall argue
below), S is a part of the causal history of S' and so S' is based on S as well as my perceptual state V. Basing relations are transitive, so if A causes B and B causes C, then A causes C, hence C is based on A. In the flag example, H causes my belief state S and S and V together cause S', hence H causes S' and my new belief that the state flag of Nevada is blue is still based on my hearing that it is blue.

Since the same c-belief that supervenes on S supervenes on S', from an epistemic point of view we would say (speaking loosely) that I have acquired a new reason for my belief that the state flag of Nevada is blue, and speak as if the very same belief got causally reinforced. In other words, when concerned with whether a person knows or is justified in believing something, we would identify their belief state in terms of its content, as in "Your belief that Christmas is coming is justified by this new reason you've acquired," and not the state of the person, as in "Molecular state C of your brain has just been causally impacted and altered to become state D by causal chain X."

This, I shall now argue, is what occurs in BTR cases.

One reason for thinking that unproductive belief causes in BTR cases can be accounted for in much the same way causal overdetermination can is that it seems that unproductive belief causes are identical with causal overdeterminants from the time the unproductive belief cause comes into existence up through the point it re-instantiates a belief. It's not as if the unproductive belief cause is going to know whether some other overdetermining cause is occurring and change itself accordingly. And the status of belief causing reasons after they cause a belief is not thought to be particularly mysterious in this context: the
reasons remain (albeit in the form of a state rather than as an active cause) after the belief has been brought into existence, and are usually accessible to the cognizer in question. We may suppose that unproductive belief causes similarly remain after they have causally reinforced the belief in question, and are likewise usually accessible to the cognizer in question. So unproductive belief causes may be thought of as a kind of overdeterminant, similar to causal overdetermination except that the overdetermining causes occur at two different times.

A second reason for my claim that belief states are altered by unproductive belief causes is the need for an account of a causal relation between reason and belief. If there is no alteration of S into S' in the flag example, then the unproductive belief cause would have no effect on my belief state S, and if we were to permit such causes to count as reasons it would then not be clear how to distinguish reasons for my belief about the flag from reason states which I possess but which are not reasons for which I believe the flag is blue. And if we cannot distinguish reasons one merely possesses from reasons which are reasons for which one believes, then we cannot distinguish between justified and merely justifiable belief.

One key assumption I have been making is that in ordinary humans the same c-belief can be, and often is, instantiated by two different, if similar, belief states. I shall dub this key assumption the Re-instantiation Thesis. There are a number of reasons to believe that the Re-instantiation Thesis is true, which I shall now canvass. My illustrations of my arguments will sometimes presume that belief states are identical to brain states, but it is in no way essential to the Re-Instantiation Thesis or my theory of the basing relation that such a theory of mind/body relations be true. The Re-
instantiation thesis is compatible with any plausible theory of mind/body relations. My three arguments for the Re-instantiation thesis are as follows.

First, it is generally agreed that a single memory trace is stored not within a single neuron or even one small section of the brain, but the one trace is spread through the brain, perhaps over numerous connections between neurons. So if only one well-defined brain state can represent one belief, one would expect that someone who has had a hemisphere of their brain removed would lose many or most of their beliefs as stored in their memory. However, such patients retain their memories (Oakley 1985, 231). So in fact, eliminating much of a distributed memory trace does not eliminate the memory trace itself, and this result is compatible with the assumptions I have made regarding beliefs.

If we take belief states to either be identical with or supervene on brain states, then we may suppose that when the brain states change the belief states change as well. Nonetheless, the differing belief states may still be instances of the same c-belief, e.g., two successive belief states might both be the person's belief that p. Perhaps an analogy will be helpful. Suppose you have a square of plaid cloth and you rip it in half. You will still be able to recognize that each piece is plaid. Similarly, in the case of hemispherectomy, a belief state may be altered in a way analogous to being ripped in half. If we think of what makes a belief state an instance of a c-belief as being analogous to the pattern, we can get a sense of how we could still introspect an altered belief state and recognize it as the same c-belief. A similar analogy holds for cases of causal reinforcement. Just as we can recognize two significantly different patterns
as examples of plaid, perhaps we can also introspect two differing belief states and recognize either as an instantiation of just one c-belief.

Second, it is not clear that it makes sense to think of causally efficacious belief states of persons as completely static things given that they are either identical with or supervise on brain states. For instance, the brain is made up of sub-atomic particles which are constantly buzzing about. And we can identify a brain state by completely specifying the spatial location of a set of sub-atomic particles at a given time t. But then at any later time t+n, the brain state will have changed because the particles will have moved. But we can clearly retain the same belief over a period of time. It may be objected that brain states are not to be specified in terms of sub-atomic particles, but in terms of states of neurons, axons and such. My first reply is that it seems arbitrary to prefer one level of description to another, especially since we would expect a finer grained description to be more accurate. To prefer a coarser grained level of description to the finer seems ad hoc. My second reply is that neurons and axons and such are not static either. For instance, synaptic weights (i.e., the size and time course of the potential change that a synapse will produce in the postsynaptic cell) are apparently slightly altered over the years by relentless molecular turnover, apparently aside from ordinary activation such as presumably occurs during memory recall (Crick & Asanuma 1986, 365). There may also be other relevant changes that the brain undergoes over time, such as the death of brain cells or changes in blood circulation. So while one may retain one and the same belief (identified in terms of its content) for 70 years, during that time the brain and each of its parts will apparently have gone through numerous
physical state changes. So it appears that, at both levels of brain
description, distinguishable states within a single brain may nonetheless
instantiate a single belief over time.

This kind of argument is not limited to a materialist theory of
mind/body relations. For instance, if we suppose that belief states are non-
physical or spiritual things of some sort, I don't see why we must suppose
that a person cannot have two belief states which have the same content
but which are nonetheless distinguished by the times or contexts at which
they appear in consciousness, or by the connotations associated with each.
Regardless of which ontology we accept, it is clear that we will want to be
able to say that different people can believe the same thing. So there
should be no quarrel in principle with the view that one and the same c-
belief may supervene on distinct states of different persons. And it is not a
large step from that claim to the claim that a c-belief may supervene on
two distinct states of one person.

Third, it's not clear what other viable options there are for
explaining causal sustaining relations. By way of illustration, imagine that
mind/brain Ernest is caused to believe that p by reason r, and undergoes
no further changes until causal reason s acts upon him, where if s had
acted at the same time as r, we would count them as causal
overdeterminants of the belief that p. What effect(s) can coming to believe
that p have on Ernest that would alter the effect of s on Ernest? In other
words, how might one's previous reason r or the belief that p alter the
effect of a reason one later acquires, such as s? In particular, will it
prevent s from causing a belief state the way r did? If so, how?
Ernest's already believing that $p$ will not prevent $s$ from being one of his additional reasons for believing that $p$, nor will it require that he believe that $s$ is a good reason to believe that $p$. Nor will it be sufficient to claim that $s$ would have caused the belief that $p$ had $r$ not done so, because this does not answer our question: it does not tell us how the series of events instigated by $s$ that would have caused Ernest's belief that $p$ plays out in mind/brain Ernest, and it must play out if $s$ is to be a reason for believing $p$. Finally, we cannot simply assert that $s$ caused Ernest to come to believe that $p$ for the first time because this ex hypothesi is not true. And it is not as if the causal chain of events initiated by a unproductive belief cause can simply disappear.

So an additional reason to accept the assumption that one belief can and often is instantiated by two different belief states in one mind/brain is that it is the most natural explanation of the course of an unproductive belief cause. For there were no changes in Ernest after the acquisition of reason $r$ and the belief that $p$, and if $s$ instead of $r$ had occurred first, $s$ would have caused the belief that $p$ just as $r$ did. Having shown that neither $r$ nor the belief that $p$ will interfere with the causal chain of events initiated by $s$, there is nothing in mind/brain Ernest to prevent $s$ from forming another state of believing that $p$ within him.

I think that these three arguments are sufficient to show that a single c-belief can supervene on different belief states within a single person.
3.2.3 Complex reasons

3.2.3.1 Complex reason states

BTR cases are cases in which a belief is the result of two causes either one of which is sufficient to cause the belief. It is obvious, however, that rarely if ever is the causing of a belief so simple. Usually, the causing of a belief will involve a host of background beliefs and reasons. For example, suppose I come to believe (A) that Hume's choosing the name 'Pamphilus' for the fictional character who listens in on the discussion among Cleanthes, Demea and Philo was not arbitrary, but yet another instance of his ironic wit. My coming to have this belief about Hume was, we may suppose, the result of a number of events. For example, perhaps I read in a biography of Constantine, and I thus come to believe, (B) that Pamphilus was a fourth century Christian martyr. My reading this alone, we may suppose, was not sufficient to cause my belief about Pamphilus: it is also (in part) caused by my belief (C) that this biography is a reliable one. In addition, my belief (A) about Hume is also the product of my belief (D) that it is possible that Hume knew of Pamphilus, my belief (E) that Hume often used irony and wit in his writings, my belief (F) that it was Hume and not someone else that wrote the Dialogues, and no doubt other beliefs as well, although for the sake of simplicity I shall assume that only (B) through (F) are involved. None of beliefs (B) through (F) alone are sufficient to cause my belief (A). Nonetheless, we may suppose, had I disbelieved any of (B) through (F), I would not have come to believe (A).
In this situation, there are several belief states, occurring at several
different times, contributing to my belief (A). How is this situation to be
handled by a causal account of the basing relation?

I think the answer begins with the observation that we have a
degree of freedom when individuating reason states. Perhaps my belief
(E) that Hume often used irony and wit in his writings is also the immediate
cause of my belief that Hume was a genius, whereas none of the other
beliefs (A) through (F) were the immediate cause of my belief that Hume
was a genius. In this context, it is useful to distinguish my belief (E) from
the rest of my beliefs (A) through (F). Where we have beliefs that require
no further individuation, we have what I shall call simple reason states. My
beliefs (B) through (F) may each be an example of a simple reason state.
However, where it is the combination of my beliefs (B) through (F) that
causes my belief (A), it is helpful to consider (B) through (F) together as
one complex reason state. Complex reason states are those which are
made up of two or more other reason states, those other reason states
themselves either complex or simple. Eventually, each complex reason
state may be cashed out completely in terms of simple reason states.

What happens in cases like my coming to have the belief (A) is that
I acquire a number of simple reason states, each of which alone is
insufficient to cause my belief (A). We may suppose that I first came to
believe (F), then (a few weeks later) (E), then (perhaps several years
later) (C), then (a few days after that) (B), then (D), and finally (A).

The central question here is exactly how each of (B) through (F)
need to be related to (A) in order to be thought of as the basis of (A). It is
not enough that I possess each of (B) through (F), for I might have done
that and still not have believed (A). (B) through (F) must not merely coincide, but coincide in a particular way so as to cause me to come to believe (A). It is this coinciding in a particular way to function as a complex reason state that distinguishes complex reason states from arbitrarily selected sets of simple reason states. When a complex reason state bears the appropriate causal relation to a belief, and that reason state consists of several other reason states and individually each of those states is not sufficient to cause the belief, then the members of that complex reason state have coincided in the appropriate way. (Of course, other conditions for a belief's being based on a reason must be met as well, and these are given in the final version of the causal-doxastic theory presented in section 3.5.)

It might be thought that there is something odd in claiming that my belief (C) - that this biography is a reliable one - actively caused my belief (A). It seems that something like (C) plays the role of permitting, rather than causing, me to come to believe (A) by causing me to come to believe (B) that Pamphilus was a fourth century Christian martyr. If so, this would be a serious problem because every reason we have in some sense permits any belief we actually formulate, otherwise the belief would not be formulated. But we can account for cases like (C) by noting that there would still be an appropriate causal relation from (C) to (B) and from (B) to (A), hence (A) is at least partially, if only indirectly, based on (C). Thus (C) does not merely permit me to come to believe that (A), but is causally related to (A) in the appropriate way. In short, basing relations may be transitive, but such transitive relations are not to be confused with the mere permitting of a belief to be based on a reason.

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3.2.3.2 Complex BTR cases

BTR cases may also involve complex reason states. Suppose that I have come to believe (A) that Hume's choosing the name 'Pamphilus' for the fictional character who listens in on the discussion among Cleanthes, Demea and Philo was not arbitrary, but yet another instance of his ironic wit, for the reasons described in the Hume example in the immediately preceding section. Then, a few weeks later, suppose I read in what I take to be a reliable biography of Hume that Hume was aware of the ironic wit suggested by the use of the name 'Pamphilus', and that this is a new and additional reason R for which I believe (A). Further suppose I have no meta-belief to the effect that the information I read in the reliable biography of Hume is another of my reasons for believing (A). How is it that my reading what I did in the biography of Hume becomes a reason for my believing (A)? The explanation of this merely involves combining my account of BTR cases with my account of complex reason states. Call the complex reason state made up of reason states (B) through (F) Q. Q causes me to believe (A), and then at a later time R creates within me a state distinct from (A), but identical to (A) in its content. In this way, R causally reinforces (A).

Complex reason states can also (literally) be expanded by a process similar to the way complex BTR cases work. Suppose you have a case where you acquire a new reason (G) that Hume had written a letter to a friend that he intended to use ironic wit in the naming of the character listening in on the conversation among Cleanthes, Philo and Demea. (G),
we may suppose, is not sufficient to cause me to believe (A) (because it is not clear to me that Hume's intention had been fulfilled - perhaps I think his choosing of the name could have been a coincidence), which I have already been caused to believe by reason Q. Nonetheless, (G) is a bit of additional evidence which is, intuitively, one of the partial reasons (as are (B) through (F) taken individually) my belief (A) is based on. What is the causal relation of (G) to (A)? The answer is that (G) must combine with other reason states (e.g., (Q)) to produce another complex reason state (X) within me. (X) then causes a re-instantiation of my belief (A). It is only if there is such a causal relation that we can distinguish the mere possession of (G) with (G)'s being a partial reason for my belief (A).

3.2.4 Final definition of causal reinforcement and the distinction between causal reinforcement and causal sustaining relations

The final definition of causal reinforcement is as follows:

(DCR) For two simple and/or complex reasons r; (occurring at time t-\(n\)) and r; (occurring at t), each of which is possessed by a person S at time t, r; causally reinforces S's belief that p at t iff

(1) there is an appropriate causal chain of events\(^{41}\) from r; to S's belief that p, and

(2) there is an appropriate causal chain of events from r; to S's belief that p, and

\(^{41}\)I should also note that I am taking the notion of a causal chain of events as primitive.
(3) each of $r_i$ and $r_j$ alone is sufficient to cause $S$ to be in a belief state which may be correctly described as $S$'s believing that $p$.

Note that (3) permits an appeal to the Re-instantiation Thesis. While I have not explicitly mentioned the Re-instantiation Thesis in (DCR), I believe that any proper understanding of causal reinforcement should involve an appeal to the Re-instantiation thesis. The view competing with the Re-instantiation thesis is the view that the belief state is not changed when it is causally sustained. As I noted earlier, I think this competing view is implausible. However, I recognize that others may sympathize with the competing view, and I wish to emphasize that the theory of the basing relation I shall defend does not necessarily presuppose the one view or the other. This is why I have not included the Re-instantiation thesis in (DCR).

Contrasting the account of causal reinforcement with Armstrong's characterization of sustaining causes will highlight some of the advantages of my account of causal reinforcement. Armstrong states that in sustaining causation,

... one state of affairs simply maintains another state of affairs in existence. Sustaining causation does not entail that anything changes. Pillars may sustain a roof. The pillars' presence underneath the roof is one state of affairs. It sustains, that is, maintains in existence, another state of affairs: the roof's staying up. Nothing need be happening. (Armstrong 1973, 80)
So if I currently believe p for reason q, and then later acquire another reason r to believe p, it might be thought that r is a sustaining cause of my belief that p because it simply maintains a pre-existing state of affairs (my believing p). However, this view of things provides no clear account of the causal relation between r and my belief that p. On this view, it appears that r cannot cause me to believe p because I already believe p. Does r then just cause my belief that p to be brought into consciousness? If so, how is this to be distinguished from a mere recollection of my belief that p from memory? And, if it is literally the case that nothing is happening, then how do we distinguish a sustaining cause of a belief from the mere possession of a reason for that belief? The answers to these questions on Armstrong's view as he presents it are not obvious.

No doubt Armstrong is speaking somewhat loosely and metaphorically here, and there is nothing wrong with his description of events taken as such. However, such an account is not sufficiently detailed to serve the role it needs to in an account of the basing relation.

This is one reason to prefer the alternative analysis of causal reinforcement, along with the Re-instantiation thesis, with which we get a clearer picture of what is happening in the cases that Armstrong describes. For example, suppose you have a table top propped up first by four legs and then, later, by a rope (Armstrong 1973, 80-81). Armstrong would call the rope's causing the table top to stay up a weak sustaining cause, because it is sufficient, though not necessary, to keep the table top up. As Armstrong describes it, the rope maintains in existence a state of affairs: the table top's being up. According to the theory of causal
reinforcement supplemented by the Re-instantiation thesis, the rope causes one state of affairs (the table top being held up by the rope) and the four legs another (the table top being held up by four legs). If all we care about is whether the table top stays up, we can still say (speaking loosely) that the table top remains up after we have attached the rope to it, and both the table's legs and the placement of the rope cause this event. But if we want to distinguish the rope's holding the table top up from the rope simply being around the table top and not holding it up, we cannot merely state that the table top is still up after the addition of the rope. We need to be able to distinguish the table top being held up by the rope from the table top being held up by four legs if we are to be able to conceptually distinguish the mere presence of the rope from the rope's doing some causal work. And, of course, the whole point of developing a theory of the basing relation is to understand what distinguishes the mere presence of a reason from that reason's doing some causal work, i.e., being the basis of a belief.

We can account for the event of the table top's staying up by noting that the table's legs initially hold the top up, and then the placement of the rope causally reinforces this state of affairs. The table top's staying up becomes overdetermined.

3.2.5 A revised version of (CT 2)

We are now able to modify our causal theory (CT 2) by replacing it's reference to causal sustaining with a reference to causal reinforcement:
(CT 3) S's belief that p is based upon a reason r\textsuperscript{42} at time t iff either r is an internal cause, internal causal overdeterminant or internal causal reinforcement, at or prior to t, of S's belief that p, but is not merely a recollection cause, or r contributes to the internal cause, internal causal overdetermination or internal causal reinforcement, at or prior to t, of S's belief that p, but is not merely a recollection cause.

Another of the advantages to utilizing the account of causal reinforcement I have offered results from the emphasis placed on complex reason states. It is common in the literature on the basing relation to speak of a belief's being caused by a reason. But it must be kept in mind that this probably never happens - rather, what happens is that a multitude of reasons converge to cause a belief. As noted in chapter two, section 2.4.2, I believe that some of the intuitive plausibility of Audi's guide/effect distinction results from thinking of beliefs a caused by individual reasons, rather than several reasons. Understanding certain basing relations in terms of causal reinforcement may help to emphasize that talk of a belief being caused by a reason is merely shorthand for a much more complicated process.

While there are still some changes that need to be made to (CT 3), it is best that we now turn to the doxastic element of the causal-doxastic theory.

\textsuperscript{42}r being a member of the set of reasons R, having one or more members, and consisting of all the reason(s) upon which S's belief that p is based. Thus, a belief may be based on several reasons.
3.3 How meta-beliefs can establish basing relations

I argued in chapter two that causal theories of the basing relation cannot account for gypsy lawyer type cases, cases in which it seems clear that a belief is based on a reason even though there is no causal relation from reason to belief. While I think this argument is sufficient to show that causal theories are problematic, the question of exactly why the belief is based on the reason in such cases remains unanswered (at least in detail). Answering this question in greater detail will provide direction in our effort to modify the causal theory in order to account for gypsy lawyer type cases, and that is the aim of this section.

3.3.1 Why recognizing that a reason supports a belief may be sufficient for the belief's being based on the reason

I claimed in chapter two that, in the case of the gypsy lawyer, the reason it seems that the lawyer's belief that his client is innocent is based on the complicated line of reasoning is that he recognizes that the reasoning shows his belief to be true. Why should this be sufficient for a belief's being based on a reason? I'll discuss three answers to this question. The first involves a comparison of two gypsy lawyer style examples. The second involves an appeal our pre-analytic intuitions regarding whether the gypsy lawyer is justified in believing that his client is innocent. The third (a discussion of what is involved in showing a belief to be justified) serves two roles in my defense of the doxastic element of
the causal-doxastic theory, and these dual roles need to be emphasized at
the outset. With the second answer, I wish to support my interpretation of
gypsy lawyer style cases as well as provide reasons completely
independent of any particular sort of example for thinking that basing
relations may supervene on meta-beliefs.

I wish to emphasize that even if I am completely wrong about gypsy
lawyer style examples, there are still very good reasons to believe that
basing relations may be established by appropriate meta-beliefs. I will
argue that such basing relations are established by certain meta-beliefs to
the effect that a reason is a good reason to hold the belief that p. I call
basing relations which essentially involve such a meta-belief doxastic
basing relations.

3.3.1.1 The case of the doubtful gypsy lawyer

The case of the gypsy lawyer shows that some basing relations may
be established between a belief and a reason even when there is no
causal relation from the reason to the belief. We can confirm this
interpretation of the case of the gypsy lawyer by examining a similar
example, the case of the doubtful gypsy lawyer presented in chapter two,
which is just like the case of the gypsy lawyer in all relevant respects
except that the lawyer does not have a meta-belief to the effect that the
complicated line of reasoning is a good reason to believe that his client is
innocent. If, where the lawyer does not have the appropriate meta-belief,
he does not base his belief about his client on the complicated line of
reasoning, whereas when he does have the meta-belief, he does base his

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belief about his client on the reasoning, then this would be evidence that
the meta-belief is what establishes the basing relation between his belief
that his client is innocent and the complicated line of reasoning.

Recall that the case of the doubtful gypsy lawyer goes like this: The
doubtful gypsy lawyer's client has been accused of eight very similar
murders, and the lawyer has conclusive evidence that his client is guilty of
seven of those eight, and everyone is convinced that the client committed
all eight crimes. But the doubtful gypsy lawyer has absolute faith in the
cards and happens to consult them with regard to his client. The cards tell
him that his client is innocent of the eighth murder, and his faith in the
cards convinces the lawyer that his client is innocent of the eighth murder.
In addition, the particular manner in which the cards are read convinces
the lawyer that the only reason he should accept for believing that his
client is innocent is that the client's character is such that he would not
have committed the eighth murder. As a result of the card reading, the
lawyer reviews the evidence and discovers a complicated line of
reasoning showing that the client is innocent of the eighth murder by
virtue of the fact that the client could not have acquired an eighth copy of
Philosophical Investigations with which to strangle the eighth victim.
However, while the lawyer believes as a result of going through the
complicated line of reasoning that it would have been virtually impossible
for his client to acquire an eighth copy of Philosophical Investigations the
lawyer does not believe (doubts) that the complicated line of reasoning
shows that his client is innocent because it suggests that the client's
innocence of the eighth murder has nothing to do with his character,
contrary to the cards. His absolute faith in the cards leads the lawyer to
dismiss the fact that it would have been virtually impossible for his client to acquire another book, viewing what seems to him to be the fact that his client must have acquired the book as surprising and unlikely, but nonetheless true. The doubtful gypsy lawyer might believe the complicated line of reasoning, and even base other beliefs on it (e.g., the belief that his client is very resourceful in his ability to acquire books). But it is clear that the doubtful gypsy lawyer does not base his belief that his client is innocent on the complicated line of reasoning.

When the lawyer believes something to the effect that the complicated line of reasoning is a good reason to believe that his client is innocent, his belief about his client is based on the complicated line of reasoning. Yet when he does not believe something to the effect that the complicated line of reasoning is a good reason to believe that his client is innocent, his belief is not so based. A comparison of these two sorts of cases is evidence that appropriate meta-beliefs may be sufficient to establish basing relations.

There is another way to argue that the gypsy lawyer bases his belief that his client is innocent on the complicated line of reasoning which must be distinguished from the above argument. It can be argued that, intuitively, the lawyer's belief that his client is innocent is justified. But if it is justified, it must be based on adequate reasons. Since the complicated line of reasoning is the only adequate reason the lawyer has to believe that his client is innocent, if his belief is based on adequate reasons, then it must be based on the complicated line of reasoning. This is another good reason to believe that meta-beliefs can establish basing relations, but,
unlike the above reason, it does presuppose an account of or intuitions regarding justification.

3.3.1.2 Showing that one is justified

A third reason for thinking that basing relations may be established by appropriate meta-beliefs begins with the distinction between the state of one's being justified in believing p and the action of justifying one's belief that p (to one's self or to someone else). I understand the action of justifying one's belief that p to involve intentionally showing that one possesses what one sincerely takes to be adequate reasons to believe p.

Being justified in believing that p and the action of justifying one's belief that p are two entirely different things. As Alston notes, it is easy to confuse these two, and such a confusion can result in serious error (Alston 1989, 82-83). Here, I'll note three important differences between the two. First, and most apparently, being justified in believing p is a state whereas showing that one is justified in believing p is an action. Second, it seems clear, for instance, that one may be justified in holding a belief even if one lacks the epistemic concepts needed to show that it is justified. Thus, one need not be able to justify one's belief in order to be justified in holding it. Third, I could attempt to show that my belief that p is justified even if I am not justified in believing p. For example, perhaps I have long believed p, and have deluded myself into believing that I have good reasons to believe p even though, in fact, I have no good reasons to believe p. Perhaps only under pressure to show that my belief that p is justified do I realize that I cannot do so. Similarly, I might not be justified in
believing p but nonetheless believe p. Under pressure to justify my belief, I
could discover that I do have good reasons to believe p and perhaps
become justified in believing p on the basis of those reasons. This third
difference is important for my purposes because I want to argue that one
can begin to show that one is justified in believing p even when one is not
justified in believing p, and then, as a result of going through the process
of justifying one's belief that p, one, for the first time, can come to
justifiably believe p.

I have belabored the distinction between a belief's being justified
and showing it to be justified because the fact that these concepts are
distinct, and distinct in these ways, is important for my argument that
recognizing that a reason supports a belief may be sufficient for the
belief's being justified by the reason. In particular, it should be clear that
my action of trying to show that I am justified in holding a belief does not
presuppose that I am in fact justified in holding the belief.

Although the two concepts are distinct, successfully showing that
one is justified in believing p may, on at least some occasions, be sufficient
for being justified in believing p. If S is able to justify her belief and,
moreover, has justified it and is aware (by means of direct introspection)
that she has justified it, then, all else being equal, surely she is justified in
holding the belief.

If showing a belief to be justified can (under the appropriate
circumstances) be sufficient for its being justified, and if a necessary
condition of a belief's being justified by another belief is its being based
on that reason, then showing a belief to be justified (in the appropriate
circumstances) is sufficient to establish that it is based on a reason. So if
one can show that a belief is justified on the basis of a reason without that reason causing the belief, then there must be basing relations that do not involve a causal relation from reason to belief. However, we need to determine what is at least sufficient for showing that a belief is justified to make sure that one can show one's belief to be justified by reasons which do not cause the belief.

It seems that the following conditions are sufficient for S's showing that his belief that p is justified:

1. S believes that p
2. S possesses reason r
3. S is aware of some logical relation (or something functionally equivalent to such a logical relation) L (e.g., entailment or probability)
4. S is aware of the epistemic relevance of L for r and p for S, (e.g., S realizes that r entails p, and realizes that he knows r, that all else is equal, and that it follows from this that S is justified in believing p to be true and/or that p is true, or S realizes that since r makes p probable to degree n, and that he is virtually certain r is true, and, consequently, that p is probably true to (virtually) degree n and if p is probably true to degree n then S is justified in believing p to be true, or, etc.).
5. S does not discard or ignore r, but sincerely accepts it as an adequate reason for believing p.

If S has satisfied 1-5, then clearly S has shown that his belief that p is justified. The key point here is that it seems clear that steps 1-5 may
occur even though there is no (occurrence\textsuperscript{43}) causal relation from reason $r$ to the belief that $p$. Conditions one and two obviously require no causal relation from reason $r$ to the belief that $p$. Conditions three, four and five all take the form of meta-beliefs, and clearly such meta-beliefs may exist in the absence of any causal relation from reason $r$ to the belief that $p$.

Some points of clarification: the epistemic concepts in the above analysis of showing attributed to S (e.g., entailment, etc.) could be replaced with less sophisticated (but similarly virtuous) epistemic principles, and S would still have shown that her belief that $p$ is justified. It is important to note that the five conditions I have listed for showing a belief to be justified are sufficient for a belief's being justified or being shown to be justified, but my argument does not depend on their being necessary. I am not claiming that a belief cannot be justified or shown to be justified on the basis of a reason if the reason has caused the belief.

We can summarize the argument of this section as follows:

P1 Showing that a belief is justified by a reason may be sufficient for the belief's being justified on the basis of that reason.

P2 One can show that a belief is justified on the basis of a reason even where the reason bears no causal relation to the belief.

C One may be justified in holding a belief on the basis of a reason even where the reason does not cause the belief.

\textsuperscript{43}Swain points out that there is still a pseudo-overdetermination relation from reason to belief in such cases, and I agree. However, I do not include this as an additional condition for showing a belief to be justified because (a) I am not sure how to adequately explicate the notion of pseudo-overdetermination (as indicated in chapter two) and (b) it seems to me that the five conditions I present are in fact sufficient for showing a belief to be justified.
In addition, we can understand gypsy lawyer type examples in light of this argument. The gypsy lawyer can show that he is justified in believing that his client is innocent on the basis of the complicated line of reasoning, hence the lawyer can be justified in believing that his client is innocent on that basis. All this even though there is no causal relation from reason to belief. Note that the claim that the gypsy lawyer can show that he is justified in believing that his client is innocent does not beg the question by presupposing that the lawyer is justified in believing that his client is innocent. The conceptual distinctions between showing that one is justified in believing $p$ and being justified in believing $p$ discussed at the beginning of this section should make this evident. Rather, it seems intuitively obvious that the lawyer recognizes that the complicated line of reasoning is a good reason to believe that his client is innocent, and, as it turns out this is roughly sufficient (and is sufficient in the circumstances of the gypsy lawyer or a similarly situated individual, we may suppose) for showing that he is justified in believing that his client is innocent. We then discover that this is sufficient for the lawyer's being justified in believing that his client is innocent. And if the lawyer is justified in believing that his client is innocent, then his belief must be based on adequate reasons, which in this case is the complicated line of reasoning.

3.3.2 Conclusion

I have discussed three reasons for believing that meta-beliefs may be sufficient to establish basing relations. The first makes a strong case for the intuitive plausibility of this claim by means of a comparison of the case
of the gypsy lawyer with the case of the doubtful gypsy lawyer. The second appeals to intuitions regarding whether the gypsy lawyer is justified in believing that his client is innocent. The third stems from the fact that one can show that one is justified in believing that p on the basis of a reason r even where r does not cause the belief that p. These considerations indicate that a meta-belief to the effect that a reason supports a belief may be sufficient, all else being equal, for the belief to be justified by that reason. Since it is a necessary condition of a belief's being justified by a reason is that it be based on the reason, it follows that meta-beliefs, all else being equal, are sufficient to establish basing relations from reason to belief.

Thus far, I have not said much about which meta-beliefs to the effect that a reason is a good reason to believe p may establish basing relations. Obviously, not every meta-belief to the effect that a reason is a good reason to hold a belief will establish a basing relation. I shall return to this issue in section 3.5. Next, however, I turn to an issue relevant to both causal and doxastic basing relations, the question of under what circumstances a reason ceases to be the basis of a belief.

3.4 Rejecting reasons

One potential objection to causal theories of the basing relation such as (CT 3) is that they make no provision for rejecting one's reasons for a belief. For example, suppose I come to believe that Pablo Neruda is a great poet because I believe that he was a revolutionary and I believe that all revolutionaries are great poets. Later, I realize that this is a bad
reason to believe that Neruda is a great poet and, simultaneously (or nearly so) I come to believe that he won the Nobel Prize for Literature, and I justifiably take this to be a reliable sign that he is a great poet. Thus, I never lose my belief that Neruda is a great poet, but I have changed my reasons for believing this. It seems clear that my belief that Neruda is a great poet has ceased to be based on my thinking that he is a revolutionary and is now based on my belief that he won the Nobel prize. This contradicts the claim that a belief is based on any reason that has non-deviantly caused it.

We can support our interpretation of this example with the following considerations. If a belief is based on a reason then the quality of the reason must be taken into account when attempting to determine whether the belief is justified. If my belief that Neruda is a great poet is to continue to be based on my (former) belief that all revolutionaries are great poets, then this should lessen the degree to which my belief that Neruda is a great poet is justified, because the claim that all revolutionaries are great poets is now undermined by other things I believe. Yet my belief that Neruda is a great poet is now justified to the same degree it would have been if I had never believed that all revolutionaries were great poets.

We need, then, an account of how it is that beliefs may cease to be based on reasons. One possible account would be that a belief has ceased to be based on a reason if the person no longer has the reason. The difficulty here is that it seems that beliefs may be based on reasons we no longer have. For example, my belief that the chalkboard in my classroom is green is based in part on my sensory impression the chalkboard. But I am not now looking at the chalkboard, and I am no
longer having a sensory impression of it. It seems clear that a belief may be based (at least in part) on a reason I no longer have.

I think the correct account is that a belief ceases to be based on a reason (i.e., a reason has been rejected as a reason for a belief) when
(a) one has a meta-belief to the effect that the reason is no longer a good reason to hold the belief, 
(b) one has no contradictory meta-beliefs, and 
(c) the reason is not currently causally sustaining the belief.

Where all three conditions are met, the belief has ceased to be based on the reason. If condition (a) but (b) and/or (c) are not satisfied, then it is unclear whether the belief is based on the reason. This account of rejecting reasons has the advantage of not automatically ruling out reasons one has ceased to possess as the basis of a belief.

We can add this account of belief rejection to (CT 3) to get (CT 4):

(CT 4) S's belief that $p$ is based upon a reason $r$ at time $t$ iff condition (1) is met:

(1) either

(a) the following three conditions are met:

(i) $r$ is an internal cause, internal causal overdeterminant or internal causal reinforcement, at or prior to $t$, of S's belief that $p$, and

(ii) $r$ is not merely a recollection cause, and

\[\text{footnote:} \text{being a member of the set of reasons R, having one or more members, and consisting of all the reason(s) upon which S's belief that p is based. Thus, a belief may be based on several reasons.} \]
(iii) $r$ has not been rejected at $t$ or at any time between $t$ and the time closest to $t$, but prior to $t$, that the reason met both conditions (a)(i) and (a)(ii);

or

(b) the following three conditions are met:

(i) $r$ contributes to the internal cause, internal causal overdetermination or internal causal reinforcement, at or prior to $t$, of $S$'s belief that $p$, and

(ii) $r$ is not merely a recollection cause, and

(iii) $r$ has not been rejected at $t$ or at any time between $t$ and the time closest to $t$, but prior to $t$, that the reason met both conditions (b)(i) and (b)(ii).

Where it is not clear whether a reason has been rejected, it is not clear whether condition (iii) of (a) or (b) has been met, hence it is not clear whether the belief is based on the reason. This result does not appear to be counter-intuitive.

Doxastic basing relations may also be rejected, but not the same way in which causal basing relations are. It seems clear that one has ceased to have a doxastic basing relation when one has ceased to have the meta-belief. When one has contradictory meta-beliefs, then it may simply be unclear whether the belief is based on the reason.
3.5 The causal-doxastic theory

So far, I have worked out the details for the causal side of the causal-doxastic theory, and explained the need for the doxastic side. We are now in a position to begin working out the details of the doxastic side.

I believe I have shown in my arguments in section 3.3 that a meta-belief to the effect that a reason is a good reason to hold a belief is sufficient to establish a basing relation. These arguments also show that it is not a necessary condition of a belief's being based on a reason that the reason cause the belief. I have also argued, in chapter two, that it is not necessary that one have any meta-belief in order for a belief to be based on a reason, i.e., that a belief's being caused by a reason in an appropriate fashion is sufficient for the belief to be based on the reason. These arguments, taken together, indicate that any correct theory of the basing relation will have to allow that both appropriate meta-beliefs and appropriate causal relations are sufficient, but not necessary, for a belief's being based on a reason. As I shall argue below, although this forces us to reject causal theories of the basing relation, it does not force us to reject causal analyses of the basing relation.

An initial, flawed theory of the basing relation which accounts for the fact that both meta-beliefs and causal relations from reason to belief are sufficient but not necessary for the presence of a basing relation is this:

(D) S's belief that p is based on a reason r iff either the conditions of (CT4) are met by S, r, and S's belief that p,
and/or S believes something to the effect that r is a good reason to believe p.

Any number of different kinds of beliefs might satisfy the condition of believing something to the effect that r is a good reason to believe p. For example, S could believe that a good reason to believe p is r, or that given r, S should believe p, or that r shows that S is right in believing p, etc. Possessing such a meta-belief does not require that one be an epistemologist, although it does require that one have some notion functionally equivalent to having a good reason to believe. It does not follow that persons, such as young children, who lack any notion functionally equivalent to a good reason to believe cannot have beliefs based on reasons. (D) stipulates that the appropriate meta-belief is sufficient, but not necessary, for a belief to be based on a reason.

I shall not yet explain how a theory like (D) can resolve the problem for causal theories posed by the case of the gypsy lawyer because (D) is vulnerable several counter-examples which must first be dealt with. Not all meta-beliefs to the effect that a given reason is a good reason to believe are sufficient to establish a basing relation. I shall call meta-beliefs to the effect that a reason is a good reason to believe, but which do not establish basing relations, epiphenomenal basing beliefs.

One sort of counter-example to the meta-belief condition in (D) results from the fact that one can have a meta-belief both about and resulting from a basing relation established by a reason's causing a belief. For example, suppose my belief that tomato sauce is red causes me to believe that tomatoes are red, such that the latter belief is based on the
former. Upon reflection, I may come to have meta-belief Q, that my belief about tomato sauce is a good reason to believe that tomatoes are red. But Q merely reports a basing relation that already exists. The problem is that such introspective reports of one's reasons can be, and often are, mistaken. People are often mistaken about their reasons for what they believe, hence such meta-beliefs do not guarantee the presence of the basing relation they describe.\textsuperscript{45} In order to avoid this sort of difficulty, we replace the 'and/or' in (D) with an exclusive 'or.'

Another sort of counter-example to the meta-belief condition in (D) occurs when one has a meta-belief to the effect that a reason is a good reason to believe, the reason does not cause the belief, and the meta-belief is nonetheless mistaken. For example, suppose that Ezekiel, while selling flowers on the street, sees an armadillo, and thereby comes to believe that he saw an armadillo. However, Ezekiel belongs to a religious cult, and slavishly believes everything his cult leader, Exidor, tells him. Exidor later tells Ezekiel that his belief in God is a good reason to believe everything else he believes, and Ezekiel obediently comes to believe this. But it is clear, we may suppose, that his belief that he saw an armadillo is not based on his belief in God, and that he and Exidor are simply mistaken. Such an epiphenomenal basing belief is mistaken and does not establish a basing relation between his belief in God and his belief that he saw an armadillo.

Similarly, Heber, having fallen prey to some charlatan psychotherapist, might come to believe that "Whatever I come to believe

\textsuperscript{45}A number of well controlled psychological tests provide evidence for this claim. See Vollmer 1993 for examples and discussion.
exactly 20 minutes from now, my belief that all dogs have four legs is a good reason for it." But certainly Heber could be mistaken about that.

This second sort of counter-example can be avoided by requiring that any meta-belief, to the effect that a reason \( r \) is a good reason to believe \( p \), and which is to establish a basing relation, must be such that \( r \) and the belief that \( p \) causally contribute to the meta-belief. More perspicuously, and for reasons already discussed, S's belief that \( p \) and S's reason \( r \) must contribute to the internal causing, internal causal overdetermination or internal causal reinforcement of the meta-belief if the meta-belief is to establish a basing relation. Requiring that \( r \) and the belief that \( p \) contribute to the causing of the meta-belief allows us to avoid counter-examples like those involving Ezekiel and Heber. There is no causal relation from all of Ezekiel's beliefs to his meta-belief that all of his beliefs are based on his belief in God, hence his meta-belief does not establish a genuine basing relation. Similarly, since there are no causal relations from the future to the past, whatever Heber comes to believe 20 minutes from now cannot cause his current meta-belief that whatever he comes to believe 20 minutes from now will be based on his belief that all dogs have four legs.

Note that I do not claim that S's reason \( r \) and S's belief that \( p \) together will be sufficient to cause the meta-belief. Typically, many other internal states will also help to cause such meta-beliefs. For instance, one's state of awareness of a reason \( r \) (in part caused by reason \( r \) itself) and one's state of awareness of the belief that \( p \) (in part caused by one's belief that \( p \)) will also causally contribute to the meta-belief. However, merely
requiring that \( r \) and the belief that \( p \) contribute to the causing of the meta-belief allows us to avoid these counter-examples.

There is a third sort of counter-example to (D) involving recollections from memory. The difficulty results from the fact that the process of introspection is not infallible. One might mistakenly believe that a belief has been based on a reason even though no such basing relation (i.e., no causal relation from reason to belief) ever existed. For example, one might think "I know I had a good reason for believing \( p \), but I'm having trouble remembering what it is. I think it was because of reason \( q \). Yes, that must be it." and later one thinks "No, it wasn't \( q \) but reason \( r! \)"

Whether this later belief is mistaken or not, it is clear that one's introspective beliefs can be mistaken. This sort of situation involves a mistaken recollection cause of the meta-belief, and we do not want to conclude that the meta-belief regarding reason \( q \) is sufficient to establish a basing relation. This sort of counter-example can be avoided by requiring that the second-order belief not be the result of a mere recollection cause, much as we ruled out recollection causes for the causal side of the causal-doxastic theory.

We may now formulate the causal-doxastic theory of the basing relation by combining (CT 4) with the account of meta-beliefs suggested by the foregoing considerations:

\[
\text{(CD)} \ S's \ belief \ that \ p \ is \ based, \ at \ time \ t, \ upon \ reason \ r^{46} \ \text{possessed by} \ S \ \text{iff}
\]

\[46r \text{ being a member of the set of reasons } R, \text{ having one or more members, and consisting of all the reason(s) upon which } S's \text{ belief that } p \text{ is based. Thus, a belief may be based on several reasons.} \]
(1) S believes that p at t; and
(2) Either
   (a) the conditions of (CT 4) are satisfied,
   or
   (b) the following conditions obtain:
      (i) there is no appropriate causal chain of events from r to the belief that p (i.e., condition (2a) is not fulfilled for r),
      (ii) S has a meta-belief, at t, to the effect that r is a good reason to believe p,\footnote{Note that S's meta-belief must be functionally equivalent to the belief that r is a good reason to believe that p, but need not have this exact content. For example, the meta-belief could be that if r is true, then p is, or that r entails p, or that r makes p very likely, etc.}
      (iii) the causal explanation of S's having this meta-belief involves, in some appropriate manner, both S's belief that p and r,
      (iv) r, the belief that p, and any other reason the meta-belief is caused by and is to be causally based on (in the sense defined by condition (2)(a) only), must meet all the conditions of (2)(a),\footnote{Note that this leaves open the possibility that a basing relation could be established between some reason and the meta-belief described in (ii) by some second meta-belief satisfying condition (b). However, no such additional meta-belief is \textit{required} by CD.}
      (v) S has no other meta-belief which contradicts the meta-belief described in (ii).

I have intentionally left condition (b)(iii) is somewhat vague, although (b)(iv) eliminates much of this vagueness. One appropriate manner in which S's belief that p and reason r may be involved in the causal explanation of S's having the meta-belief is as described above. Condition (b)(iii) is satisfied if S's belief that p causes her to be aware that she believes p, and r causes S to be aware of r, and these two awareness states (perhaps along with other states of S) cause the meta-belief.
However, I leave open the possibility that there may be other appropriate ways in which such meta-beliefs get caused.

There is one remaining possibility regarding (CD) I should discuss. This is the possibility that an initially epiphenomenal basing belief might later come to establish a doxastic basing relation, a possibility permitted by condition (b)(iii) of (CD). Suppose Joshua belongs to the same cult as Ezekiel and slavishly believes everything Exidor tells him. Exidor tells Joshua that his belief that money is evil is a good reason to believe that anything green is evil, and Joshua slavishly comes to have the belief B, the meta-belief that his belief that money is evil is a good reason to believe that anything green is evil, without realizing that he does not even believe that anything green is evil. In other words, Exidor's utterance leads Joshua to mistakenly believe that he (Joshua) believes that anything green is evil. In fact, Joshua's belief that money is evil was based on his (mis-) reading of the Bible. Since belief B does not have the appropriate causal history, B does not establish a basing relation. Suppose that at some later time, however, during a sermon given by Exidor on the evils of greenness, Joshua does come to believe that anything green is evil. Joshua's belief B is initially caused by (and based on) Exidor's testimony, and is then causally sustained by both his belief that anything green is evil and his belief that money is evil. As long as B comes to have the appropriate causal history, there seems nothing wrong with allowing that it establishes a basing relation once it is causally sustained in the way described by (CD). Joshua's belief that money is evil would then come to be based on his belief that anything green is evil.
With regard to both the case of the gypsy lawyer and case of the doubtful gypsy lawyer, it is clear that (CD) accords with our intuitions. If, in the case of the gypsy lawyer, we understand the gypsy lawyer to have the meta-belief that the complicated line of reasoning is a good reason to believe that his client is innocent, as I have argued above we should, then we want to say that the gypsy lawyer bases his belief that his client is innocent on the complicated line of reasoning. (CD) gives the correct result in this case since it holds that such a meta-belief is sufficient to establish the relevant basing relation. On the other hand, when we retain all of the crucial elements of the case of the gypsy lawyer except his meta-belief that the complicated line of reasoning is a good reason to believe that his client is innocent, as is done in the case of the doubtful gypsy lawyer, then the lawyer does not base his belief that his client is innocent on the complicated line of reasoning. Here again (CD) gives the correct result. In the case of the doubtful gypsy lawyer, neither condition (2a) nor condition (2b) of (CD) is met, hence according to (CD) the doubtful gypsy lawyer's belief that his client is innocent is not based on the complicated line of reasoning.

3.6 Objections to the causal-doxastic theory

In this section, I shall examine two potential objections to my theory. Both have been raised in the literature, but neither has been presented with the causal-doxastic theory in mind.
3.6.1 The pure facilitators objection

Anne Jaap Jacobson has recently presented an objection to Alvin Goldman's reliabilist theory of justification which might be thought to pose a problem for any causal theory of the basing relation, as well as the causal-doxastic theory (Jacobson 1992, 37). Jacobson argues that some reasons may be non-deviant causes of a belief, and yet not be reasons for which the belief is held. She offers the example of Roger, who suffers from an Obsessive-Compulsive Disorder (Jacobson 1992, 37-38). Roger is taking a multiple-choice examination, and in order to think clearly about the examination, he needs to believe (and therefore does) that the boy in the seat before him is not named Charles. Thus, Roger is able to answer question 25 correctly as "c" only as long as he believes that the boy in front of him is not named Charles. Now, Roger has several beliefs from which he can justifiably infer the correct answer to the question, but would be unable to make the inference if he did not believe that the boy in front of him was named Charles. Roger does make the correct inference, and, according to Jacobson, part of the cause of his belief about the correct answer is his belief that the boy in front of him is not named Charles. However, Roger's belief that the boy in front of him is not named Charles is completely unjustified, and this does not to any extent undermine the justification of Roger's belief about the correct answer. Jacobson takes this to indicate that Roger's belief about the correct answer is not based on his belief that the boy in the seat in front of him is not named Charles, although it is non-deviantly caused by that belief.
Jacobson calls causes of belief which are not reasons for which one believes, such as Roger's belief about Charles, pure facilitators. My reply to Jacobson's argument is that the pure facilitator is effective by means of its effect on Roger's emotions, but basing relations are not transitive over emotional states, for reasons discussed above. What happens is that Roger's belief about the boy occurs, Roger calms down, and this elimination of emotional tension permits his reasons to cause his belief about the correct answer. Thus, it would be a mistake to suppose that Roger's belief about the correct answer is based on his belief that the boy in front of him is not named Charles. I conclude that Jacobson's objection is not a problem for the (CD) theory or any similarly sophisticated causal theory of the basing relation.

3.6.2 The rationalization objection

Another potential objection to the causal-doxtastic theory of the basing relation, an objection Audi, it seems, would be partial to, focuses on the doxastic element, arguing that meta-beliefs alone are never capable of establishing basing relations (Audi, 1986). The argument begins with the assumption that a belief's being based on a reason requires that it be under the control of reason. This condition for basing is said to be satisfied when the belief is the causal result of, or is causally sustained by, reasons. However, the objection continues, meta-beliefs to the effect that r is a good reason to believe that p are not sufficient to keep the belief that p under the control of reason because they bear no causal relation to the belief that p. If all this is correct, then a belief that p
can never be based on a reason \( r \) merely as the result of a meta-belief to the effect that \( r \) is a good reason to believe \( p \).

This argument requires some refinements to be plausible, and Audi supplies these. First, as Audi notes, the existence of the belief need not be under the control of reasons for it to be based on those reasons (Audi 1986, 258-260). Consider cognitively irreversible beliefs, beliefs so firmly implanted in one's mind that one cannot help but believe them. Cognitively irreversible beliefs might include beliefs such as "I exist," or "Something exists," or "I have memories." Such beliefs might be such that one could not reject them regardless of countervailing reasons, but nonetheless one could still hold such beliefs for a reason. For example, one's belief that one exists might be based on direct introspective experience of one's thoughts.

For these reasons, Audi favors the view that for a reason to be a reason for which one believes, it must at least be able to influence the "strength of the belief," i.e., the confidence that one has in the belief (Audi 1986, 259). Thus, the belief must be integrated into one's cognitive system, "where this requires mainly that the strength of one's belief is appropriately responsive to opposing reasons" (Audi 1986, 259). It is only in this sense, then, that a belief must be under the control of reason if it is to be justified, according to Audi.

Given this improved understanding of the sense in which a belief needs to be under the causal influence of reasons if it is to be based on those reasons, we can now return to the main thrust of the argument, which is that if a belief is not under the causal control of reasons it cannot be based on them. Audi cites as justification for taking such causal
influence to be a necessary condition of a belief's being based on a reason both the intuitive plausibility of the principle and the concern that "having a reason, seeing that it is one, and using it in defense of p is not sufficient for believing for that reason. One might be merely rationalizing one's belief" (Audi 1986, 240).

This raises the question of what rationalizing involves, and whether it is sufficient to undermine the justification of a belief (for if rationalizing does not undermine the justification of a belief, it cannot be incompatible with the presence of a basing relation). Audi seems to hold the view that if a reason bears an appropriate causal relation to a belief (where an appropriate causal relation would be one which meets the necessary and sufficient conditions of the belief's being based on the reason), then the belief is not being rationalized in terms of that reason. In other words, if a belief is being rationalized in terms of a reason, there is no appropriate causal relation from the reason to the belief. This is presumably thought to be a necessary but not sufficient condition for a belief's being rationalized. To have a case of rationalization, other conditions will have to be satisfied as well, e.g., the person may have to have a reason, see that it is a reason, use it in defense of the belief, etc. This account of rationalization may seem to capture the sense of insincerity which occurs when one's proclaimed reasons are not one's real reasons for belief.

From this account of rationalization, an objection to the causal-doxastic theory may be formulated. The objection would be that meta-beliefs to the effect that r is a good reason to believe that p are not sufficient to establish r as the basis of the belief that p precisely because
the meta-beliefs the (CD) theory asserts are sufficient to establish basing relations cannot be distinguished from rationalizations.

My first reply to this objection is that one may be justified in holding a belief even if it is being rationalized in Audi’s sense of the term. For example, my belief that p might be caused by and justified by reason r, but due to general epistemic anxiety (which I recognize to be irrational) I feel the need to have at least two reasons for everything I believe, and so I rationalize my belief that p is also justified by my reason q, even though reason q bears no appropriate causal relation to my belief that p. Since, we may suppose, I recognize that my anxiety is irrational, and I recognize and sincerely believe that my causal reason is perfectly adequate, and I recognize that my rationalization is merely a means of indulging my anxiety, it seems clear that my rationalization does not undermine my adequate justification. Even though I do not take my rationalization very seriously, it is still a rationalization in Audi’s sense of the word, i.e., there is no causal relation from reason to belief, the reason is being presented in defense of the belief, etc. So it seems that rationalizing a belief, at least in Audi’s sense of the term, does not automatically prevent the belief from being justified. But then it is at least logically possible for a belief to be both rationalized and justified on Audi’s account, in which case there is no conceptual link between a belief’s being rationalized (at least in Audi’s sense of the term) and it’s being unjustified.50

50Of course, in situations in which one does take the rationalization seriously, then the individual may be unjustified in holding the rationalized belief. But, if so, it will not be because there is no causal reason from reason to belief, but rather for the reasons I discuss in the next paragraph. Furthermore, the existence of such cases does not undermine my point that Audi’s account of rationalization is not incompatible with being justified. The example I give in text is still an effective counter-example to Audi’s account of rationalization.
A second example will expand on this point by showing how a belief can be justified by a reason even where the reason is used in a rationalization (in Audi's sense of the term). We are naturally inclined to suppose that a rationalized belief is unjustified because one part of the motive for one's rationalizing is often a belief that one's current reasons are inadequate or inappropriate. Where one's current reasons are thought to be epistemically inappropriate, their justification is automatically undermined. But a rationalization in Audi's sense may occur without this undermining. For example, suppose I have a cognitively irreversible belief, such as a belief that I exist. Suppose the basis for this belief is it's self-evidence, and that nothing else could cause me to believe or disbelieve, or alter the degree of confidence (which happens to be the very highest degree of confidence I am capable of) I have in my belief that I exist. Then I read Descartes, and I come to have what I take to be another reason for believing that I exist, namely that I cannot be deceived about whether I exist. Since my belief that I exist is not under the causal influence of this new reason to believe I exist, and, we may suppose, the reason bears no appropriate causal relation to my belief, the reason must, if the account of rationalization I have attributed to Audi is correct, be a rationalization of my belief that I exist. But it seems clear that my new reason could be an additional good reason for me to believe that I exist, one that helps to justify my belief (e.g., where the appropriate sort of meta-belief is present).

This example highlights a feature of rationalization that is ignored in Audi's brief account, namely that when one rationalizes a belief it is (at least usually) because one takes one's reasons for it to be in some sense
inadequate or inappropriate. Thus, typically, when a belief is rationalized, one's causal reasons may be undermined by the very thing which motivates the rationalization. But this need not be the case. One's rationalizing a belief does not entail that one is irrational in holding it, at least on Audi’s account of rationalization.

If there is no conceptual link between a belief’s being rationalized in Audi’s sense of the term and it’s being unjustified, then rationalization (on Audi’s account) is not a negative epistemic appraisal of the justification of a belief. And if rationalizing does not undermine justification, it cannot prevent a belief from being based on a reason and there is no reason to suppose that a belief cannot be based on a reason which does not cause it. In some other sense of rationalization, e.g., in the sense in which where one rationalizes, one takes one’s reasons to be inappropriate, rationalizing a belief may be incompatible with it's being justified. But the incompatibility is the result of the meta-belief that one’s reasons are bad, not any lack of causal relation from reason to belief. The causal-doxastic theory does not conflict with this alternative and more plausible account of rationalizing.

Even in Audi’s sense of the term, rationalizing may deserve a negative epistemic appraisal, but this need not undermine the justification of the rationalized belief. An analogy to the rationalization of actions may be helpful here. Audi offers the example of a teacher who wants to give a student a B because he likes her (Audi 1985, 417). The teacher recognizes that such an action would be inappropriate. The teacher also realizes that the student deserves the B, but this plays no causal role in the teacher’s assigning the student a B. Audi cites this as a case of
rationalization. The action of giving the student a B has clearly been rationalized, but no normative judgment about the action follows from this. This particular action was correct in every way. It is the person, not the action, who should be criticized, not for performing the action, but for performing it for the reasons they did.

Analogously, when one rationalizes a belief in Audi's sense of the term, it is the person, and not necessarily the belief, that should receive a negative normative judgment. They should receive a negative normative judgment if, for instance, the motive for rationalizing is emotional factors which prevent good reasons from causing a belief, as in the case of the gypsy lawyer. An epistemically virtuous person should never let untoward emotional factors interfere with their reasoning, hence never need to rationalize a belief. If someone does need to rationalize a belief, that person may plausibly be thought epistemically naughty. But the belief rationalized may still be epistemically praiseworthy as justified.

My second reply to the objection is that Audi's account of rationalization is inadequate. As long as I sincerely recognize that \( r \) is a good reason to believe \( p \), and this meta-belief meets all the conditions of (CD), then, intuitively, I am not rationalizing my belief that \( p \). It seems to me that two essential ingredients of rationalizations are (1) that one be dissatisfied with one's current reasons for the belief and (2) one doubts the quality or importance of the reason one presents to supplement one's current reasons, hence one is insincere in presenting them as adequate or important. For example, in the case of the teacher who is going to give a student a B because he likes her, the teacher recognizes that his liking the student is not a good reason to give her the B (although he does it for this
reason anyway) and the teacher does not take his good reasons to give the student a B to be important: all the teacher really cares about is that he likes her. This is a clear case of rationalization. By contrast, in the case of the gypsy lawyer, for example, we may suppose that the lawyer is not dissatisfied with the quality of his actual reasons (his belief in the cards - we can suppose that the lawyer knows the cards are reliable if need be) and, more importantly, he does not doubt the quality or importance of his good reasons for believing that his client is innocent. He recognizes that the reasons are perfectly good. It is simply that the lawyer is such that those reasons cannot causally influence his belief that his client is innocent.

Finally, both the lawyer and the teacher can be held epistemically responsible for the quality of their reasons and, as argued above, this is what seems essential to a belief's being subject to epistemic evaluation insofar as justification is concerned. But if one can be justified in holding a belief on the basis of a reason, then the belief is based on the reason. I conclude that concerns about whether individuals in gypsy lawyer type cases are rationalizing do not warrant the conclusion that appropriate meta-beliefs cannot establish basing relations.

3.7 Conclusion

I noted in the conclusion to chapter two that most discussions of the basing relation begin with perceived inadequacies in purely causal theories. The causal-doxastic theory is no exception to that rule. Sharing the motivations Swain presents for the pseudo-causal theory, namely
gypsy lawyer type examples, I have supplemented the causal theory with an account of doxastic basing relations aimed at accounting for the examples. In the process, I have shown that the addition of doxastic basing relations is supported not only by our pre-analytic intuitions regarding gypsy lawyer type examples. I believe I have shown that the causal-doxastic theory is true, and I will now turn to an examination of some of its epistemological implications.
CHAPTER 4

SOME IMPLICATIONS OF THE CAUSAL-DOXASTIC THEORY OF THE BASING RELATION

4.0 Overview

In this chapter I discuss some of the implications of the causal-doxastic theory of the basing relation. In section 4.1 I argue that the causal-doxastic theory of the basing relation has useful implications for many different sorts of theories of justification. I will also present a few illustrations showing how the basing relation may be useful in understanding and defending various different theories. I will not, however, attempt to defend any particular theory, for the question of which theory of justification is correct is far too large to approach here.

In section 4.2 I discuss the implications of the causal-doxastic theory of the basing relation for the debate between accessibility internalists and accessibility externalists. I develop a typology of different possible theories of accessibility internalism and externalism, and argue that the causal-doxastic theory is incompatible with several of them. In particular, it shows that any pure form of accessibility externalism is false, and gives qualified
support to a broad range of internalist and combined internalist/externalist theories.

In section 4.3, I present an argument against process reliabilism. I try to show that the causal-doxastic theory provides some evidence that process reliabilism is mistaken.

In section 4.4, I discuss some implications of the causal-doxastic theory for various versions of the principle of closure. I develop a version of the principle of closure that is significantly clearer than some that have been discussed in the literature.

4.1 The basing relation and theories of justification

If a belief is to be justified, it must be based on a reason. Beliefs which are not based on reasons will result from cognitive glitches, brain probes, and such. Such beliefs are not candidates for being justified, because if beliefs could be justified without being based on reasons, there would be no non-arbitrary way to distinguish unjustified from justified beliefs. Furthermore, there would be no way to adequately analyze the distinction between justified and merely justifiable beliefs. Any account of justification not involving beliefs being based on reasons will give problematic results.

It follows that any adequate theory of justification must require that a belief be based on a reason if it is to be justified. However, the manner in which the basing relation becomes relevant may vary from theory to theory. I'll illustrate this variation with a few examples. I should mention that I do not endorse the following theories of justification. I am merely

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illustrating how a theory of the basing relation can be relevant to the formulation and defense of some theories of justification.

4.1.1 Foundationalism

Foundationalism requires that any non-basic justified belief ultimately receive its justification from some properly basic belief(s). A non-basic belief is a candidate for justification only if it is based on some reason(s). Properly basic beliefs are those which are non-inferentially justified. The basing relation between a non-basic belief and the reason for which it is believed I will call an inferential basing relation. Basic beliefs, if they are to be justified, must be based on reasons, but the reasons they are based on will (obviously) not be beliefs. Rather, they will be based on other sorts of reasons, such as sensation or perceptual states, and it is on the basis of these states that they may be justified. Even beliefs which are logical truths, such as the belief that everything is equal to itself, will have to be caused, and they will be based on those reason states which cause them (they may also be based on reasons via doxastic basing relations). These reason states might include an introspective state of awareness of the logical truth, states of understanding the proposition involved, etc. The basing relation between a basic belief and the reason for which it is believed I will call a non-inferential basing relation.

The central tasks in developing a foundationalist theory of justification include determining which beliefs will count as basic and determining which relations between basic and non-basic beliefs must hold if non-basic beliefs are to be justified on the basis of basic beliefs.
The causal-doxastic theory provides a framework for these tasks and hence is compatible with a broad spectrum of foundationalist theories of justification.

The causal-doxastic theory offers an account of both inferential and non-inferential basing relations. Inferential basing relations will occur whenever an appropriate causal relation from reason (in the form of a belief) to belief occurs or the appropriate meta-belief occurs. In either case, an analysis of the basing relation in terms of the mental states of persons and causal relations is provided. Similarly for non-inferential basing relations. It is in virtue of being based on a perceptual state, sensation state, introspective state of awareness, state of understanding a proposition, etc., that a belief may be non-inferentially justified. The causal-doxastic theory provides necessary and sufficient conditions for all such basing relations. Hence, it provides a partial analysis of basic and non-basic belief.

The causal-doxastic theory does not, however, determine which relations occurring from basic beliefs to non-basic beliefs will justify the non-basic beliefs. For example, the foundationalist who accepts the causal-doxastic theory is free to determine whether basic beliefs may justify non-basic beliefs by means of induction or deduction. Nor does the causal-doxastic theory determine which beliefs are basic. It leaves open the possibility that beliefs based on any of the non-belief states of persons discussed (e.g., perceptual states, sensation states, etc.) may be counted as basic.

The causal-doxastic theory also helps to provide insight into an important objection to classical foundationalism. The view that beliefs that I
am having a particular sensory experience (e.g., that I am experiencing a loud noise) are certain has been attributed to C. I. Lewis (Firth 1968, p. 335). For beliefs about sensory experience to be certain, it would have to be logically impossible for them to be mistaken. Now it is well known that certain prime candidates for properly basic belief may well be mistaken. For instance, Lewis apparently thought that one could not be mistaken in one's belief that one was having a sensation of pain. But consider the following case: a fraternity pledge is told that he will, as part of his initiation, be branded on his back with a hot iron.\textsuperscript{51} He is blindfolded and waits to be branded, hearing the sounds of the hissing fire and the agonized screams of his fellow pledges as they go before him. When it's his turn, instead of branding him, an ice cube is placed against his back. The pledge screams, at first believing that he is in pain, and only after a moment realizes that he was mistaken and that he is feeling a sensation of cold. Thus, non-inferential beliefs which are reports of sensation states may be mistaken.

The causal-doxastic theory of the basing relation provides an explanation of how the fraternity pledge case is possible. What happens is that the causal chain of events from the sensation state to the belief that one is feeling that sensation at some point goes awry, and the pledge is caused to believe that he is feeling pain rather than cold. By casting the matter in causal terms, we can explain the pledge's error as an example of what psychologists call expectation effects, situations in which one's expectations of what one is about to experience effect one's interpretation of that experience. More importantly, we can pinpoint Lewis' error as

\textsuperscript{51}A case very similar to this one is discussed in Lehrer 1990, p. 53.
assuming that it is logically impossible for a causal relation to go awry. According to the causal-doxastic theory, all basing relations are to be analyzed in terms of states of persons and the causal relations between them. Thus, there is always the possibility that the causal relations involved in the basing relation in question go awry.

4.1.2 Linear coherentism

There are two main kinds of coherentism: linear coherentism and holistic coherentism. Linear coherentism is the view that beliefs get justified on the basis of other beliefs in linear and circular fashion, e.g., belief B1 gets its justification from belief B2, B2 from B3, B3 from ... Bn, Bn from B1. Purely causal theories of the basing relation are incompatible with linear coherentism because they present it with what Audi calls the self-sustenance problem (Audi 1993, 4, 81). The self-sustenance problem is simply that since nothing can cause itself, a belief cannot be based on itself.

The causal-doxastic theory is somewhat more compatible with linear coherentism than purely causal theories because it allows for alternative causal structures in the form of doxastic basing relations. According to the causal-doxastic theory, a reason (in the form of a belief) might cause one to hold the belief that p such that the belief that p is based on the reason. Then, one might come to have the appropriate (i.e., basing relation establishing) meta-belief that the belief that p is a good reason to hold the reason/belief, e.g., where the belief that p and the reason/belief logically imply or otherwise support each other. It might even be the case that the
only thing that justifies one's reason/belief is the belief, for the original basis of the reason/belief might have been a non-justifying reason. In this way, a belief may be partially based on itself without any problem of self-sustenance. Of course, a belief's being based on itself does not entail that the belief justifies itself by virtue of that basing relation.

For the linear coherentist theory to work, every circle of reasoning would have to involve an appropriate meta-belief in order to avoid the self-sustenance problem. It is unclear whether people ordinarily have enough such meta-beliefs to prevent a linear coherentist theory, in conjunction with a causal doxastic theory of the basing relation, from collapsing into a kind of skepticism. But if the prospect of skepticism is not thought problematic, then, if there is to be an effective objection to linear coherentism, it will not come from concerns about the basing relation or problems regarding self-sustenance. It will have to be a problem regarding justification.

4.1.3 Holistic coherentism

The central thesis of holistic coherentism is that a belief is justified by virtue of its membership in a coherent set of beliefs. It seems to me that the causal-doxastic theory is compatible with such a theory of justification. In particular, an appeal to basing relations might be useful to holistic coherentists in a number of ways. For example, one common objection (which has been called the lucky guess problem (Lehrer 1989, 273)) against coherentist theories is that lucky guesses which happen to be true might cohere well with a system of true beliefs, yet (intuitively) not be
justified. One possible response to this sort of objection is to offer a different analysis of being a member of a system of beliefs. The lucky guess problem is facilitated by an account of membership in a set of beliefs according to which a belief that \( p \) is a member of \( S \)'s set of beliefs iff the belief that \( p \) is a belief of \( S \)'s (i.e., the belief that \( p \) bears an appropriate relation to the proposition \( p \) and the belief that \( p \) is directly introspectible by \( S \)). One way to rule out lucky guess type objections would be to analyze the belief that \( p \) being a member of a system of beliefs as the belief's being based on some directly introspectible state of the person. Since the lucky guess would not be based on any of the person's directly introspectible states, it could not be properly said to be a member of the person's system of beliefs.\(^{52}\)

Of course, there are revisions of the lucky guess counter-example which still pose a problem for the holistic coherentist. In particular, the lucky guess could instead be a belief based on very bad reasons, and yet cohere well with the rest of the person's beliefs. However, this is a problem for the coherentist, not the causal-doxtastic theory of the basing relation.

A different objection to Lehrer's holistic coherentist theory of justification is presented by Pollock. Pollock's objection is that Lehrer's theory provides no way to make a distinction between justified and justifiable beliefs. In order to present the objection properly, I need to summarize Lehrer's theory. Lehrer takes the notion of 'more reasonable

\(^{52}\)Of course, there are other methods for dealing with this sort of problem. Lehrer, in the source cited in text, suggests that lucky guesses will always be defeated, hence never justified.
than' as primitive and describes his theory by means of a series of
definitions (Lehrer 1988):

(D1) A system X is an acceptance system of S if and only if X
contains just statements of the form - S accepts that p - attributing to
S just those things that S accepts with the objective of obtaining truth
and avoiding error with respect to the specific thing accepted.

(D2) S is justified in accepting p at t on the basis of system X of S at
 t if and only if p coheres with X of S at t.

(D3) p coheres with X of S at t if and only if all competitors of p are
beaten or neutralized for S on X at t.

It appears that Lehrer does not understand "accepting that p on the
basis of system X" to involve a basing relation from system X to the belief
that p. Rather, he seems to mean that accepting that p may be justified by
virtue of being a member of X. I shall return shortly to the sort of theory of
the basing relation I think Lehrer has in mind. The relevant elements of
the definition of coherence are defined as follows:

(D4) c competes with p for S on X at t if and only if it is more
reasonable for S to accept that p on the assumption that c is false
than on the assumption that c is true on the basis of X at t.

(D5) p beats c for S on X at t if and only if c competes with p for S
on X at t, and it is more reasonable for S to accept p than to accept
c on X at t.
(D6) n neutralizes c as a competitor of p for S on X at t if and only if c competes with p for S on X at t; the conjunction of c and n does not compete with p for S on X at t, and it is as reasonable for S to accept the conjunction of c and n as to accept c alone on X at t.

Finally, Lehrer offers the following account of personal justification:

(D7) S is personally justified in accepting that p if and only if S is justified in accepting that p on the basis of the acceptance system of S at t.

The foregoing list of definitions neatly summarizes Lehrer's theory of personal justification. The rough idea is that something is personally justified for a person if it is more reasonable for the person to accept that belief than to accept a contrary (competitive) belief given everything else she believes.

Utilizing this account of justification, Lehrer offers an analysis of knowledge as undefeated justification. In order for a justified belief to be known, according to Lehrer, it must be such that it cannot be defeated by the correction of any error in the person's acceptance system. Thus, by taking the acceptance system of a person and making one or more corrections in it, we can construct what Lehrer calls an acceptance set. The set of all such acceptance sets plus the original acceptance system of the person in question Lehrer calls the ultrasystem of the person. Using the notion of an ultrasystem, Lehrer offers the following accounts of defeat and undefeated justification.
(D8) S is justified in accepting that \( p \) at \( t \) in a way that is undefeated if and only if S is justified in accepting \( p \) at \( t \) on the basis of every system that is a member of the ultrasystem of S at \( t \).

(D9) \( M \) defeats the personal justification of S for accepting \( p \) at \( t \) if and only if S is personally justified in accepting \( p \) at \( t \), but S is not justified in accepting \( p \) at \( t \) on system \( M \) at where \( M \) is a member of the ultrasystem of S at \( t \).

The rough idea is that something is known if one would be personally justified in believing it regardless of the corrections made to the set of propositions one accepts. Lehrer defines knowledge as undefeated justification.

Pollock objects to an earlier incarnation of Lehrer's theory that it provides no means of distinguishing justified from justifiable belief (Pollock 1986, 81-82). Pollock states that basing relations at least involve some sort of causal relation from reason to belief. According to Pollock, being justified consists of one's belief arising out of its basis in some appropriate way, but this is not possible on a holistic coherence theory such as Lehrer's. The problem is that according to such theories there is no way for the coherence of a belief (i.e., what justifies the belief) to causally result in the belief because coherence relations are logical relations and not causal relations (Pollock 1986, 82). Pollock suggests that the only way this might occur is if one believes that the coherence relation holds between one's set of believed propositions and the proposition \( p \), and that meta-belief (regarding the propositions) causes the belief that \( p \). Such a
doxastic theory of the basing relation is very similar to Longino's theory discussed in chapter two, and faces the same objections as does that theory.

There are a couple of ways to reply to Pollock's objection. First, a holistic coherentist could note that Pollock assumes a purely causal theory of the basing relation and object by means of counter-examples such as the case of the gypsy lawyer. This is one line Lehrer has taken (Lehrer 1990, 168-172). However, Pollock's objection can be restated in terms of the causal-doxastic theory of the basing relation. This theory avoids gypsy lawyer style counter-examples while still pressing what is perhaps the central point of the objection, namely the question of how the holistic coherentist is to distinguish justified beliefs from merely justifiable beliefs.

An objection to Lehrer's theory similar to Pollock's, and having the same point, has been raised by John Bender and Wayne Davis (Bender and Davis 1989, 57-58). Bender and Davis ask us to consider the following acceptance system:

1. All and only those with at least a 90 on a preliminary exam get an A on it.
2. All and only those with an A on every prelim are exempt from the final.
3. I got at least a 93 on every prelim.
4. I got an A on every prelim.
5. I am exempt from the final.

Regarding both Alan and Bob, each of (1) - (5) is true. Alan inferred (4) from (1) and (3), and (5) from (2) and (4). In other words,
Alan validly inferred (5) from true premises. But Bob inferred (5) from (1) and (4), (1) from (2), (2) from (3), (3) from (4) and (4) from (5). In other words, Bob's inference "was viciously circular, and every step was idiotic" (Bender and Davis 1989, 58). So Alan is justified in accepting (5), but Bob is not. According to Bender and Davis, Bob need not accept that (5) follows from (1) and (4), but need only accept that (5) is inferable from (1) through (4), and perform the inference through invalid steps. In other words, Bob need not accept anything false (or, anything that is not justified for him).

Lehrer replies to Bender and Davis that it is not sufficient for Bob to accept that A, (5) is inferable from (1) through (4), if Bob is to be justified in believing (5). It is not sufficient because there is a competitor to accepting that (5) is inferable from (1) through (4), namely the competitor C: (5) is not inferable from (1) through (4). For Bob to be justified in accepting A, C has to be beaten or neutralized on Bob's acceptance system. In the original example presented by Bender and Davis it is not clear that this is the case. But suppose we modify the example so that all competitors are beaten or neutralized. Lehrer continues as follows:

[Bob] is then personally justified in accepting that [(5)]. But, of course, his personal justification is defeated. If his error in accepting that [(5)] follows from [(1) through (5)] is corrected, then his justification would be defeated. That is how knowledge arises from inference. Acceptance that something follows from something else and that we can tell whether this is so is required for personal
justification to arise and must be correct for the justification to go
undefeated (Lehrer 1989, 272).

Lehrer simply changes the subject from justification to knowledge. Even if the question is addressed regarding knowledge, the question of how to distinguish justified belief from justifiable belief remains unaddressed, at least explicitly. However, I shall go on to argue that Lehrer is implicitly presupposing a certain theory of the basing relation. Lehrer grants that Bob is personally justified in holding his belief that A (i.e., that (5) is inferable from (1) through (4)), so long as all of A's competitors are beaten or neutralized on Bob's acceptance system. But is it the case that S's belief is justified on the basis of possessed reasons R whenever all competitors to accepting that the belief follows from R are beaten or neutralized on the acceptance system of S? The acceptance system of S is the set of statements of the form 'S accepts that p' which are all true. To beat or neutralize all competitors of the claim 'p follows from R,' S will have to (at least in effect) accept that p follows from R and also accept that it is more reasonable for S to accept that p follows from R than it is to accept any contrary claim (e.g., p does not follow from R). Since competitors may include things that S does not accept, defeating all competitors is going to amount to defeating all possible competitors, and, for practical purposes (to avoid attributing to S an infinite number of meta-beliefs regarding each of these competitors, including competitors S has never heard of), we are going to have to suppose that S accepts that the belief that p follows from R if Lehrer's theory is going to be plausible. In other words, it looks as if Lehrer's account of personal justification builds
in an implicit appeal to meta-beliefs of the sort which might be thought to establish basing relations.

In recent writings, Lehrer makes some statements which suggest that he might endorse a doxastic theory of the basing relation. For example, he states that "it is the background information that one possesses, that one uses to evaluate the claim in question, that is crucial [to determining whether one has knowledge]. It does not matter how one acquires information, or what sustains belief in the information" and "What matters is whether one has background information sufficient to evaluate the information [if it is to be known], to know that the information is correct, whatever the origin and sustenance of it." (Lehrer 1988, 339). The two quotes suggest significantly different views. The latter quote suggests that if one merely possesses ("has") sufficient evidence (reasons) to evaluate a claim as true, the claim may be justified by the evidence (reasons). This is problematic because it does not require that the individual make any connection between the evidence (reasons) and the claim that is said to be known. Without something to mark the distinction between justified and justifiable belief, Lehrer's account fails. The first quote fares better: there, Lehrer suggests that one must "use" the information one possesses to evaluate the claim if the claim is to be known by virtue of that information. Using the information in a process that results in knowledge would surely involve, at some point, a meta-belief to the effect that the information shows the claim to be true or correct. It is not clear how else one could use information to acquire knowledge.

Lehrer seems to suppose that he has shown how his theory can distinguish between justified and justifiable beliefs. What he says is
compatible with holding the view that there is no such distinction, but such
a view is so implausible that it ought not be attributed to him. It seems to
me that the most generous interpretation of Lehrer's statements is that he
is implicitly supposing that meta-beliefs to the effect that one's reasons are
good reasons to hold a belief may be sufficient to establish basing
relation.

Before I pursue this line of thought (that Lehrer is implicitly
endorsing a doxastic theory of the basing relation) further, I should note
that beliefs play no role in Lehrer's epistemology. Lehrer replaces talk of
belief with another notion, that of acceptance. Roughly, to say that a
person accepts p is to say that she "is in a certain kind of functional state
which typically arises when a person reflectively judges that p with the
objective of judging that p if and only if p" (Lehrer 1989, 253). The kind of
acceptance requisite for knowledge involves accepting something for the
purpose of attaining truth and avoiding error (Lehrer 1990, 11). This does
not include accepting false statements for the purpose of accepting true
ones (e.g., in unusual situations such as a demon who will make you
omniscient on the condition that you first believe one false proposition);
one must accept something for the purpose of obtaining truth and
avoiding error with respect to just the thing one accepts (Lehrer 1986, 6).
Lehrer seems\(^53\) to take the view that not all acceptances are beliefs. He
states that people may easily decide to accept something whereas they
may not be able to easily decide to believe it (Lehrer 1986, 7). So,

\(^53\) In Lehrer 1990, Lehrer states that if someone accepts something, then they believe it.
But he hints that this is just for "expository simplification," and Lehrer 1990 is intended
to be an introductory text (Lehrer 1990, 11).
technically, Lehrer would not, presumably, adopt a theory of the basing relation involving meta-beliefs, but rather meta-acceptances.

Aside from whatever difficulties Lehrer's notion of acceptance might involve, it seems one could formulate a theory of the basing relation that is just like a doxastic theory except that acceptances replace beliefs. An example of such a theory would be the part of the causal-doxastic theory concerning meta-beliefs, minus the causal-doxastic theories allowance that a belief may be based on a reason by virtue of the reason's appropriately causing the belief in the absence of any appropriate meta-belief (or meta-acceptance). On such a theory, acceptances would be analyzed as states of persons, and appropriate acceptances would still require appropriate causal relations, from the beliefs and/or reasons to which the acceptance refers, to the acceptance state itself, etc.

If Lehrer's theory is implicitly supposing a meta-acceptance theory of the basing relation, can he use it to get around Bender and Davis' and Pollock's objections? I believe so. As Pollock notes, a primary motive for requiring that a belief be based on a reason if it is to be justified is the need to distinguish justified from justifiable beliefs. As I argued in chapter three, basing relations can be established by meta-beliefs, and the meta-beliefs will distinguish justified from justifiable beliefs. The same sort of argument obviously works for meta-acceptances: the meta-acceptance will indicate that the belief is based on the reason and a lack of meta-acceptance will indicate that the belief is not based on reasons.

However, for reasons already discussed in chapter two, section 2.4.1, such a theory of the basing relation is not plausible. In particular, it seems clear that we do not have a corresponding meta-acceptance for
every belief we have that is based on a reason. This is particularly the case with regard to beliefs formed on the basis of sensory impressions.

But perhaps Lehrer could conjoin his coherentist theory with the causal-doxastic theory of the basing relation in its entirety in order to successfully avoid the objection that he fails to provide adequate resources to distinguish between justified and justifiable belief. His definition of personal justification would be modified as follows (the added part is underlined):

\[(D7^*) \text{ S is personally justified in accepting that } p \text{ if and only if (1) S is justified in accepting that } p \text{ on the basis of the acceptance system of S at } t \text{ and (2) S's accepting that } p \text{ is based on each of the members of the acceptance system of S (except S's accepting that } p).\]

Acceptances which meet both conditions (1) and (2) would be justifiably accepted, whereas acceptances meeting (1) but not (2) would be beliefs S is justified in believing, but which he does not justifiably believe. Note that this addition does not add an element of foundationalism to Lehrer's theory. As with Lehrer's original theory, all that matters with regard to the justification of the accepting of p is its coherence with S's acceptance system - the basing relation merely serves as a prerequisite for justification by means of coherence.

\[D7^* \text{ is not very plausible because it seems very unlikely that every acceptance one has is based on every other acceptance one has. While this may be logically possible for some creature, it does not seem plausible}\]
to suppose that it occurs in ordinary humans. Consequently, holistic coherentism results in skepticism.

If one accepts a coherence theory of justification which requires for justification coherence with only a limited set of the things one accepts, perhaps the impact of this objection can be lessened. Should the coherence theorist merely require that the belief to be justified cohere with what we would (pre-analytically) take to be the reasons for it, perhaps the objection could be avoided altogether.

My aim here is not to defend holistic coherentism, but to show that the causal-doxastic theory of the basing relation may be useful in developing and understanding such a theory. This discussion shows how the causal-doxastic theory of the basing relation may be useful in defending some versions of holistic coherentism from an important objection. Unfortunately, it is out of the frying pan and into the fire. The causal-doxastic theory does not automatically rule out coherentist theories of justification, but it does show that they appear to have implausible results. D7* also highlights the distinction between theories of justification and theories of the basing relation. Finally, it seems clear that causal analyses of the basing relation are at least logically compatible with internalist conceptions of justification.
4.2 The internalism/externalism debate

4.2.0 Introduction

Epistemologists use the labels 'internalist' and 'externalist' in a number of different ways.\(^\text{54}\) The internalism/externalism distinction I have in mind concerns the question of whether we need some sort of introspective access to our reasons and their relation to a given belief in order to be justified in holding that belief on the basis of them. Internalists claim that some such access is a necessary condition of being justified, while externalists deny this in one way or another.

Internalists will want to claim that there are two things a person needs to be able to access (in addition to her beliefs and her reasons) if she is to have a justified belief on the basis of the set of reasons R. First, the person must have access to the basing relation that obtains between r and the belief, where this involves the person’s being aware that r is one of her reasons for holding the belief. I’ll call this first type of access basing access. Second, the person must have access to r in such a way that she can be aware of whether the reasons are sufficient to justify a given belief or not. I’ll call this second sort of access sufficiency access.

To access a reason or belief is to have a direct introspective awareness of it. While access to reasons and beliefs is usually direct, basing access and sufficiency access are usually thought to be propositional. However, they may sometimes be direct, and so we need to

\(^{54}\)Richard Fumerton provides a concise summary of seven different accounts of the internalism/externalism debate in (Fumerton 1988, 443-457).
distinguish propositional from direct access regarding both basing and sufficiency access.

To have propositional basing access to a particular basing relation from reason r to the belief that p is to believe something to the effect that reason r is a reason for which the belief that p is held. To have propositional sufficiency access is to believe something to the effect that the reason r is an adequate reason to believe p.

Basing access and sufficiency access could also be the result of direct introspection. To have direct basing access is to have a direct introspective awareness of a reason's being a reason for which a belief is held. Reasons and beliefs may on occasion be associated with one another such that one can just sense that the reason supports the belief, even if one lacks the concepts needed to formulate a belief to this effect. For example, a child may be aware that seeing a pony is his reason for believing there is a pony in the field even if he lacks the concepts needed to formulate a meta-belief to that effect. This may be evident if we ask the child why he thinks there's a pony in the field and he claims he sees one.\textsuperscript{55} To have direct sufficiency access is to have a direct introspective awareness of a reason's being adequate to justify holding a belief. For example, our sensory perceptions tend to be authoritatively presented in such a way that we implicitly recognize that we can trust them prima facie. For example, if you see a desk before you, you can directly have a sense that your perception is reliable. This is most evident when we are

\textsuperscript{55}Of course, asking someone to justify their belief may sometimes result in the person's manufacturing new reasons for presentation. The individual might not even know what his or her real reason is. However, it is not unreasonable to stipulate that such factors do not come into play here, and that the child is correct when he gives his reason for his belief.
presented with optical illusions, and we lose our sense of the reliability of our sensory perceptions. We take many of our sensory perceptions and beliefs to be reliable until proven otherwise, and we can by direct introspection sense our doing so. This is non-propositional sufficiency access.

One can have basing access without having sufficiency access and vice versa. First, one can have basing access without sufficiency access. For instance, I can be aware that my belief that all Macintosh computers have a little rainbow colored apple on the front, and be aware of the fact that my belief is based on my belief that every Macintosh computer I have seen has such an apple. All this might be the case even though I have no idea whether I have seen enough Macintosh computers to justifiably make such an inference about all of them. Going the other way, I might be aware of a mental state of mine, namely a memory of having read in a reliable source that all Macintosh computers have such an apple, which serves as a reason for various beliefs I have, but is not the basis of my belief that all Macintosh computers have an apple on them. This might be the case if I had read this some time ago, but the fact that I have read this does not occur to me now and I make no connection between my belief and my potential reasons for it when I am trying to decide whether I am justified in believing that all Macintosh computers have the apple. Here, I have sufficiency access to a reason (namely my memory of having read, etc.) but I have no awareness of a basing relation between that memory and my belief that all Macintosh computers have an apple on them. Ex hypothesi, there is no basing relation between them for me to be aware of.
Although basing access and sufficiency access are logically distinct, the primary motivation for internalism requires that we have both sorts of access in order to be justified. The traditional argument for internalism involves appeal to the deontological conception of justification according to which we have epistemic responsibilities which we ought to fulfill, and we can only be justified if we have fulfilled those responsibilities.56 Such responsibilities might include, for example, a duty to believe something only on the basis of what seems to us to be sufficient evidence, to be earnest and erudite in our efforts to acquire evidence relevant to the truth of our beliefs, to be sure that our cognitive and perceptual equipment is in good working order, etc.

Whatever these responsibilities might be, the assertion that we ought to fulfill them seems to imply that we can fulfill them, and our ability to fulfill them would seem to require at least that we be aware of the beliefs which are to be justified, the reasons in question, and the basing relations between those reasons and beliefs. For example, it is not at all clear how we could be held responsible for forming beliefs on the basis of bad reasons when we had good reasons all along if we have no access to our own reasons or our own beliefs. But deontological justification also requires basing access. Even if we had access to our own reasons and beliefs, we could not be held responsible for basing beliefs on inappropriate reasons if we could not determine which of our beliefs were based on which of our reasons.

56See Plantinga 1993a for an excellent discussion of epistemic deontology. I am aware that there are theories of justification called deontological but which do not require an ability to fulfill epistemic duties. However, when I refer to deontological theories of justification, I mean those theories which do require that one fulfill epistemic duties in order to be justified.
The main argument for sufficiency access also derives from the deontological account of justification. The central idea is that one cannot be justified in believing something if one believes it irrationally or irresponsibly. For example, suppose Overton believes that Pabst Blue Ribbon is the best selling beer in the Midwest. Suppose further that Overton has access to the basis of his belief and that he believes that his reason is that someone in a bar told him that Pabst Blue Ribbon is the best selling beer in the Midwest. But Overton insists that he has no idea whether the guy telling him this was telling the truth. We are inclined to say that Overton is being irrational in holding his belief. Overton has basing access, but lacks sufficiency access. Let's alter the example to include sufficiency access. Suppose now that Overton both has access to the basis of his belief and that he believes that his reason is the assertions of the man at the bar, and that Overton justifiably believes that the man in the bar is a reliable source of information about beer distribution. In this case we are inclined to say that Overton would be responsible and rational in believing that Pabst Blue Ribbon is the best selling beer in the Midwest. And all we have added in this last case is that Overton has sufficiency access to his reasons.

The deontological justification of internalism seems to imply that a person S must have access to four things if she is to be justified in her belief that p on the basis of reason(s) r:

1. S's belief that p,
2. S's reason(s) r,
3. the basing relation between r and S's belief that p, and
4. the adequacy of S's reason(s) r.
Ordinarily, access to each of these four things is introspective access, and such access must be sufficient to satisfy the internalist's intuitions regarding the need for access in order to be justified if the internalist is to avoid a wide-ranging skepticism. However, it is not logically necessary that such access only be introspective. For example, suppose that in the year 2010 the epistemic-duty police invent a belief detector, a connectionist computer which is hooked up to a camera and, after being trained up, can, by merely viewing a given person, detect a subliminal pattern of microfeatures in their appearance which indicates what they believe and why they believe it.\footnote{Although this example is pure sci-fi, there are computers which have been programmed to function as a connectionist computer would, and which can detect subliminal patterns, such as the sonar echoes which distinguish underwater mines from rocks (Churchland 1988, 157-162) or the past tenses of verbs (without the benefit of innate grammar) (Rumelhart and McClelland 1986, 216-271). So perhaps the possible world in which such a belief-detector exists is not too distant. For philosopher-friendly accounts of connectionism, see Bechtel and Abrahamsen (1991) or Clark (1989).} Such a belief detector could be used by someone to gain access to their own beliefs in a manner which we can suppose is just as accurate as introspection, and is also faster and detects even subconscious beliefs. In principle, the internalist should have no objections to such a means of access in order to fulfill internalist requirements for justification, perhaps as an aid for busy, working persons-on-the-go to fulfill their epistemic duties, or to ensure that the epistemic duty police always get their person.

Situations like Overton's seem to show that sufficiency access is needed for justification. More importantly, the example suggests that we cannot properly conceive of justification without both basing and sufficiency access. For instance, if we take away both basing and sufficiency access, but retain a reliable cause of belief such as
clairvoyance, as is done in BonJour's famous example of Norman the clairvoyant, we are inclined to say that the subject is lacking in justification (BonJour 1985, 41). BonJour describes the example of Norman as follows:

Norman, under certain conditions which usually obtain, is a completely reliable clairvoyant with respect to certain kinds of subject matter. He possesses no evidence or reasons of any kind for or against the general possibility of such a cognitive power or for or against the thesis that he possesses it. One day Norman comes to believe that the President is in New York City, though he has no evidence either for or against this belief. In fact the belief is true and results from his clairvoyant power under circumstances in which it is completely reliable (BonJour 1985, 41).

Intuitively, Norman is not justified in his belief that the President is in New York City. Thus, internalists conclude that basing and sufficiency access are essential elements of any adequate account of justification.

It might be objected to the internalist that a person need not have actual access to their reasons, the sufficiency of the reasons or basing access in order to be justified, as long as they are aware that they are a reliable indicator of the truth. This line of reply might be suggested by an example discussed by Richard Foley (Foley 1985, 199). The example is taken from a story by D.H. Lawrence about a boy who knows that when he rides his rocking horse with sufficient effort he unfailingly picks the winners at a local race track. Foley argues that this shows that reliabilism is sufficient for knowledge, but that is not what I want to discuss here. What I want to focus on is the fact that the boy has more information about what's going on than Norman does. Norman is not even aware that he has a clairvoyant ability, much less whether he has a reliable clairvoyant ability. The boy, however, is aware that he is a reliable
indicator of the truth when he rides his rocking horse, and his awareness of his reliability makes it seem intuitively that he knows which horse will win at the track (and also that he is justified in believing what he knows). However, we can suppose that the real reason the boy knows which horse will win at the track is not (contrary to what the boy thinks) riding the rocking horse but that physical exercise in that part of the house gives the boy the power to see the future. Thus, it might be thought that the boy has no access to the real reasons for what he believes, but only the fact that he is a reliable indicator of the truth under certain circumstances.

My response to this line of argument is that it confuses what makes a belief true (which may be a cause of the belief) with the reason it is based on. The boy's belief that a particular horse will win is based on his belief that he (the boy) has a reliable track record (literally), and the latter belief causes the former. And if we suppose that the boy lacks access to his belief that he has a reliable track record, to the adequacy of his reason or to the relevant basing relation, then intuitively the boy would cease to be justified in believing that a particular horse will win. It may be that the ability to see the future is the cause of his reasons for believing that he is a reliable indicator of winning horses, but that cause is not internal, hence it is not a reason upon which his belief is based. Thus, from the internalist's point of view, it is irrelevant whether he has access to it.

The primary motivation for accessibility internalism is thought by many to be problematic. According to Alston, "The only arguments of any substance that have been advanced [for accessibility internalism, which Alston calls perspectival internalism] proceed from a deontological
conception of justification and inherit any disabilities that attach to that conception" (Alston 1986, 224). And the deontological conception of justification faces serious questions, such as whether and to what extent are we free to voluntarily choose what we believe and whether a deontological conception of justification is relevant to an account of knowledge. Further, it is not clear how internalism will handle the arguments of the skeptic or how it will account for the apparent knowledge of children or animals who seem to lack the sophisticated epistemological concepts that sufficiency access might sometimes require. In addition, once these questions are correctly answered and deontologism has been suitably developed, it's not clear what support an adequate deontological theory of justification will then provide for accessibility internalism.\footnote{58 For a discussion of some of these issues, see William Alston's "An Internalist Externalism" in (Alston 1989, 227-245).} This is especially the case if deontological theories of justification are to be understood as not complying with the rule that epistemic 'oughts' imply epistemic 'cans'.

The causal-doxastic theory of the basing relation offers a new and straightforward argument against any accessibility externalism which holds that basing access can never make the difference between a belief's being justified and it's not being justified. Since a necessary condition of a belief's being justified by a reason is that it be based on the reason, and since a belief is sometimes based on a reason by means of a doxastic basing relation, any theory of justification which does not make provision for such access as doxastic basing relations require must be mistaken. Doxastic basing relations, as described by the causal-doxastic theory,
require that one have a meta-belief to the effect that a reason is a good reason to hold a belief, and such a meta-belief requires that one have basing access. (It does not require sufficiency access because the meta-belief to the effect that a reason is a good reason to hold a belief could be mistaken in its claim that the reason was good and it would still establish a basing relation). But any purely externalist theory of justification holds that basing access is irrelevant to whether a belief is justified. So if the causal-doxastic theory is true, any purely externalist theory of justification must be mistaken. I have shown in chapter three that the causal-doxastic theory is correct, and I have done this by means of an argument that does not rely on any internalist intuitions regarding justification. One argument I presented there involved comparing the case of the gypsy lawyer and the case of the doubtful gypsy lawyer. It seems clear that when the relevant meta-belief is present, a basing relation is present, and if not, not. Note that this argument does not depend on a deontological account of justification, or even deontological intuitions. This is seen from the fact that our conclusion regarding that argument is not altered even if we suppose that both gypsy lawyers are not justified in believing that their client is innocent. Thus, it is reasonable to conclude, given the truth of the causal-doxastic theory, that any purely externalist theory of justification is mistaken.

It is worth noting here that pure accessibility externalism is an extreme view, holding as it does that no kind of introspective access is ever relevant to whether a belief is justified. The pure accessibility externalist does not deny that we can have access to our beliefs, reasons, etc., he just denies the relevance of such access to justification. Pure
accessibility externalism is certainly not an element of most reliabilist theories discussed in the literature. Someone who held that a belief is justified only if it is produced by a reliable process, for example, might deny pure accessibility externalism on the grounds that a reliable process of belief production might well essentially involve some sort of introspective access to one's reasons. However, we must evaluate pure accessibility externalism if our discussion is going to be complete.

Since basing access and sufficiency access are logically independent of one another, it is at least logically possible to formulate theories of justification which require basing access but not sufficiency access as a necessary condition of being justified. Such a move would be unlikely coming from the internalist seeing as how the primary motivation for internalism suggests that both forms of access are necessary for justification. However, an externalist might be inclined to require only basing access if only to avoid the objection resulting from accepting the truth of the causal-doxastic theory of the basing relation. Such a move on the part of the externalist might not be purely ad hoc either. It might be compatible with the standard externalist concern that children and animals can have knowledge, for even propositional basing access does not require particularly sophisticated concepts regarding basing relations (compared to propositional sufficiency access). In addition, it would also account for widely held internalist intuitions: the externalist could argue that internalists have been misled, by the relatively technical requirement of basing access for justification, into thinking that such access was always necessary for justification. However, before pursuing this option, it would be best to determine whether there are good reasons to believe that
sufficiency access is required for justification. If so, that would constitute a strong argument against the sort of limited or internalistic externalism just mentioned. If not, then this option would be deserving of more careful consideration.

While pure externalist theories of justification are thus easily dispatched, there remains a wide variety of internalist and more modest externalist theories to choose from, and the causal-doxastic theory of the basing relation is helpful in ruling out many of them. I shall begin by presenting an exhaustive listing of various types of internalism and externalism, and then examine the implications of the causal-doxastic theory of the basing relation with regard to them. I shall then discuss some traditional arguments against internalist and externalist theories in hopes of decisively pinpointing the correct type of internalist or externalist theory of justification.

4.2.1 A typology of internalist and externalist theories of justification

Having established that any adequate theory of justification must count basing access as relevant to justification, I will now focus on sufficiency access. We can begin distinguishing among internalists and externalists with following chart. The top row indicates what sort of access one must have and the left column indicates when justification requires that access. Each cell in the table contains the name of the view defined by the row and column which intersect it when the blank in the left column is filled in with word at the top of the row.
<table>
<thead>
<tr>
<th></th>
<th>potential</th>
<th>actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justification always requires ___ access to the sufficiency of one's reasons &amp; basing access.</td>
<td>weak accessibility internalism</td>
<td>strong accessibility internalism</td>
</tr>
<tr>
<td>Justification sometimes does and sometimes does not require ___ access to the sufficiency of one's reasons &amp; basing access.</td>
<td>weak conciliatory accessibility externalism</td>
<td>strong conciliatory accessibility externalism</td>
</tr>
<tr>
<td>Justification never requires ___ access to the sufficiency of one's reasons or basing access.</td>
<td>N. A.(^{59}) (pure accessibility externalism)</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

**Table 1: Core Types of Internalism and Externalism**

Weak theories require that you have the potential (i.e., the ability) to access your reasons in a way which makes it possible for your belief to be justified by them, all else being equal.\(^{60}\) For instance, it might be required that one have fairly direct access to one's beliefs, e.g. that one can access them after a few minutes of reflection, or that one can access them within 30 minutes of sincere effort, etc. But one need never have actually accessed those reasons. There is a modal ambiguity here, and a number of different theories result depending on how that ambiguity gets

\(^{59}\)A pure externalist theory that merely did not require actual access to one's reasons must always require potential access to one's reasons, sometimes require it or never require it. In the first case, it collapses into a kind of weak accessibility internalism. In the second case it collapses into a kind of conciliatory accessibility internalism, and in the third into pure accessibility externalism.

\(^{60}\)The distinction between weak and strong here is BonJour's from Dancy and Sosa (1993), 132-133.
clarified. However, for our purposes, the ambiguity is not important and we shall simply assume that one or another clarification of it is correct. Strong theories require that you must in fact access your reasons in order for your belief to be justified by them.

The potential or actual access must exist at the time the belief is justified. When one loses access, one ceases to be justified.

Conciliatory theories attempt to combine accessibility internalism and accessibility externalism in a way that is at least logically possible. An externalist might propose a conciliatory theory in hopes of avoiding counter-examples to a pure externalist theory. Although such a maneuver seems somewhat ad hoc, I shall evaluate conciliatory theories in order to make my review of possible theories complete. Note that a conciliatory theory is not necessarily compatible with the sort of limited externalism I discussed in section 4.2.0, according to which only basing access is sometimes relevant to justification. According to conciliatory theories, there is a kind of justification for which only purely externalist considerations are relevant, and such justification need not be sensitive to any requirement for basing access. Only if it is sensitive in that way would conciliatory externalism be an instance of a limited externalism.

There is a third dimension that must be added to Table 1 if it is to be complete. Each of the three internalist theories comes in a first-order and a second-order or iterative version. First-order internalist theories of justification hold that one must merely be aware of the sufficiency of one's reasons in order for a belief to be justified on the basis of them. The clearest example of such first-order access would be one's awareness of a perceptual or sensation state. I could be aware, e.g., of a red patch in
my visual field without having any beliefs about what I am seeing. Further, this awareness may carry with it a confidence and lack of doubt such that it is clear to me that the experience is real and genuine. In almost all circumstances, our awareness of our perceptual states seems to carry with them an implicit and prima facie presumption that they are correct and sufficient to support belief. This awareness does not involve the presence of a meta-belief. Perhaps one could also have a similar awareness of the sufficiency of one's beliefs to justify other beliefs. One example might be a person who is thoroughly convinced that everything she believes is prima facie true.

Second-order internalist theories of justification require that one have a meta-belief to the effect that one's reasons for which a given belief is held are sufficient if those reasons are to justify the belief. Thus, second-order theories require a different sort of access to one's reasons than do first-order theories. Second-order access is propositional, whereas first-order access is direct.

There are three kinds of second-order internalist theories. The kind described in the immediately previous paragraph, which I'll call second-order justification internalism, requires that one be justified in believing that one's reasons are sufficient. Alternatively, one might require that one merely need to believe that one's reasons are adequate to justify the belief based on them (second-order belief internalism) or that one must know that one's reasons are adequate to justify the belief based on them (second-order knowledge internalism). I believe that both second-order belief and second-order knowledge internalisms are non-starters.

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First, I'll argue that second-order belief internalism is mistaken. Internalists would chastise for failing to fulfill her epistemic responsibilities someone who unjustifiably appealed to several of her own belief states as reasons for a given belief. For instance, if Renford has been told that his belief in God is the basis of his belief that he is currently seeing a pig standing in front of him, and he unjustifiably believes this, then we would not claim that Renford has fulfilled his epistemic responsibilities. Internalists demand that one be able to access one's beliefs largely because people who lack such access seem thereby epistemically irresponsible, hence irrational and unjustified. But surely accessing one's own reasons incompetently, as Renford does, is no better than failing to access them altogether. This is so even if, by coincidence and unknown to Renford, the reason he has irresponsibly accessed logically entails what he believes.

Alston provides a good counter-example to second-order knowledge theories:

Suppose that I am justified in believing that my car is in the garage....In the afternoon I see a car that looks like mine in the parking lot of a bank but believe that it isn't mine, on the grounds of my car's being in my garage. Suppose further that my car has been stolen and this is my car, so I didn't know that my car was in the garage even though I was justified in believing this. I am surely justified in believing that the car in the parking lot is not mine, even though the basis for this belief is something I am justified in believing but do not know (Alston 1986, 193).

Cases like this show that one need not know that one's grounds are sufficient in order to be justified on the basis of them. I conclude that second-order justification internalist theories are the only contenders among the three kinds of second-order internalism. From here on, when I
refer to second-order internalism it should be understood that I refer to second-order justification internalism.

It should be noted that first-order access does not imply second order access and vice versa. I have already shown that one can have first-order awareness of something without having a meta-belief about it. The only apparent alternative here is an infinite hierarchy of beliefs being necessary for having one belief, but this is unacceptable. Going the other way, second-order access does not entail first-order access. For instance, I could believe that I have good reasons to believe p because I was told by a reliable psychiatrist (who knows that I subconsciously have good reasons to believe p) that subconsciously I have good reasons to believe p. I could thus have second-order access to the sufficiency of my reasons even though I am unable to introspect those reasons, hence lack first-order access to them. Such second-order access need not be epistemically irresponsible.

Note that both conciliatory externalist theories (but neither of the pure externalist theories) contain an internalist element, hence the first-order/second-order distinction cuts across them as well. This presents us with four theories of accessibility internalism and five of accessibility externalism, as listed in Table 2:
1. weak first-order accessibility internalism
2. strong first-order accessibility internalism
3. weak second-order accessibility internalism
4. strong second-order accessibility internalism
5. weak first-order conciliatory accessibility externalism
6. strong first-order conciliatory accessibility externalism
7. weak second-order conciliatory accessibility externalism
8. strong second-order conciliatory accessibility externalism
9. pure accessibility externalism

Table 2: Nine Theories

There is further potential for hybrids. There could be theories which sometimes require first-order access and sometimes require second-order access depending on the circumstances, and these are listed in Table 3:

10. weak hybrid accessibility internalism
11. strong hybrid accessibility internalism
12. weak hybrid conciliatory accessibility externalism
13. strong hybrid conciliatory accessibility externalism

Table 3: The Hybrid Theories

Finally, a theory could require that one sometimes needs actual access to one's reasons, and other times only needs potential access. I'll call such theories double access theories, and this gives us six more possibilities, listed in table 4:
This would appear to give an exhaustive typology of different types of internalist and externalist theories. We are thus left with an imposing array of 19 kinds of accessibility internalism or externalism. Of course, there is room for a considerable number of distinct particular theories within each kind of theory. For instance, there will be different kinds of weak and double access theories according to how the modal ambiguity involved in the notion of potential access is clarified. Also, particular theories within one of the six different kinds of hybrid theories may differ according to when they require first-order or second-order access. Finally, particular theories within a type of double access theory may differ as to when they require actual as opposed to potential access.

4.2.2 Implications of the causal-doxastic theory for the internalism/externalism debate

The causal-doxastic theory impacts the internalism/externalism debate in two ways.

First, the causal-doxastic theory states that meta-beliefs to the effect that one bases a belief on a reason are sometimes relevant to whether
one is justified. This is what is required to account for the gypsy lawyer type cases. Thus, the causal-doxastic theory of the basing relation implies that pure accessibility externalism (number 9 in Table 2) is false.

Second, it requires that one sometimes have actual (not merely potential) access to one's reasons in order to be justified in believing something on the basis of them. In the case of the gypsy lawyer, it is not enough to say that the lawyer could have easily came to believe that the complicated line of reasoning showed that his client was innocent, for that would fall short of believing that the complicated line of reasoning did show that his client was innocent. The lawyer must actually believe that the evidence is the basis of his belief that his client is innocent if the relevant basing relation is to come into existence. This rules out all of those theories of justification which never require actual access to one's reasons, and these include numbers 1, 3, 5, 7, 10, and 12.

I don't believe that the causal-doxastic theory of the basing relation will allow us to choose among the remaining dozen theories directly. However it's ruling out those seven of the original nineteen possibilities sets the stage for a decisive discussion of accessibility internalism and externalism. I shall go on to try to determine which type of theory is correct.

4.2.3 Three standard arguments against second-order internalism

Six kinds of internalism remain. Many of these are ruled out by standard arguments regarding internalism, and I'll examine three of those
arguments. Interestingly, two of these arguments turn out to focus on second-order access.

The first traditional objection to some internalist theories is the objection regarding infinite regresses mental states. Second-order theories of accessibility internalism (3 and 4) as well as their double access variant (15) all face this same problem. On these theories, in order to be justified in believing p, I must have a meta-belief that I am justified in believing p. But that meta-belief will itself have to be justified by some third order belief that my meta-belief is justified, and so on infinitely. But it seems clear that people do not have such infinite regresses of beliefs (or infinitely complex hierarchies of beliefs), much less the ability to access them. Hence, second-order non-conciliatory theories of accessibility internalism (numbers 3, 4 and 15) must be mistaken. Second-order conciliatory accessibility externalist theories (such as 7, 8 and 17) may avoid the objection by allowing that the regress of beliefs gets stopped by a justification that does not require second-order access.

A second traditional argument against some internalist theories concerns children and animals. It is sometimes argued against internalist theories that since children and animals can have knowledge, and since knowledge requires justification, children and animals must be capable of having justified beliefs. But children and animals may lack the requisite concepts needed to have propositional sufficiency access to their reasons. This argument also shows that theories 3, 4 and 15 are flawed.

Note that it is not clear that sophisticated epistemological concepts are required for having first-order sufficiency access. For instance, surely children and animals have perceptual states that they are aware of and
they can sense a close relationship between those reasons and what they believe, and associate the belief with the appropriate sensory image, even if they cannot articulate that relationship. This is first-order basing access. Similarly, one could have a first-order awareness of the adequacy of one's reasons, as when one implicitly takes perceptual states or beliefs unquestioningly (and plausibly) as prima facie correct. This is first-order sufficiency access. It seems, then, that such arguments might not be effective vs. first-order theories.

A third traditional argument against internalism concerns perceptual knowledge, which does not seem to require second-order access. Interestingly, first-order access plays no role in only numbers 8 and 17 of the remaining ten theories. Is there any situation in which first-order access can make the difference between being justified and not being justified? If so, we can rule out 8 and 17 and have a buttressing argument against other theories which allow no room for first-order access. We can answer this question by considering the example of Rufus.

Suppose Rufus has just seen a red plush camel and thereby comes to believe that there is a red plush camel in front of him. It is surely possible that Rufus has justifiably come to believe that there is a red plush camel in front of him on the basis of his perceptual state without forming the belief that he is in that perceptual state. In addition, we may suppose that Rufus implicitly and justifiably trusts his five senses, so that he has a first-order awareness of the sufficiency of his reasons. That is to say, Rufus is implicitly senses that is perceptual experiences are to be trusted - he recognizes that prima facie they are to be trusted, although he does not have a (propositional) belief to this effect. It follows, then, that any theory
which did not allow a first-order awareness of a reason to be sufficient to justify a belief (all else being equal) would face a counter-example in the form of the case of Rufus. Thus, we may rule out theories 8 and 17, along with the others which leave no room for first-order access being sufficient access for justification. The central point of the Rufus example is that we do not need second-order access to the epistemic adequacy of our perceptions in order to be justified in holding beliefs on the basis of them, hence theories which require second-order access for justification (such as 8 and 17) are mistaken.

At this point, there are eight theories remaining. Four are versions of conciliatory externalism, namely numbers 6, 13, 16 and 19. The remaining four (numbers 2, 11, 14, and 18) are versions of internalism.

4.2.4 An argument against conciliatory externalism

In order to show that conciliatory externalism is mistaken, it will have to be shown that there is no instance in which a person can have a justified belief without potential or actual introspective access to his reasons. I'll begin by refuting an argument that we can have a justified belief even though we have no access to our reasons for it. Then I'll try to argue that, on the basis of theoretical considerations, it looks as if there is no instance in which a person can have a justified belief even though he has no potential or actual introspective access to his reasons.

First, an argument that we can have a justified belief even though we have no access to our reasons for it. It is sometimes argued that S can have good reasons for a belief that p, be justified in holding that belief on
the basis of those reasons and then forget the reasons, but nonetheless remain justified in holding the belief. There are a number of ways of filling in the details of such a case. One might suppose that S has no recollection of ever being justified in believing p. His belief that p merely pops into S's head as far as S can tell. In this situation, I think we are ordinarily inclined to say that S is not justified in believing that p, unless S is such that beliefs that pop into his head are very likely to be true. Suppose instead that S vaguely recalls being justified in believing that p, although he cannot now recall what those reasons were. Again, I think whether we consider S justified depends on whether he is likely to be right with respect to his beliefs that he was once justified. If he is likely to be right, then I think we will take him to be justified. If not, then we would not take him to be justified.

The pattern developing here is that we are willing to suppose that S is justified in believing that p if he is justified in believing that he once did have good reasons to believe that p. What is happening is that S becomes justified in believing that p not on the basis of any reasons directly about p, but on the basis of reasons regarding S's own reliability. While we should not in general accept justified beliefs regarding one's own reliability as bases sufficient to justify one in whatever one believes, I think it is plausible to allow such a reason to justify a belief that p where one once was justified in believing p on the basis of reasons directly about p. So even in situations where we cannot access our original reasons, access to some adequate reason for what we believe still seems necessary in order to be justified in what one believes.
One argument that merely being caused to believe something by a reliable process is not sufficient to be justified in believing it is found in BonJour's famous clairvoyance cases, such as the example of Norman discussed above (Bonjour 1985, 41-42). Norman has no access potential or actual to his reasons and, even though he is reliable with respect to his belief about the whereabouts of the President, his belief is unjustified. Norman would appear to be completely irrational in his belief that the President is in New York City, hence he could not be justified in believing it. If our intuitions in this case are to be trusted, then it seems that lack of access to the adequacy of one's reasons is sufficient to count as unjustified a belief that otherwise would be justified. This suggests that sufficiency is a necessary condition of being justified.

A second potential hurdle for conciliatory externalism to overcome is to provide some sort of theoretical justification for combining accessibility internalism with accessibility externalism. One reason for such a combination might involve appeal to the causal-doxastic theory, which would support only those versions of conciliatory externalism which held that actual basing access was sometimes required for justification. Insofar as one defends only this form of conciliatory externalism, one can avoid the objection that the whole idea of conciliatory externalism seems ad hoc. My own view, however, is that the Norman example is sufficient to rule out conciliatory externalism.

At this point, it looks as if we have sufficient reason to reject all four remaining versions of conciliatory externalism, the theories numbered 6, 13, 16 and 19. This leaves four remaining theories, which are the subject of the next section.
4.2.5 The final four

The final four remaining theories, numbers 2, 11, 14 and 18, are all internalist theories. Each of the theories 11, 14 and 18 can be thought of as adding something to 2. 14 adds to 2 the stipulation that justification may sometimes involve potential as well as actual access to one's reasons. 11 adds the option that sometimes justification involves the presence of a second-order belief. And 18 adds to 11 the stipulation that justification may sometimes involve potential as well as actual access to one's reasons. Having ruled out all of the other options, we may rely on the completeness of the list of internalist and externalist theories in deciding among the remaining four.

To begin with, 2 and 11 allow only for strong (actual) access to one's beliefs in order to be justified. 14 and 18 allow that potential access may on occasion be sufficient. Is potential access ever actually sufficient? From a third-person point of view, potential access seems sufficient. If we were to ask someone why they thought most good contemporary epistemology books had at least partially blue or turquoise covers, we would assume they were justified in believing this if they immediately replied, "I have seen virtually all of the good contemporary epistemology books and most of them have blue or turquoise covers". From the outside, we would take them to be justified even if they had never had actual access to their reasons. However, things look different if we take the point of view of the person in question. Prior to the time the person has been asked why she believes what she does, she has never been aware of her
reasons and has no idea why she believes what she does. She is like Norman, who believes the President is in New York but has no idea what his reasons are for believing it. Once the person has been asked to justify her belief, her epistemic situation has changed considerably. Yet the reason she gives could have just popped into her head, and might never have been a reason for her belief until she was asked to justify it. In this situation, we should not say that her belief about epistemology books was justified by the reason she gave prior to the time she was asked to justify her belief. From the first-person point of view, she was not justified in her belief prior to the time she had actually accessed her reason. This suggests that potential access is not sufficient for justification, that actual access is required. Thus, theories 14 and 18 may be ruled out.

This leaves us with two theories remaining, numbers 2 and 11. The difference between 2 and 11 is that 11 allows that sometimes second-order access may be relevant to a belief's being justified whereas 2 states that only first-order access is ever required. If there is any situation in which second-order access is required for justification, then we should accept 11 and reject 2.\textsuperscript{61} I shall argue that second-order access is sometimes sufficient for a belief's being justified (all else being equal) in the absence of first-order access with the example of Junior.

Suppose Junior goes to a reliable psychiatrist and is told that she believes that p, that she has good reasons for believing p, and that she bases her belief that p on her good reasons. The psychiatrist tells her that, although Junior has access to her reasons and her belief, the basing relation is subconscious and she cannot access it introspectively. Junior

\textsuperscript{61}Recall that second-order access does not entail first-order access.
knows that the psychiatrist is reliable, and this is the basis of her belief that what the psychiatrist has told her is correct. Thus, Junior comes to believe that her belief that p is based on her good reasons (although this cannot establish a doxastic basing relation because we are supposing that a causal basing relation already exists between her reason and belief). Intuitively, Junior is justified in believing that p even though she has no first-order basing access. The fact that she has second-order access seems sufficient for her to be justified in believing p. Thus, any adequate theory of justification must allow that second-order access without first-order access is sufficient for justification. I conclude that number 11, strong hybrid accessibility internalism, is true.

Given that sufficiency basing as described by strong hybrid accessibility internalism is a necessary condition for justification, the sort of limited externalism (according to which basing access but not sufficiency access is required for justification) set aside in section 4.2.0 is seen to be incorrect.

4.2.6 The causal-doxastic theory of the basing relation and the internalism/externalism debate

Even though the causal-doxastic theory alone was sufficient to rule out only seven of the nineteen theories, it was indirectly helpful in buttressing the standard arguments against the remaining theories. In particular, ruling out pure accessibility externalism left only versions of conciliatory externalism for an externalist to defend.
Recall Alston's point that "The only arguments of any substance that have been advanced [for accessibility internalism or for what Alston calls perspectival internalism] proceed from a deontological conception of justification and inherit any disabilities that attach to that conception" (Alston 1986, 224). The fact that pure accessibility externalism can be ruled out without appeal to controversial deontological intuitions about justification gives the internalist what may be the only effective argument for internalism that does not rely on internalist intuitions.

The motive for the doxastic basing element of the causal-doxastic theory was represented by the gypsy lawyer type cases, in which the fact that the lawyer believed that his belief that his client was innocent was based on the complicated line of reasoning makes it the case that his belief is so based. Our judgment of this case need not involve any presuppositions about whether the gypsy lawyer is justified in what he believes, or whether he is justified in believing that his reasons are sufficient to justify his belief that his client is innocent. We need merely to judge that the fact that the lawyer recognizes that his belief that his client is innocent is based on the complicated line of reasoning shows that it is so based, and this need not involve the lawyer's justifiably believing that his reasons are sufficient to justify that belief. The lawyer could unjustifiably believe that his reasons were sufficient to justify his belief that his client is innocent (as would be the case where the cards told the lawyer to base his belief that his client is innocent on the complicated line of reasoning) and the lawyer could still have the meta-belief that his belief that his client is innocent is based on the complicated line of reasoning. And that meta-belief would still establish a doxastic basing relation. Our judgments about
basing relations are not relevant only in the context of deontology; rather, they seem to be neutral in that respect.

4.3 The causal-doxastic theory and process reliability

Process reliability is, minimally, the view that if a belief is to be justified it must be produced by a reliable process. It will be useful to distinguish two sorts of reliable belief-producing processes. In a broader sense, reliable processes might include the process of a person coming to have a true belief. The reliable process theorist attempting to provide an analysis of justification has no use for such processes because they cannot distinguish justified from unjustified beliefs. Any adequate process reliabilist analysis of justification will have to analyze justification in terms of reliable processes more narrowly conceived. Such belief-producing processes might include the faculty of vision operating under certain specified conditions, or, similarly, other faculties. In this discussion, I am concerned only with these narrower sorts of reliable processes. Of course, process reliability requires further elaboration to be a useful analysis of justification. However, I will not discuss such elaborations because my main concern is with this central, essential element of process reliabilism.

There are a number of popular objections to process reliabilism which, even if persuasive, are such that a defender of process reliabilism could reasonably and consistently reject them. My aim in this section is to develop an objection to process reliabilism which does not have the limitations of the standard objections. The objection I will defend was
originally raised by Keith Lehrer in the form of the case of the gypsy lawyer. As originally presented, the case of the gypsy lawyer is problematic, and has been widely attacked. I believe that the case can be revised so as to avoid these objections and that, so revised, the case of the gypsy lawyer is the most defensible of the standard objections to process reliabilism.

Alvin Goldman identifies four standard objections faced by the process reliabilist which I shall (very briefly) sketch (Goldman 1992, 434-435). The first two involve counter-examples. One of those counter-examples is Laurence BonJour's example of Norman, a reliable clairvoyant who is completely unaware of his clairvoyant ability (BonJour 1985, 41-42). Although beliefs produced by this process of reliable clairvoyance are invariably true, from Norman's point of view, they seem to just pop into his head at random, hence they are not justified. So a belief's being produced by a reliable process is not sufficient for a belief's being based on a reason. The second counter-example involves Stewart Cohen's concern that brains in vats can have justified beliefs (Cohen 1984, 281). It seems clear that even if we have are all brains in vats, that some of our beliefs are epistemically preferable to others, and that some of those epistemically preferable beliefs are justified. It follows that it is not necessary for a belief to be produced by a reliable process in order for it to be justified.

Although I believe these counter-examples are effective, one drawback to them is that they appear to presuppose deontological intuitions regarding justification. It is thus possible for an externalist to consistently reject such counter-examples. The reliabilist could bolster her
case for suspicion of such counter-examples by noting that, in the case of
Norman, it appears that the reason we want to deny that Norman has a
justified belief is that he does not have a sufficient degree of introspective
access to the adequacy of his reasons (since his reasons are a product of
the clairvoyance and he is unaware of his clairvoyance). Yet requiring
such access for justification is itself extremely counter-intuitive. Again, I am
not trying to defend process reliabilism from these objections. But I do
want to draw attention to the fact that, as objections, they are less than
ideal, and that one could reasonably withhold judgment as to whether they
indicate that process reliabilism should be surrendered.

A third standard objection to process reliabilism is the generality
problem, the question of how exactly a particular process is to be
individuated for purposes of assessing its reliability (Feldman 1985, Alston
1995). A difficulty is that any particular process will instantiate numerous
different process types, and each of those types may have radically
different degrees of reliability. If process reliabilism is to be plausible, it
must provide some account of which process types are to be appealed to
in determining the reliability of a particular process.

The fourth problem Goldman calls the 'range' problem, and
concerns the question of whether reliability is to be gauged in the actual
world or other possible worlds (e.g., in what Goldman calls normal worlds)
as well. The range problem arises in attempting to avoid Cohen's counter-
example. Goldman at one point suggests that reliability be understood in
terms of reliability in normal worlds, i.e., roughly, reliability in what we
presume to be the actual world (Goldman 1986, 108). He then argues that
individuals living in brain-in-a-vat type worlds will be using cognitive
processes which are reliable in normal worlds, hence may be justified in what they believe.

These last two objections challenge the process reliabilist to clarify her theory in an acceptable way. It does not follow from the third or the fourth objection that process reliabilism cannot be formulated in a satisfactory way. Hence, these objections, although they raise serious issues, may reasonably be thought less than conclusive.

In short, the first two standard objections to process reliabilism rely on intuitions which are in contention and which the reliabilist may consistently deny, while the last two provide merely circumstantial evidence that process reliabilism is mistaken. The causal-doxastic theory of the basing relation offers a fifth objection to process reliabilism which neither relies on internalist intuitions nor merely poses a dilemma for the process reliabilist without determining whether she can resolve the dilemma.

According to the causal-doxastic theory of the basing relation, a belief can be based on a reason by virtue of an appropriate meta-belief to the effect that a reason is a good reason to hold the belief. One argument for the doxastic element of the causal-doxastic theory given in chapter three (the comparison of the gypsy lawyer and doubtful gypsy lawyer examples) does not rely on internalist intuitions or theory, or any intuitions or theory regarding justification at all.

If a belief can be based on an adequate reason without that (or any) reason being involved in producing the belief, then it seems that a belief may be justified even if it has not been produced by a reliable process. The case of the gypsy lawyer provides an example of such a
case. There are two components to S's belief that \( p \) being justified: S must possess an adequate (and not undermined) reason to believe \( p \), and the belief that \( p \) must be based on the reason. The adequacy of a belief depends on the logical relation between the proposition believed and the content of the reason (and perhaps other things as well, e.g., access to one's reasons). For example, if the latter entails the former, then the reason is, all else being equal, presumably adequate. If the belief is based on the reason then, all else being equal (e.g., the justification is not undermined by other things one believes), the belief is justified, and the process reliabilist should have no objection to all else being equal in at least some cases.

An additional reason for thinking that, in situations such as that described in the immediately previous paragraph, the person is justified in believing that \( p \) involves appeal to a reliable indicator conception of justification. In its most minimal form, the reliable indicator theory is that a belief is justified if it is based on reasons which are a reliable indication of the truth. In the situation at hand, the reasons are a reliable indication of the truth and according to the causal-doxastic theory, the belief is based on those reasons. It follows that, on the minimal reliable indicator conception of justification, the person's belief is justified. In this way we can see that a belief can be justified, even though it is not produced by a reliable process, without appeal to internalist intuitions or an internalist conception of justification. Of course, the reliable process theorist will want to reject the reliable indicator theory of justification. But the minimal version of the reliable indicator theory relied on here involves the same sort of conception of justification the reliable process theorist favors:
justification is the result of a reliable link to the truth. Furthermore, the links to the truth to be compared (the first link being a causal process which produces the belief and the second link being a causal process which relates the belief to a reason state itself the result of a reliable process, as in the complicated line of reasoning arrived at by the gypsy lawyer) are very similar. Both may be analyzed in causal terms, as is evidenced by the causal analysis of doxastic basing relation offered by the causal-doxastic theory. Both require links to the truth. It is not clear what theoretical grounds the process reliabilist will have for rejecting the claim that doxastic basing relations as described by the causal-doxastic theory, can establish basing relations and that these basing relations may result in a belief's being justified, even if they do not result in the belief itself.

The causal-doxastic theory of the basing relation can thus be utilized in making an argument against the process reliabilist which does not rely on internalist intuitions and hence which seems to show that the reliable process theory is mistaken on its own turf, so to speak. This objection to process reliabilism proceeds from the central reliabilist intuition (that justification involves a reliable link to the truth) and proceeds by the same means as the formulation of any reliabilist theory of justification (namely, by means of providing a causal analysis of justification - in this case, one part of any such analysis, a causal analysis of the basing relation, in the form of the causal-doxastic theory) directly to the conclusion that process reliabilism is mistaken.
4.4 Skepticism, closure and the basing relation

Many recent efforts to deal with the problems posed by certain skeptical arguments have focused on what is variously called the principle of closure or the transmissibility principle. Actually, a number of different principles have been referred to in this way. For example, Goldman discusses what I will call the principle of closure for knowledge: If I know that p, and I know that p logically implies q, then I must know that q (Goldman 1986, 56). This is the principle presupposed by some arguments attempting to show that we do not have knowledge of the external world.

The difficulty is that we want to retain something like the principle of closure for knowledge because it seems intuitively obvious that knowing that q entails p and knowing that q should (at least usually) allow one to know that p. Denial of the principle threatens a skepticism of its own. On the other hand, finding a way to restrict the principle so that it fails to function in skeptical arguments seems a promising way to defeat those arguments. We thus face a dilemma.

If we are to slip between the horns of the dilemma, we must have an analysis of the closure principle. In particular, we need to know why it is that knowing that q entails p and knowing that q should (at least usually) allow one to know that p. Only then will we be able to look for ways to appropriately restrict the principle. (Note that similar comments apply, mutatis mutandis, to skeptical arguments regarding justification and a corresponding principle of closure for justification.) The purpose of this section is to provide such an analysis.
The principle of closure for knowledge presupposes another which has also been referred to as the closure principle (e.g., Audi 1993a, 355), but which I will call the ambiguous closure of justification principle (ACJP): Necessarily, if I am justified in believing p, I am justified in believing any proposition that self-evidently follows from p. As its name suggests, there are two ways to interpret (ACJP), and both interpretations are presupposed by the principle of closure for knowledge. In order to clarify this ambiguity, I'll first lay out the relevant skeptical argument in which (ACJP) appears.

The sort of skepticism I am concerned with denies that we are justified in believing anything about the external world. The particular skeptical argument I am concerned with is the well known brain-in-a-vat argument. Audi presents the argument roughly as follows:

1. P1 I am justified in believing p, that there is a credenza before me.
2. P2 p self-evidently entails that there is no mad scientist causing me to have just the kind of sensory experience I am now having without there being the credenza before me.
3. P3 Necessarily, if I am justified in believing p, I am justified in believing any proposition that self-evidently follows from p.
4. P4 I am not justified in believing that there is no mad scientist deceiving me.
5. P5 I am not justified in believing p.

P3 expresses an instance of the closure or transmission principle. As stated the closure principle is ambiguous in it's use of 'justified in
believing,' an ambiguity Audi points out. In one sense of this phrase, I am justified in believing p just in case I justifiably believe p. On this interpretation, P3 asserts that necessarily if I justifiably believe that p then I justifiably believe any proposition q that self-evidently follows from p. I'll call this the closure of belief principle. The necessity is presumably at least nomological. The alternative interpretation is that one is justified in believing p just in case one possesses an adequate justification for believing p. I shall return to this alternative interpretation shortly.

The closure of belief principle asserts that recognition of the appropriate logical relation between a proposition believed and a proposition appropriately related to a reason is sufficient for the belief to be based on that reason. In other words, it asserts that basing relations can be established by meta-beliefs to the effect that a particular reason supports a belief. However, the unqualified nature of this appeal to doxastic basing relations undermines this interpretation of the principle, for reasons discussed in chapter three involving epiphenomenal basing beliefs. Not every meta-belief to the effect that a reason is a good reason to hold a belief is sufficient to establish a basing relation, and if the belief is not based on the reason, then the belief is not known on the basis of the reason. Note that this also undermines the closure of knowledge principle, which presupposes the closure of belief principle. So one way we must restrict the closure of belief and closure of knowledge principles is to limit them in accordance with the necessary and sufficient conditions established by the causal-doxastic theory for doxastic basing relations.

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62 The distinction is explained by Roderick Firth in (Firth 1978, 218).
However, this restriction is of no apparent help regarding the skeptical arguments, so we shall have to continue our analysis of the principle.

One argument for the closure of belief principle appeals to examples in which having one belief seems logically sufficient for having another. For example, if I believe that there are two Dalmatians on the porch, then it seems clear that I also believe that there is at least one Dalmatian on the porch. Of course, it would be a mistake to suppose that one believes the logical consequent of everything one believes. The reason that such examples are possible is not because of the logical relation between the contents of the two beliefs, but because of the nomological relation between the two belief states. As it turns out, having a belief state appropriately related to the proposition that there are two Dalmatians on the porch is nomologically sufficient for having a belief state appropriately related to the proposition that there is at least one Dalmatian on the porch. (It is sometimes suggested that what is relevant here is that the entailment is obvious, e.g., in (Vogel 1990, 13). But this is misleading: what is relevant is the relation among the belief states, not any meta-belief about or recognition of them to the effect that it is obvious that one follows from the other. As we shall see below in the Undermined Justification example, it is not the obviousness of the entailment that guarantees that one is justified in holding the entailed belief.)

Understanding that the relations among belief states cannot be logical relations allows us to see why the closure of belief principle is false. In order to justifiably believe a proposition q which self-evidently follows from p, I would (we may suppose) have to believe p on the (non-inferential) basis of q. If we suppose this basing relation to involve a
causal relation of some sort, then it is easy to see that such a causal chain might be interrupted. For instance, suppose I believe p (after some reflection, for my belief that p is not easily accessible to me), then realize that it's self-evident that if p then q, and then get called to dinner, instantly ceasing to think about p and whether q follows from p. Not taking into account my belief that p, I might, a few days later, ponder q, withholding belief in it unless I pick up my previous train of thought. In this case, I have not (so to speak) drawn the inference to q from my belief that p (i.e., I have not realized that q on the basis of p - strictly speaking, there is no inference because q is to self-evidently follow from p).\(^6\) I would submit that such cases have occurred, and if they have then it follows that closure of belief principle is false. Note that the closure of belief principle involves the same sort of error that I argued, earlier in this chapter, C. I. Lewis made.

Another counter-example to the closure of belief principle involves irrational persons. For instance, suppose that Pat believes that the earth is flat and rectangular, and looks at the round shadow of the earth on the moon during an eclipse. Pat may believe that the shadow is being cast by the earth (and that there are no optical illusions present) but refuse to believe that the earth is not rectangular, even though this follows self-evidently from what Pat believes. Pat does not necessarily have inconsistent beliefs. Rather, Pat believes that the earth's being round follows self-evidently from what he sees, but refuses to accept the belief that the earth is round.

\(^6\)Robert Nozick makes a roughly similar sort of argument with regard to knowledge in (Nozick, 1981, 205).
Further support for both of these counter-examples to the closure of belief principle comes from another distinction of Audi's, between having a dispositional belief and having a disposition to believe. The clearest cases of dispositional beliefs would be beliefs we have consciously entertained or which are clearly revealed by our behavior. The clearest cases of dispositions to believe would be dispositions that are only activated in the farthest possible worlds. In this latter case, I may be said to have a disposition to believe any proposition I am logically capable of believing. For example, it may be quite clear that I do not currently believe in God, being a firmly committed atheist. But I might be disposed to believe that God exists were I given what I took to be adequate proofs for the existence of God and had adequate time to reflect on them.

Between these two extremes (clear dispositional beliefs at one end and clear dispositions to believe at the other) is a finely grained continuum of cases. In the middle of the continuum is a gray area where attributions of belief are controversial. For instance, we may attribute to a person an infinite number of mathematical beliefs (e.g., belief in the existence of each of an infinite series of numbers), but we do not attribute her all of the mathematical theorems which follow (analytically and a priori, if not self-evidently!) from her mathematical beliefs. But even the attribution of such an infinite number of mathematical beliefs is controversial, and some would (not implausibly) hold that we really have a disposition to believe of each number that it exists, but we do not dispositionally believe that each number exists.

Perhaps the distinction between believing dispositionally and having a disposition to believe is to be understood as a difference in the sorts of
state a person is in, and the difference is apparently one of degree rather than of kind. Perhaps one way to understand the difference in terms of the nearness and quantity of possible worlds in which the disposition is activated. If the disposition is activated in many near possible worlds, it is a dispositional belief. If it is activated only in distant possible worlds, it is a disposition to believe, but not a dispositional belief. At any rate, the distinction between the two is not sharp. But if it is not sharp to degree n, then to that degree it is less clear that the closure of belief principle is true. For perhaps one merely has a disposition to believe q, rather than a dispositional belief that q, in cases where one has not drawn the inference from one's belief that p and the self-evident if p then q. And it makes no sense to say of at least many dispositions to believe that they are justified or unjustified, for people have a disposition to believe (broadly construed) anything whatever the circumstances, given some possible world or other. Thus far, this is no proof that the closure of belief principle is false; rather it is an argument that it is unclear that it is true.

So where on the continuum does the belief that there is no mad scientist deceiving me fall? For most people, I suspect it would be a disposition to believe that there is no mad scientist with a brain in a vat rather than a dispositional belief. One reason for believing this is that it is implausible to attribute to persons beliefs when they lack the requisite concepts to form those beliefs. Certainly, most persons lack the concept of a brain in a vat, hence do not believe that they are not brains in vats. Nor is it the case that we might plausibly attribute the belief that they are not brains in a vat on the grounds that they believe that they are not being deceived. For the ordinary person’s concept of deception will not include
brains in vats: it will at best include worries about intoxication or common perceptual illusions. Finally, it is not evident from a person's continuing to act in a normal fashion that they presume that they are not brains in vats. The factors which govern our behavior would remain even if we were brains in vats. No one would go touch a hot stove merely because they've come to believe that they're a brain in a vat. I think this provides at least some reason to believe that the closure of belief principle does not function as the skeptic hopes it will.

If the closure of belief principle is false, then it follows straightforwardly that knowledge is not closed under known entailment either.

If the above arguments are effective, they show that P3 interpreted as the closure of belief principle is false. There is, however, a second interpretation of 'justified in believing' which is useful in avoiding the above objections. On the second interpretation, one is justified in believing p just in case one possesses an adequate justification for believing p. Thus, one may be justified in believing p even if one does not believe p. I'll call versions of the transmission principle which utilize only this interpretation of 'justified in believing' closure of justification principles. This interpretation seems to capture the skeptic's point, which is really a problem about the nature of justification, not a problem concerning the actual beliefs of persons. The question is not whether people are going to unjustifiably believe that they are not brains in vats, but whether the purported good reasons we possess are really good reasons at all.

According to the closure of justification principle, if I possess an adequate justification for believing p, and believe that q self-evidently follows from p, then I possess an adequate justification for believing q.
This principle is also false, for it does not take into account the potential undermining of justification. The justification of a belief is undermined when other reason(s) I have make it irrational for me to accept the belief. Consider what I’ll call the Undermined Justification example. Suppose I possess an adequate justification for believing p, and that I possess an adequate justification for believing that q self-evidently follows from p. But an expert epistemologist, whom I take to be reliable, has told me that it has been proven that I am not always justified in believing whatever self-evidently follows from my beliefs, that self-evidence is sometimes a kind of socially inculcated prejudice which I have an epistemic duty to resist as much as possible. Furthermore, I come to justifiably believe that the self-evidence with which q follows from p is just one of those cases of socially inculcated prejudice. Believing all the epistemologist has said, my justification for believing q would be undermined despite the fact that q still follows self-evidently from p and that the justification for my belief that p is not undermined. This constitutes a counter-example to the closure of justification principle.

It might be objected to my counter-example that it only shows that a person who doubts whether self-evidence is always sufficient for justification avoids the skeptical problem of having no justified beliefs. Everyone else is forced to draw the skeptical conclusion. My point, however, is that Audi’s version of the skeptical argument fails to pose any conceptual problem for justification, for self-evidence does not necessarily indicate justification. The same holds, I take it, for any process of inference understood solely in terms of its validity or some comparable logical or epistemic property (e.g., probability, self-evidence, etc.). My
being justified in believing that \( q \) follows from \( p \) via *modus ponens* and my being justified in believing \( p \) does not entail that I am justified in believing \( q \). For again I may justifiably believe that under certain conditions *modus ponens* is an invalid process of inference.

The skeptic may reply to the above counter-example that an undermined entailment is not really a known entailment at all, hence I have misconstrued the skeptic's argument. To make the point explicit, the skeptic could modify P3 as follows:

\[ P3^* \text{ Necessarily, if I am justified in believing } p, \text{ and I am justified in believing that } q \text{ self-evidently follows from } p, \text{ then I am justified in believing } q \text{ given that my justification for } q \text{ on the basis of } p \text{ is not undermined by anything else I justifiably believe.} \]

\[ P3^* \text{ makes plain that what is important for being justified in making an inference is not the validity of the inference but whether one is justified in making it. For the skeptic to claim that the inference from the belief that I am not justified in believing that I am not a brain in a vat to the claim that I am not justified in believing that there is a credenza before me is sound is to focus on an irrelevance for the purposes of his argument, for there is no logical connection between an inference's being correct and it's being justified.} \]

A causal analysis of the basing relation, such as the causal-doxastic theory, is thus useful for understanding and evaluating some versions of the closure principle - the closure of belief and closure of knowledge principles in particular. But (and this point is extensively obscured in Audi's
construction of the skeptical argument presented at the beginning of this section) the real issue concerns the closure principle P3*. And P3* is a principle regarding justification, not the basing relation.
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