THE RELIABILIST THEORY OF RATIONAL BELIEF*

Niceties aside, Reliabilism is the claim that a belief is justified or rational if and only if it has a reliable source. One way to arrive at a belief is by inferring it from others through the application of a rule of inference. Hence Reliabilism has the consequence that a belief arrived at by applying a given rule of inference is rational if and only if arriving at that belief by applying the rule is reliable. This consequence of Reliabilism I will call the Reliabilist’s Thesis.

Proponents of Reliabilism must give an account of the conditions under which a belief has been arrived at through a reliable means. In this paper I will sketch just such an account, one which will improve on that of Alvin Goldman¹ and others (see Section I). Then, bearing that analysis in mind, I will argue against Reliabilism by refuting the Reliabilist’s Thesis (in Section II). Having given Reliabilists the best analysis of reliable belief sources I can develop, I believe that my refutation of the Reliabilist’s Thesis will be effective enough to discredit any plausible version of Reliabilism. However, it is very tricky to say exactly when a belief has a reliable source; even if I do not succeed, my refutation of Reliabilism should still be of interest, though, since it is resistant to a wide range of alternative analyses.

Most of my efforts will be spent in an attempt to disassociate considerations about reliability from considerations about rationality. But of course the former are not entirely irrelevant to the latter. In Section III, I describe how facts about reliability enter into an account of rational belief. I end the paper with a brief discussion of how rational belief is related to knowledge.

I. RELIABLE SOURCES

I begin with the task of stating when a belief has a reliable source. An immediate problem is the fact that the question, ‘When is the source of a belief reliable?’ can be understood in two distinct ways, and its answer will be quite different depending on which understanding we adopt. I will lay out these two versions, then suggest that one of them is not the question we should be asking.
1. Specific and Unspecific Reliability

We might take our question to be, "When is a source reliable specifically for a belief about a certain sort of state of affairs?" To be reliable in this respect, a source must be reliable for a given type of belief. If we are interested specifically in a belief about tables, the source must be reliable for beliefs about tables: reliability of a source for beliefs about buffaloes will not do. Call this specific reliability.

But a second understanding of the question is possible, according to which we are not asking about reliability relative to a specific type of belief. It could mean, "Considering all of the beliefs it is capable of yielding, when is a source reliable?" A rough answer to this question would be "A source is reliable so long as the beliefs it is capable of yielding tend to be true." Call the sort of reliability involved here unspecific reliability.

Unspecific reliability is not what we should ask about if we want to identify the conditions under which a particular belief has a reliable source. Notice that a source can yield several different types of belief, and may tend to produce many beliefs of one type but very few of another. Suppose that it tends to produce many beliefs about things other than tables yet very few about tables. Moreover, the former are (almost) always true while the latter are (almost) always false. Such a source is reliable in the unspecific manner. Collectively, the beliefs it is capable of yielding tend to be true. By contrast, it will be unreliable as a source specifically for beliefs about tables. Clearly, when we demand that a belief about a table have a reliable source, we have in mind the specific sort. We mean to demand that its source be reliable relative to beliefs of the type at hand.

More than one philosopher has overlooked the distinction between specifically and unspecifically reliable belief. Alvin Goldman is a good example. His important account of reliable belief actually deals with unspecifically reliable belief. He provides his analysis in two phases. The first is an analysis of what he calls belief-independent processes, i.e., processes that do not include beliefs as input. Such processes must have reliability in an unconditional sense in order to yield justified beliefs. According to Goldman, we have formed a belief through an unconditionally reliable process if and only if that type of process tends to produce true beliefs.²

The second phase of Goldman's account arises when he notices that "a reasoning procedure cannot be expected to produce true beliefs if it is applied to false premisses."³ Reasoning processes are examples of what Goldman calls belief-dependent processes, i.e., ones that include beliefs as input. And all that can be expected from belief-dependent processes is con-
ditional reliability, i.e., they must tend to yield true beliefs when the beliefs that are fed in are true.

Goldman combines the notions of conditional and unconditional reliability into an account of justified belief. In doing so, he does not simply suggest that a belief is justified if and only if it is arrived at through a process that is either conditionally or unconditionally reliable. In order for a conditionally reliable process to yield a justified belief, he says, the beliefs fed into the process must themselves be yielded by unconditionally reliable processes that are belief-independent. Let us stipulate that a conditionally* reliable process is one that is not only conditionally reliable in Goldman’s sense, but also one whose input beliefs are unconditionally reliable. Then Goldman’s view is that a belief is arrived at reliably if and only if arrived at via a process that is either conditionally* or unconditionally reliable.4

Goldman’s view cannot be accepted. A source which is reliable in his sense need not be reliable relative to a given type of belief. Setting aside the problem of distinguishing one belief-forming process from another, the following is an example of what I have in mind. Let R1 be the following inference rule:

\[ R_1: \text{For any } S, \text{ If: } S (\text{believes that } S) \text{ seems to see a table in front of } S, \text{ infer: There is a table in front of } S; \text{ if: } S \text{ believes that } S \text{ seems to see } 12 \text{ centaurs pulling the sleigh of a fat, jolly elf, infer: } S \text{’s dog Fido is loose.} \]

The application of R1 is a reliable method of arriving at beliefs both about tables and Fido according to Goldman’s analysis. Obviously enough, unfortunately, it is not actually a reliable way to arrive at a belief about Fido.

2. Reliable Indication: A Preliminary Analysis

We have decided to investigate specific, rather than unspecific, reliability. As a first attempt, consider a simple account that ultimately will fail, though for instructive reasons. Let us say that a person S has a reliable source for S’s belief that p (or S’s belief that p is sustained in a reliable way) if and only if:

\[ R_C: \text{There is a cause (or sustainer) } f \text{ of } S \text{’s belief that } p, \text{ and: } f \rightarrow p. \]

The arrow abbreviates the subjunctive conditional.5

I will assume without argument that matters involving causes and effects can be dealt with in terms of facts, so that there is no need to introduce the ontological category of events.6 Thus instead of describing a cause of a
belief as an event, I prefer to describe it as a fact. And when a belief is produced by a causal chain, I will not deal with that chain as a series of events each link of which causes its successor and is caused by its predecessor. Rather, the links of causal chains are facts each of which causes one that holds after it and is caused by one that holds before it. On this view, then, facts are as extralinguistic as any other state of affairs.

RC1 is much too weak to guarantee reliable belief. Imagine that Flip arrives at his belief that the lights in the room near him are on after the toss, by applying the following mad inference rule at time $t_i$:

$$R_i \quad \text{For any } S, \text{ if: } S \text{ believes that the result of } S\text{'s coin toss is heads, infer: Lights in the room near } S \text{ are on after the toss.}$$

And suppose that though Flip is unaware of her intervention, Jessica is flipping on the lights whenever Flip’s toss comes up heads. Then Flip’s belief has a reliable source according to RC1. For it is caused by the fact that Flip has applied $R_i$ at time $t_i$ so as to reach its recommendation that he believe that the lights are on. And, given Flip’s circumstances at $t_i$, his belief would be true if that fact were to hold. In all of the close worlds in which that fact holds, lights in the other room are on since all of these worlds are ones in which Jessica is intervening. Yet it is clear that Flip has not arrived at his belief in a reliable way.

This example exploits an important feature of subjunctive conditionals, namely, their truth depends crucially on whether or not statements embedded in them make explicit reference to particular times. Contrast two conditionals:

(a) Molloy depresses the gas pedal $\rightarrow$ the car moves slightly later.

(b) At $t_i$, Molloy depresses the gas pedal $\rightarrow$ the car moves slightly later.

If $t_i$ is a time at which Molloy’s car is situated in favorable conditions (e.g., it is in good running order, etc.), then (b) will be true. But (a), taken literally, is very probably false. Literally speaking, it says that at any time whatever that Molloy were to depress the gas pedal, the car would move. It is likely that on some occasions the car’s engine will fail; on those occasions the car would stay put even if the pedal were depressed, so (a) is false.

A similar point can be made about Flip’s belief. It is true that after his coin toss, the lights would be on in the room near Flip if at $t_i$, $R_i$ were to recommend that he believe them to be on. But that is just because of the odd circumstances he is in at $t_i$. When the reference to time $t_i$ is omitted from this subjunctive conditional, the result is false:

If $R_i$ were to recommend that Flip believe that the lights are on, then they would be.
This resulting conditional requires that the lights in the room near Flip be on if at any time he applied R, so as to reach its recommendation.

RC1 is also too strong. Any rule whose use is reliable (but not infallible) can be applied in circumstances in which it fails to have the sort of reliability RC1 requires. For example, applying the following rule is a reliable way to arrive at various beliefs about tables:

- **R:** For any S, if: S believes that S seems to see a table in front of S at some time, infer: There is a table in front of S at that time.

But suppose that Sue Seesit, via R, comes to believe that there is a table in front of her while standing before the only real table in a House of Illusions. Consider the following fact:

- **fi:** Seesit applied R, at time t, so as to reach its recommendation that she believe that there is a table.

Given Seesit's circumstances at t, her belief that there is a table in front of her might be false even if fi were true. That is to say, in worlds close to the actual world (as it is at t) in which fi holds, she is being deceived by a hologram, so that her belief is false.8

Similar examples can be provided to show that the contrapositive of RC1 is too weak and strong. The contrapositive would require that there be a fact f which causes S to believe that p, and:

\[
\text{not-} p \rightarrow \text{not-} f.
\]

A counterinstance can be constructed on the model of our earlier example in which Flip arrives at his belief that the lights in the room near him are on after the toss. Instead of the crazy rule R, which has him base his belief on the results of a coin toss, imagine that Flip now arrives at his belief about the lights using the following rule:

- **R':** For any S, if: S believes that the result of S's coin toss is heads, infer: Lights in the room are near S are on after the toss; if: S believes that the result is tails, infer: Lights are off after the toss.

So long as Jessica is switching off the lights when Flip's coin comes up tails, and on when heads, the source of his belief meets the suggested conditions. But no one would say that Flip has arrived at his belief in a reliable way.9

3. **Reliable Indication: A Final Analysis**

From our discussion of RC1 we can draw an important conclusion. The reliability of a belief source is not merely a matter of its behavior within the sort of circumstances in which it is used at a given time. Its behavior in other sorts of circumstances is relevant too. In the last few examples
discussed, we used the fact that a belief was recommended by a given rule at a particular time as an indicator of that belief’s truth. But the sources of belief in those examples were unreliable precisely because of the behavior of rules when applied at other times and hence in other circumstances. Let me therefore replace RC1 with an account which takes this behavior into account.

To capture the needed restriction, I must introduce a device which abstracts from the time at which a fact holds. Let \( f^* \) refer to the state of affairs that remains when all of the particular times involved in fact \( f \) are omitted. If no such times are involved then \( f^* \) is identical to \( f \). Thus where \( f_i \) is the fact that the cat is on the mat at noon, New Year’s Day, 1984, \( f_i^* \) is the state of affairs of the cat being on the mat. Where \( f_i \) is the fact that Riley went to sea at noon, New Year’s Day, 1984, while the cat was on the mat, \( f_i^* \) is the state of affairs of Riley’s going to sea while the cat was on the mat.

The needed analysis requires that one of the causes (or sustainers) of \( S \)’s belief that \( p \) be a fact (call it \( f \)) such that, on most occasions \( t \), if the temporally abstracted version of \( f \) held at \( t \), then the temporally abstracted version of \( p \) would too:

**RC2:** There is a cause (or sustainer) \( f \) of \( S \)’s belief that \( p \), and at most times \( t \), the following condition holds:

\[
f^* \text{ at } t \rightarrow p^* \text{ at } t.
\]

When

\[
f^* \text{ at } t \rightarrow p^* \text{ at } t
\]

holds at most times \( t \), let us say the fact that \( f \) is a reliable indicator that \( p \).

The new proposal handles the counterexamples on which we saw RC1 founder. In the first example, Flip’s belief was caused by the fact (call it \( f_i \)) that Flip has, at \( t_i \), reached R2’s recommendation that he believe the lights to be on just after the toss. Because the lights would be on after the toss if \( f_i \) held, Flip’s belief met RC1. But RC2 requires more (and less) than that the lights would be on after the toss if \( f_i \) held. It demands that at most times \( t \), the lights would be on after the toss if \( f_i^* \) held at \( t \); that is, they would be on if at \( t \) Flip were to reach R2’s recommendation that he believe them to be on. But of course the lights need not be on.

For the sake of simplicity, I have formulated RC2 in a way which presupposes that if \( f \) is grounds for believing that \( p \), then \( p^* \) would usually be true if \( f^* \) were to hold. E.g., Riley’s eating dinner on New Year’s Day, 1984 is grounds for believing that Riley is alive on New Year’s Day, 1984. Unfortunately this presupposition is not always true. Consider the following fact:

\( f_i \): Robust Riley, who lived well over 100 years, was ten on New Year’s Day, 1810.
is good grounds for believing that q: Riley was one hundred years old 90 years after New Year's, 1810. But certainly there are no times t such that if Riley were ten at t then he would be 100 at t. I will describe how RC2 can be altered so as to handle this complication, but immediately after doing so I will ignore the reformulation and the problem which gave rise to it.

Involved in the fact that q is a time which is specified in terms of the time at which f, says that f* holds. To assert q is to say that q* holds 90 years after New Year's, 1810. (Here q* is the state of affairs of Riley's being 100 years old.) I will need to talk about the temporal relation involved in facts such as the fact that q, relations which specify times in terms of when some state of affairs holds. To refer to these relations, let me introduce a definition. Let

\[ \text{TR}(t', t'', f, p) \]

refer to that temporal relation involved in the fact that p which specifies how the time t'' at which p* holds is related to the time t' at which f* holds. Thus, for example, TR(New Year's 1810, New Year's 1900, f, q) is the relation, t' is 90 years before t''. RC2 should then give way to the following condition:

RC2': There is a cause (sustainer) f of S's belief that p, and at most times t, the following condition holds:

f* at t \rightarrow p* at time t' such that TR(t, t', f, p).

Although I will speak no more about RC2', other modifications must be made in RC2. An entire causal chain, each link of which causes the next, will typically be a belief's cause. Seesit's belief, e.g., was produced by a causal chain beginning with a very complicated state of affairs involving facts such as that there was a table in front of her, and that her environment was in some complicated condition. This complex fact caused another link in the chain, one which involved the fact that light configured in a table-like way struck her retinas, etc. Now, it is entirely possible for some links in a causal chain to be reliable indicators while others are not. So long as one link is a reliable indicator, however, the entire chain as a whole will be as well, according to our account. That is, the fact that the entire chain held will be a reliable indicator since it includes a component which is a reliable indicator. Unfortunately, many beliefs arrived at through clearly unreliable means are produced by chains whose status as reliable indicators is due to their having a reliable indicator as a component.

By way of an example, consider this situation. The fact that a piece of cheese just fell onto the floor of Fran's apartment startles a mouse, which in turn causes it to scurry out the back door. Through the following inference rule,
R. For any $S$, if $S$ believes that a mouse scurried out the back door at some time, infer: There is cheese in $S$'s apartment at that time, Fran arrives at the belief that there is cheese in her apartment at time $t$. I assume that the mouse's having exited is not a reliable indicator that there is cheese in Fran's apartment at $t$. But the fact that cheese fell onto her floor at $t$, is, and any chain which includes it will be too. One such chain is a cause of Fran's belief about the presence of cheese in her apartment. Consequently, her belief has a reliable source according to RC2.

Two factors in combination explain our hesitation to say that Fran's belief has a genuinely reliable source. First, it is produced by a chain with several links which are unreliable indicators. Second, Fran's access to the one link which is a reliable indicator is through those links which are not. The reliability of the chain which produced her belief is due to its including the fact that cheese fell onto the floor at $t$. But this fact is able to affect Fran's belief only by causing other facts such as the fact that the mouse was startled, and these facts are not reliable indicators that her belief is true.

The upshot is that we must strengthen RC2. To guarantee that my belief that $p$ has a reliable source, more must be required than that one of its causes be a reliable indicator that $p$. A causal chain can be a reliable source for the belief that $p$ only if every link in it is a reliable indicator that $p$. RC2 must therefore give way to the following analysis:

RC3: There is a causal chain (possibly with only one link) which produced (or sustains) $S$'s belief that $p$, and each link of it is a fact $f$ such that at most times $t$,

$$f^* \text{ at } t \rightarrow p^* \text{ at } t.$$

I reliably believe that $p$ only if my belief is produced by a causal chain each link of which is a reliable indicator that $p$. But that is not to say that every part of those links must be reliable indicators. It will rarely happen that the parts of the links are reliable indicators. One link in a causal chain that produced my belief that there is a pad of paper in front of me is the fact that my retinas have just been stimulated in a given way while I am in such and such an intellectual state. In some sense this link has as a part the fact that a given cell in my left retina has just entered a certain sort of state. While the link itself is a reliable indicator, this part of it need not be. In fact, the part is not a reliable indicator, since it is highly likely that my cell enters that sort of state when I am confronted with objects other than pads that bear remote resemblances to pads.

RC3 still has weaknesses as an analysis of reliable belief. Suppose that on several distant planets there are people like us living in conditions like ours, and that these planets are densely populated, so that far more of the
actual people in existence live on them rather than on Earth. There has never been and will never be any substantial contact with these aliens. However, unnoticed by the aliens, the water (or most of it) on their planets is somehow transformed into, or replaced with, a substance that is virtually indistinguishable from water yet has a different microcomposition. The qualities we currently take water to have are shared by this liquid (call it ‘XYZ’). Because of the transformation, the aliens are after a while exposed to XYZ more often than to H₂O. If such aliens existed, then even people on Earth would not normally have a reliable source for their beliefs about water. For among the links of the causal chain through which I typically arrive at my belief that the stuff I am drinking is water, is the fact that I have visual and tactile stimulations of a sort normally associated with water. Clearly, the aliens would usually be confronted with XYZ instead of water if they had such stimulations. Because most of the occasions on which people have those stimulations are occasions on which the aliens have them, then the fact that I have them is not a reliable indicator that the stuff I am drinking is water.¹⁰

Whether or not I have a reliable source for my belief that the stuff I am drinking is water should not depend on whether such aliens exist or on the fact that stuff on their planet is indistinguishable (using our methods) from water. The reason is that they are not in any sense a part of the community of persons with which we communicate and interact, and their circumstances are so remote that our methods need not be reliable enough to accommodate them. Our methods need only be reliable enough to handle the sorts of circumstances in which those in our community normally find themselves.

These considerations motivate the adoption of the following analysis:

RC4: There is a causal chain which produces (or sustains) S’s belief that p, and each link of it is a fact f such that at most times t, the following condition holds:

A member of S’s community is caused to believe that p* at t by the fact that f* holds at t → p* at t.¹¹

The aliens and Earthlings normally have the same source for their beliefs about water. But according to RC4, that source is reliable for us even though unreliable for them.

Two final matters before I turn to a critique of the Reliabilist’s Thesis. First, the adoption of RC4 forces us to alter the definition of ‘reliable indicator’. According to our new understanding, the fact that f is a reliable indicator that p for S just in case the following condition holds at most times t: a member of S’s community is caused to believe that p* at t by the fact that f* holds at t → p* at t.
Second, it is useful to redefine Goldman’s distinction between conditional and unconditional reliability in terms of our analysis. RC4 provides the conditions which must be met by a causal chain’s links in order for it to be an unconditionally reliable source of belief. In order for it to be a conditionally reliable source, that chain’s links must be reliable indicators given that all of the beliefs they involve are true.

II. AGAINST RELIABILISM

So much for an attempt to formulate an account of reliable sources of belief. Let me now take RC4 to be the correct analysis (though it is not crucial to what follows that it is correct), and state my objections to the Reliabilist’s Thesis, which maintains that a belief arrived at by applying some inference rule is rational if and only if arriving at that belief by applying that rule is reliable.

1. Irrational Beliefs with Reliable Sources

Consider the following rule of inference:

\[ R_5 \quad \text{For all } S, \text{ if: } S \text{ (believes that } S) \text{ seems to see a table at some time, or } S \text{ (believes that } S) \text{ seems to see 12 centaurs pulling the sleigh of a fat, jolly elf at some time, infer: There is a table in front of } S \text{ at that time.} \]

Imagine that Seesit applies \( R_5 \), so as to arrive at the belief that there is a table in front of her. \( R_5 \) would recommend that belief if she believed that she seems to see 12 panting centaurs or if she believed that she seems to see a table. Arrived at either way, her belief is both conditionally and unconditionally reliable. But it is certainly not rational (nor justified).

It is clear that the application of \( R_5 \) is a reliable source for Seesit’s belief. In fact, it is virtually as reliable as the application of \( R_1 \), which is roughly the way people usually arrive at the belief that there is a table in front of them. That \( R_5 \) permits Seesit to base the belief that a table is in front of her on the belief that she seems to see centaurs will not affect \( R_5 \)'s reliability in any significant way. For people will virtually never seem to see any centaurs in any close possible worlds in which they seem to see either tables or else elves in centaur drawn sleighs.

The present difficulty is not that there are one or two aberrant rules of inference whose use yields irrational beliefs in spite of the fact that they can be used to form beliefs reliably. Rule \( R_5 \) shows how to generate at least as many bad rules as there are good ones. To the antecedent of any good rule of the form:
If: \( p \), Infer: \( q \),
we simply disjoin a statement \( r \) which (a) provides no grounds whatever for believing the rule’s consequent \( (q) \), which (b) would not actually ever be true, though (c) it is logically possible:

If: \( p \) or \( r \), Infer: \( q \).

If reliability of origin is the only consideration relevant to a belief’s rationality, why isn’t the resulting rule just as good as the one from which it is constructed?

There may, perhaps, be some temptation to doubt that belief via \( R \), meets RC4. It might be objected that the close worlds in which people arrive at beliefs by applying \( R \), are ones in which they are mad. Perhaps they would then frequently seem to see centaurs and, via \( R \), tend to arrive at the belief that there is a table in front of them when there is no such table.\(^{12}\)

Even if people tend to be mad in the near worlds in which they use \( R \), however, they are still not likely to seem to see centaurs. It is difficult to say what mad people will seem to see, but surely there will be no large incidence of centaur illusions. Since even the mad are unlikely to seem to see centaurs, then the beliefs they form in conformity to \( R \) would tend to be correct.

Another attempt to meet my objection is to require that in order for one’s belief that \( p \) to be justified, it is not enough that it have a reliable source. In addition, one must possess the further belief that \textit{one’s belief that} \( p \) \textit{has a reliable source}, and this further belief must itself have a reliable source.\(^{13}\) The source for the second belief can be thought of as the application of a reliable meta-rule.

This requirement of a reliable meta-rule amounts to a rejection of Reliabilism as I have understood it. But let us consider a type of Reliabilism that is somewhat weaker than the sort discussed up until now. Call the old sort of Reliabilism \textit{Strong}, and let \textit{Weak Reliabilism} be the view that an analysis of rational belief (and of related notions such as justified or warranted belief) can be provided in terms of a set of restrictions that refer simply to the reliability of belief-forming processes, so that rational belief is a (perhaps complicated) \textit{function} of reliability though not necessarily reliably produced (or sustained) belief.

I do not see that Weak Reliabilism is much better off than Strong. What additional reliability restrictions will enable Reliabilists to deal with the problem that applying \( R \), is a reliable way to arrive at belief? The suggestion at hand, the requirement of a reliable meta-rule, will not help at all. Seesit might arrive at the belief that \( R \), is reliable by applying a meta-rule that is reliable for the same (odd) reason \( R \), is reliable. And since \( R \), is reliable, surely there will be reliable meta-rules that allow Seesit to base her
belief about the table on her belief that she sees centaurs. Moreover, this (already ad hoc) reply will not appeal to Reliabilists since the need for a meta-rule begins a regress that will have to be stopped in an ad hoc fashion. (Thus, e.g., the additional requirement could be restricted to beliefs arrived at via belief-dependent processes, and dropped for beliefs arrived at via belief-independent processes.)

Another strategy for dealing with rules like R₁ could be devised if a suggestion made by Robert Nozick were adopted. In order for Seesit's belief to be justified, according to Nozick, she "must reach it by the most reliable appropriate method" that is available to her.¹⁴ Perhaps R₁ is slightly more reliable than R₂; if so, Seesit's belief about the table is not rational, we could say, because she believed it by applying R₁ rather than R₂, while the latter was available.

Again, of course, this strategy could be adopted only if Reliabilists were willing to embrace the weaker version of Reliabilism according to which rationality is only a function of reliability. For Nozick's proposal departs from the intuition that rational belief simply is reliable belief. The source of my belief can be reliable without being the most reliable one available to me.

But the suggestion is too implausible to be of much help to proponents of Weak Reliabilism. Even when one of my beliefs is justified in view of its origin, isn't there (almost) always a more reliable method available via which I could have arrived at the belief? A painting I finished a year ago is hanging on the wall in clear view, and I am justified in believing that it is hanging there. But I could employ an even more reliable method of believing. I could go over and touch it in order to rule out the possibility that I am seeing a hologram, I could test it to see if it is a forgery, etc.

Consider a final reaction to rules such as R₃. The only sort of rule through which Seesit can arrive at a justified belief, we could say, is one which includes a Chisholm-style clause to the effect that she not have evidence which renders her belief implausible.¹⁵ If Seesit believes that there is a table in front of her when seeming to see a centaur and no table, she will have reason to doubt that the table is there. So the new clause prevents her from basing her belief about the table on her seeming to see a centaur.

Of course, this tack departs from the intuition that justified belief is reliable belief, and so helps establish a version of Weak Reliabilism at best. Even when offered in that spirit, some work remains to be done. At minimum, defenders of the new clause must analyze away the term 'implausible' since Weak Reliabilists claim to be offering an account of such terms. And, to say the least, it is not obvious how to get rid of this term.
One approach is to replace the Chisholm-style restriction with a version of Goldman's condition (10): There is no unconditionally or conditionally reliable process available to Seesit which, had she used it in addition to the process she actually used, would have resulted in her not believing that there is a table. Unfortunately, adding this condition would help only with a small subclass of the problem cases. Suppose that although Seesit arrived at her belief about the table by applying $R_s$, there is another reliable process $P$ available to her which she would have allowed to outweigh her application of $R_s$ had she used $P$. Moreover, if she used $P$ then she would fail to believe that there is a table in front of her. Then the suggested condition rules out the case. However, this is cold comfort. Suffice it to say that the condition does not help in cases such that Seesit, for whatever (possibly irrational) reasons, just would not allow her application of $R_s$ to be outweighed.

A rejection of the three versions of Weak Reliabilism just discussed does not constitute a refutation. However, serious doubt has been raised about the prospects for Weak Reliabilism; its proponents must now bear the burden of proof. For the remainder of the paper I will, at any rate, consider only Strong Reliabilism in evaluating the Reliabilist's Thesis.

2. Rational Beliefs with Unreliable Sources

There are irrational beliefs with reliable sources, I have shown. But that is only half of the case against the Reliabilist's Thesis. There are also rational beliefs whose (only) source is unreliable. This I will show by describing circumstances in which (many of) our normal rules of rational inference would be unreliable. Nonetheless, beliefs arrived at through the application of these rules would still be rational.

Now I presume that some of the rules of inference which we use are good ones, i.e., ones such that we act rationally when we use them in order to arrive at beliefs. Yet in some circumstances, the sensory information available to us is systematically misleading, and it is on the basis of this information that our rules recommend what they do. In your actual situation it is presumably reliable for at least some of your inference rules to recommend the beliefs they do on the basis of your sensory information. However, there are possible worlds such that, were you in one, (1) you would have the same sensory information and beliefs as you do in the actual world up until now, (2) your inference rules (whether good rules or not), when applied to this evidence, would recommend the same beliefs as in the actual world, yet (3) those rules would be completely unreliable. Let us say that in worlds which meet (1), your situation is perceptually and doxastically similar up until now to your situation in the actual world. Briefly, world $W_i$ is perceptually
similar to $W_2$ (during $t$) for $S$ iff $S$'s sensory information is the same in $W_1$ and $W_2$ (during $t$); and $W_1$ is doxastically similar to $W_2$ (during $t$) for $S$ iff $S$'s beliefs are the same in $W_1$ and $W_2$ (during $t$).

For example, there are worlds in which it is unlikely (or even physically impossible) for the sensory information our rules link to various states of affairs to ever really be associated with those stages of affairs. Here is one: imagine a world in which environmental conditions make it highly unlikely that human beings would ever evolve, but nonetheless some other intelligent life form has, and its members amuse themselves by growing tissues just like human brains, hooking the brains together so as to allow intercommunication, and then giving them deceptive sensory information that, as it happens, is just like ours. Of course, those in this example are not in our community, and RC4 defines the reliable use of our rules in terms of such people. Nonetheless, there are examples in which our rules are unreliable when used by members of our community. Simply suppose that the world of the tissue growers is the actual world and we are the vatters.

The fact that using our rules in such worlds would be unreliable does not entail that it would lead to irrational (or unjustified) belief. People in our doxastic community who apply the same inference rules to the very same sensory information and beliefs as we do and who arrive at the very same beliefs as we will be just as rational as we are in doing so. Or else both they and we will be equally irrational. This claim can be stated more precisely as the Principle of Interrationality (PI):

**PI:** If, at $t$, a set of rules renders $S$'s belief that $p$ rational (or justified) in one world $W_1$, then it renders $p$ rational (justified) for $S$ in any world $W_2$ that is perceptually and doxastically similar to $W_1$ for $S$ prior to $t$.

But the rules are as (conditionally or unconditionally) unreliable in these worlds as you like. That the application of a given rule yields reliable belief is something that varies with perceptually and doxastically similar possible worlds. That a given rule yields rational belief is not.

Goldman anticipates an objection to Reliabilism that is related to the one I just offered; I should discuss whether the three replies he offers are relevant. The objection he considers is that processes which are unreliable in the actual world may be reliable in other possible worlds. E.g., in the actual world wishful thinking is unreliable, but in some worlds, demons might see to it that wishful thinking is reliable by fulfilling our wishes. Goldman’s first response to this objection is to swallow it: in a world $W$ in which wishful thinking is reliable, the beliefs it yields are justified. His second response is to say that it is beliefs yielded by processes reliable in the absence of manipulative items such as demons that are justified. The third response
is to say that a belief is justified in a world $W$ even if it is yielded by a process that is unreliable in $W$ so long as that process is reliable in the actual world.

Goldman's second response is *ad hoc* and vague, and Seesit's use of rule $R$, is a counterexample to the remaining two since it shows that even in the actual world there are reliable processes that do not yield justified beliefs. But Goldman might offer a version of his first against my argument that his account is too strong.

Suppose that Goldman were to say that our inference rules do not yield justified belief in all worlds that are perceptually similar to ours, but only in ones in which they are reliable. In that case he would have to embrace the following unacceptable view: even in the actual world none of our rules may be yielding justified belief! For the actual world may be one in which our rules are unreliable. Perhaps the world of the tissue growers is actual.\textsuperscript{19}

In sum, I have defended two points. First, the use of rules which yields clearly irrational belief can be highly reliable. Second, the use of rules that results in rational belief need not be reliable. I conclude that since the Reliabilist Thesis is false, Reliabilism should be rejected.

**III. RELIABILITY, KNOWLEDGE AND INTERNALISM**

I have opposed two forms of the claim that a belief's rationality is a matter of its having a reliable source: Strong and Weak Reliabilism. Reliability considerations are not, however, irrelevant to the nature of rational belief. In this last section, I want to describe the way such considerations fit in. I will close with an attempt to forestall possible objections that might arise from failure clearly to separate knowledge and rational belief, and failure to distinguish the ways reliability conditions do and do not enter into the analyses of these two notions.

1. The Principle of Rationality

As I have understood it, Reliabilism (whether in its weak or strong form) analyzes rational belief in terms of what is reliable *in a world*. My main target has been the view that deems beliefs rational *in the actual world* just in case they are arrived at through sources which are reliable in the actual world. But I have also rejected the view according to which beliefs are rational in any possible world so long as their sources are reliable in the actual world. And finally, I have rejected the claim that beliefs are rational in a world just in case their sources are reliable in that world.

These approaches all have in common the assumption that rationality is world-bound. On this assumption, whether or not a belief is rational
depends just on whether its source is reliable in one world or another. Once this assumption is eliminated, an important relationship between rational and reliable belief can emerge. Reliability in a particular world is a good attribute for belief sources to have, but it is more important that those sources be reliable \textit{across} as wide a range of the possible worlds our community occupies as is possible.

Moreover, it is important to notice that in demanding reliability, our goal is not just to reduce the number of false beliefs yielded by our sources. That would lead us to demand an excessive degree of reliability, which in turn would prevent us from acquiring enough beliefs to form an adequate picture of the world. Instead, we also want to maximize the number of \textit{true} beliefs generated by our sources. These observations concerning reliability and its relationship to rationality are expressed by the following \textit{Principle of Rationality} (PR):

\begin{itemize}
  \item PR: Beliefs are rational to the extent that they are arrived at through a system of inference rules (a logic) which is reliable \textit{not} in any one particular world, but rather \textit{across} as wide a range of the possible worlds our community occupies as is possible; that is, to the extent to which that system maximizes the number of true beliefs recommended while minimizing the number of false beliefs endorsed \textit{as wide} a range of the possible worlds we occupy as is possible.

  Principle PR reveals why it is that beliefs arrived at through rule R, are not rational. Rationality is not world-bound, and though R, is reliable in the actual world, it is no part of a logic which is reliable across as many of the other worlds that we occupy as possible. For it would not be reliable in a world in which there are the likes of centaurs and elves.

  PR also reveals why it is possible to arrive at rational belief using our usual rules of inference even in circumstances which undermine their reliability. Presumably most of our rules of inference \textit{are} (or could be) part of a logic which is reliable across as wide a range of the worlds we occupy as possible. Even if used in a world in which they are unreliable, our rules thus still yield rational belief.

  Finally, PR shows why the Principle of Interrationality is true. A logic aimed at being reliable across a wide range of the possible worlds we occupy will \textit{presuppose} as little as possible about the world we are in. (One aimed at being reliable in the actual world alone is free to presuppose anything at all about the actual world.) For this reason, it will base its output as much as possible on the logical relations among beliefs (and perhaps other perceptual states), whether inductive or deductive. Since these relations are invariant across doxastically and perceptually similar worlds, PI is true. That a belief is recommended by another according to a set of inference rules that
is reliable across as wide a range of the possible worlds we occupy as possible is a *quasi*-logical, if not a logical, relation between those two beliefs. Hence the relation PR describes is a logical one.

Let me now discuss the relationship between knowledge and rational belief. Since the two are closely related in some ways, it is easy to jumble features of the one with features of the other. Doing so may provide a specious basis for Reliabilism. I will therefore describe three salient respects in which knowledge and rational belief are unlike.

2. *First Asymmetry*

By appealing to the Principle of Internrationality in the second part of my argument against Reliabilism, I have endorsed an Internalist stance toward rational belief. However, since Internalism as an approach to knowledge is dubious, perhaps (one might argue) we should avoid an Internalist approach to rational belief as well. I will meet this objection by pointing out that considerations against the one approach do not count against the other. A type of Internalism is correct in the case of rational belief but not in the case of knowledge. This is the first asymmetry between the two I wish to emphasize.

Roughly speaking, Internalism is the claim that knowledge and rational belief do not involve an ‘external’ component, a component other than narrow psychological states (except the truth condition). Stated in this way it is quite implausible. But if we break it into two separate doctrines, one applying to knowledge and the other to rational belief, it will be possible to isolate a kernel of truth.

Principle PI, I would argue, captures the intuition Internalists have about rational belief. The Internalist stance toward knowledge, on the other hand, can be captured by a second principle, the Principle of Interknowledge (PK):

**PK:** If, at $t$, $S$ knows that $p$ in one world $W_1$ by arriving at the belief that $p$ through process $P$, then $S$ knows that $p$ in any world $W_2$ in which $S$ arrives at the belief that $p$ through $P$ so long as $W_2$ is perceptually and doxastically similar to $W_1$ for $S$ prior to $t$ and so long as $p$ is true in $W_2$.

That Internalists subscribe to these principles would go a long way toward explaining why they think that knowledge and rational belief cannot involve an ‘external’ component, so that reliability restrictions, for example, are unacceptable as parts of the analysis of knowledge and rational belief. For if there is an ‘external’ component to knowledge and rational belief, then PI and PK are false.
It is crucial to keep PI and PK apart, for although PI is surely true, PK is certainly false, as can be shown using most Gettier cases.\textsuperscript{21} Contrast two situations. In one, Norman walks into a furniture store and arrives at the belief that there is a table in front of him, using the normal visual sequence in normal, un-Gettierized circumstances. In the second, he arrives at that belief through the very same source, but this time he has wandered into a gallery that specializes in displaying furniture illusions and which is disguised as a furniture store. Norman, by coincidence, is standing in front of the only real table there. In the first situation, he knows that his belief is true, but not in the second. Yet he has used the very same sequence in both situations, and the two are doxastically and perceptually similar to each other. PK is false.

No such criticism applies to PI. In both of the two situations just sketched, Norman is justified in believing that there is a table.

I conclude that if Internalism is restricted to rational belief, so that it merely assumes PI, then it is correct. But if it is extended to knowledge, so that it assumes PK as well, it is false. Knowledge and rational belief are asymmetrical with respect to externalist components.\textsuperscript{22}

3. Second Asymmetry

There is a second extremely important asymmetry between knowledge and rational belief. Although I have suggested that a reliability restriction such as RC4 is neither necessary nor sufficient for rational belief, one is a necessary condition for knowledge. Since a restriction dealing with rational belief also plays a role in the analysis of knowledge, one might suspect that reliability and rationality are inextricably connected. However, knowledge has two quite distinct components. One ensures that knowers fail to be accidentally correct about their beliefs, while the other ensures that inferred beliefs be rational. It is important to distinguish these elements, for whereas reliability restrictions are an important part of the first component, they are no part of the second. Rationality restrictions, on the other hand, play a role in the second but not the first.

One component of knowledge is the relationship between our belief and our circumstances by virtue of which it is the case that in those circumstances our belief is correct but not accidentally. Call this the \textit{metaphysical component}. Since reliability restrictions are necessary to rule out the accidental correctness of belief, such restrictions are an essential ingredient in the metaphysical component. Moreover, the fact that knowledge requires nonaccidentally correct belief can be used to clarify the sort of reliability restrictions it demands. I have suggested elsewhere\textsuperscript{23} that knowledge requires of belief sources a \textit{sliding scale} of reliability. The minimal level of reliability required of knowledge-yielding sources is set in
normal circumstances. But when we are in rigged circumstances, these sources might have to be even more reliable, depending on just how rigged our circumstances are. For in such circumstances, it may be necessary for belief sources to have greater reliability in order for us to be nonaccidentally correct about the beliefs they produce. However, lesser reliability will suffice in circumstances rigged to a lesser degree. The degree of reliability required, then, slides up and down (though not below the minimum) depending on our circumstances.

In the case of noninferential knowledge, the metaphysical element is exhaustive: any noninferential belief that is nonaccidentally correct is known. But more than nonaccidental correctness and reliability is required for inferential knowledge. Arrived at by applying the bizarre rule R, See’s belief is mad though its source is perfectly reliable. In fact, it is not at all accidental that she is correct about her belief. This shows that it is possible for beliefs to be nonaccidentally correct even though they are irrational. Accordingly, we are faced with the choice of either accepting some irrational beliefs as known, or else acknowledging that there is more to inferential knowledge than the metaphysical component.

Given the implausibility of the former, we had better say that inferential knowledge has a second constituent, namely, the relationship between two (or more) beliefs and our inference rules by virtue of which it is rational to arrive at the one belief by applying the rules to the other. Call this the doxastic component. These relationships include logical relationships of both the deductive and inductive sort. But a reliability restriction (of the world-bound variety) is no part of the doxastic component of knowledge.

4. Third Asymmetry

The reliability of a belief’s source may have to vary depending on our circumstances in order for that belief to be known. However, no such variation is required in order for it to be rational. I will show that this third and final asymmetry exists, then discuss a misguided way to use it in defense of Reliabilism.

That the asymmetry is genuine can be shown using an example which we recently discussed: when Norman believes that there is a table in front of him by using the normal visual sequence in unrigged circumstances, his belief is both known and rational. If he arrives at that belief in the same way while standing in a gallery which displays furniture illusions, his belief is no longer known but it is still rational. Only if Norman adopts a more reliable basis for his belief will it count as known.

There is a line of thought according to which the third asymmetry helps support Reliabilism. Notice that to be reliable, a belief source’s reliability need not vary depending on our circumstances. There is no restriction in
RC4 that provides for a sliding scale reliability. Moreover, we just said that no such variation is necessary in order for a belief to be rational. That reliable and rational belief are alike in this respect may suggest that the latter just is a species of the former.

A much better explanation of the similarity can now be provided. The reason a belief source’s reliability need not vary in order for that belief to be rational is because the rationality of a belief does not require that it originate in a reliable manner. Instead, a belief’s rationality depends on logical relations among it and others, and the logical relations which hold among our beliefs are not affected by our circumstances.

As for why a source’s reliability need not vary with our circumstances in order for that source to be reliable, the explanation is quite unspectacular. I have written as if there were some notion of adequate reliability (and adequate justification) about which we have intuitions just as there is a notion of knowledge about which we have intuitions. In fact, it is not possible to make sense of the notion of a belief source’s being adequately reliable (or a belief’s being adequately justified) unless we specify what the source’s reliability (or the belief’s justification) is to be adequate for. I have been working out the conditions under which a source is reliable enough to yield knowledge in normal, un-Gettierized circumstances. Having identified that level of reliability, I then said that a source is reliable simpliciter just in case it has this level of reliability. Hence, no variation from circumstance to circumstance is required.

If rational belief were some species of reliable belief, undoubtedly it would be belief arrived at through mechanisms that are reliable enough to permit knowledge (eliminate accident) in normal circumstances. Certainly no greater degree of reliability would be necessary. But that, we now know, is not what rational belief is.24

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NOTES

* An earlier version of this paper was read at the 1984 meetings of the Western Division of the American Philosophical Association. I thank those who attended for useful criticisms. I also thank William Alston, Curtis Brown, and Kenneth Konyndyk for helpful comments and criticisms.

2. Ibid., p. 11.
3. Ibid., p. 13.

4. I have misrepresented Goldman’s view here, but in a harmless way. Goldman combines the notions of conditional and unconditional reliability into an analysis of justified belief rather than reliable belief. My criticism of the combined view applies directly to his analyses of conditional and unconditional reliability, however.

5. The understanding of the truth conditions of subjunctive conditionals I will follow is an emendation of the Lewis-Stalnaker view that was suggested by Robert Nozick. Readers should, of course, make use of their own favored theory of subjunctives.

   In *Philosophical Explanations* (Cambridge, MA: Belknap Press, 1981), n8 on p. 174, Nozick points out a difficulty in the Lewis-Stalnaker account of subjunctives. On that account, a conditional of the form, ‘If p were true, q would be true’ is automatically true if p and q are both true in the actual world. But imagine a device that is emitting photons in such a way that it is a random matter whether they pass through the left or the right slit of a plate. The conditional,

   \[(*)\] If that photon were emitted, it would pass through the left slit

   is clearly false but is considered true on the Lewis-Stalnaker account if the photon in question did in fact pass through the left slit.

   To handle this problem Nozick suggests we say that a subjunctive conditional of the form, ‘If p were true, q would be’ is true only if q holds throughout the p-neighborhood of the actual world. The actual truth of ‘That photon was emitted’ and ‘It passed through the left slit’ is then insufficient for the truth of \[(*)\]. The antecedent of \[(*)\] is true in near worlds to the actual world; in order for \[(*)\] to hold, its consequent must also be true in these near worlds. I will adopt Nozick’s suggestion in this paper.

   Incidentally, Nozick himself does not specify the ‘distance’ of possible worlds in terms of how similar they are to the actual world. His specification is in terms of what would be the case.


6. For a convincing defense of this assumption, see Jonathan Bennett’s forthcoming book on events (untitled).

7. This example is similar to the Jessica Case offered in my paper “The Epistemic Predicament: Knowledge, Nozickian Tracking and Skepticism,” *Australasian Journal of Philosophy*, vol. 62, no. 2 (March 1984).

8. My discussion of why RC1 is too weak and too strong fleshes out Goldman’s point that “a process-type might be selected so narrowly that only one instance of it ever occurs, and hence the type is either completely reliable or completely unreliable” (*op. cit.* in n1, above, p. 12). Moreover, many of my improvements on RC1 can be viewed as attempts to help Goldman spell out the “intuitive principles” he has in mind when he admits that “it is clear that our ordinary thought about process-types slices them broadly, but I cannot at present give a precise explication of our intuitive principles” (p. 12).

9. Another reason to avoid the contraposition is that virtually any analysis that contains a version of it generates a version of skepticism. To see why, consider the
explanation I give in “The Epistemic Predicament” (cited in n7, above) of why Nozick’s third condition of knowledge leads to a type of skepticism.


11. RC4 replaces Condition (3) of the analysis of knowledge I offer in “The Epistemic Predicament” (cited in n7, above). RC4 is preferable on various grounds including prespicuousness.

12. As closely as I can recall, this is an objection that Marshall Swain offered at the 1984 meetings of the Western Division of the A.P.A. I am not sure how well I have captured his objection however; hence he should not be held responsible for it.

13. This suggestion is analogous to Goldman’s Condition (9), which he himself rejects (work cited in n1, above).


16. Detail can be provided in order to avoid the sort of objections Putnam raises in his book Reason Truth and History (Cambridge: Cambridge University Press, 1981). Putnam points out that it is difficult to make sense of the view that brains in a vat who have virtually no causal contact with the world can have beliefs about the world external to them. But in my example I can specify that the vatters are in some causal contact with the world through the mediation of the intelligent beings.

17. Dropping PI’s restriction to doxastically similar worlds would result in false principle:

If, at t, a set of rules renders S’s belief that p rational in one world W, then it renders p rational for S in any world W; that is perceptually similar to W, for S prior to t.

Assuming that some causal theory of reference is accepted, this version of PI is false. Imagine a possible world in which you and those around you are raised just as you were in the actual world, only the familiar stuff you drink and call water is not H₂O. Though virtually indistinguishable from water, it is what we earlier called ‘XYZ’. In that world, according to the causal theory, the term ‘water’ does not refer to H₂O but instead to XYZ. If you believed what is expressed by the sentence ‘The stuff I drink is water’ in that world, your belief would be different from the belief expressed in this world. Though the Twin Earth world is perceptually similar for you to the actual world up until now, it would not be rational in that world for you to believe what is expressed in this world by ‘The stuff I drink is water.’ Instead, it would be rational in that world for you to believe what is expressed in that world by ‘The stuff I drink is water.’

18. Goldman (cited in n1, above), p. 17.

19. I am helped here by Goldman’s lazy demon example on p. 17 of “What Is Justified Belief?”


21. As I explain in the course of criticizing a principle I call CK which is similar to PK in “The Epistemic Predicament” (n7, above) pp. 41–42, and in “What Skeptics Don’t Know Refutes Them,” Pacific Philosophical Quarterly 65 (1985), pp 86–96.
22. If there is an ‘external’ component to the rationality of a belief, it arises from the fact that determining the rules of rationality is a community project, so that the rationality of my belief depends at least partly on the fact that I have arrived at it through the rules selected by my community. Certainly the mere fact that my community has adopted a set of rules does not make it rational for its members to arrive at beliefs via that set. There is more to it than that. E.g., the rules must capture relevant logical relations. But there is no other external component to the rationality of a belief. The causal theory of reference does not entail that there is an external component to the rationality of belief, only that there is an external component to belief.


24. At any rate, if we adopt the suggestion to limit the level of reliability of a reliable source to that adequate to yield knowledge in unrigged circumstances, then it is possible to decide what to do with a situation in which an Earthling travels to one of the planets described earlier on which there is a great deal of XYZ. Imagine that she takes a drink of water or of XYZ and forms the belief that the stuff she is drinking is water. By RC4, the process whereby she arrived at this belief is reliable. One might, nonetheless, hesitate to accept this as an instance of reliable belief even though one has no trouble accepting the example discussed earlier in which Seesit arrives at her belief while standing in a House of Illusions.

But in fact the cases are of the same sort. Hesitation to say the voyager’s process is reliable is due to the fact that it would not be reliable according to RC4 if the voyager’s doxastic community inhabited one of the planets with XYZ. But the same is true in Seesit’s case: if her entire community were in circumstances like those in a House of Illusions, then her beliefs’ source would not be reliable according to RC4, either.

That both cases are cases of reliable belief becomes plausible if one accepts the link I have suggested with knowledge. For it is clear that in normal circumstances (normal relative to those concerned) the people in these cases have arrived at their beliefs through sources that are reliable enough to yield knowledge. The problem is that these people are not in normal conditions.