A PROBLEM FOR NATURALIZING EPISTEMOLOGIES

Anne Jaap Jacobson
University of Houston

There is a basic principle in epistemology which every theory attempts to articulate. But one kind of epistemological theory does not have access to this principle. Or so I shall argue in this paper. More exactly, I will argue that one important theoretician, Alvin Goldman, is prevented by the demands of his theory from giving us a version of the principle.\(^1\) If my arguments are correct, then any philosopher wanting to complete successfully the sort of project Goldman has undertaken will have to create resources lacking in Goldman’s theory. Hence, concentrating on one philosopher will enable us to formulate a problem precisely in an area where fairly vague terms, such as “externalism,” “naturalism,” “reliabilism,” and “causal theory,” abound. While there is certainly a fuzziness to “the sort of project,” we will be clear about what needs to be done.

Let me stress at the outset that I think there is more here than the problem we will explicitly investigate. I think that the basic principle is one which theories of knowledge like Goldman’s cannot articulate within the constraints of such theories. Further, I am prepared to argue that there is a parallel problem regarding action theory which poses as serious a challenge to causal theories of action-explanations.\(^2\) However, a much more narrow focus will give us a much more sharply defined picture. Hence, my aims in this paper are restricted.

I. The Inferential Justification Principle

We will call the principle to be discussed the Inferential Justification Principle. We will suppose, as a terminological

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Anne Jaap Jacobson, associate professor at the University of Houston, has recently written and published several papers and reviews on topics at the intersection of metaphysics, epistemology, and philosophy of mind. She has also published articles on David Hume and is currently completing a chapter on Hume for British Philosophy and the Age of Enlightenment, forthcoming from Routledge.
point, that what is said to be epistemically justified is either someone’s belief or someone’s believing. And we will understand “inferential justification” to stand for the justification of one belief by another belief. For our purposes, the distinction, if there is one, between knowledge and justified true belief need not be made relevant; however, we will have formulations of the principle which do reflect the possibility of a difference between knowledge and justified true belief.

We will eventually be using a weak version of the Inferential Justification Principle, but we can start with some statements of strong versions of it. The first is from William Alston:

I . . . need to make explicit what it is to have adequate evidence for p. First, a proposition, q, is adequate evidence for p provided they are related in such a way that if q is true then p is at least probably true. But I have that evidence only if I believe that q. Furthermore I don’t “have” it in such a way as to thereby render my belief that p justified unless I know or am justified in believing that q. . . . [A]s we have just seen, if I am not justified in accepting the evidence for p, then my believing it cannot render me justified in believing that p, however adequate that evidence.\(^5\)

The second statement is from Laurence BonJour:

[F]or the belief that P to be genuinely justified by . . . a justificatory argument [from Q], the belief that Q must itself already be justified in some fashion; merely being inferable from an unsupported guess or hunch, for example, can confer no genuine justification.\(^4\)

An earlier statement from BonJour:

The most obvious way in which beliefs are justified is inferential justification. In its most explicit form, inferential justification consists in providing an argument from one or more other beliefs which are premises to the justificandum belief as conclusion. But it is obviously a necessary condition for such inferential justification that the beliefs appealed to as premises be themselves already justified in some fashion; that a belief follows from unjustified premises lends it no justification.\(^5\)

Both writers appear to endorse the following strong principle of inferential justification:

If S’s belief q is to make S’s belief p justified, then S’s belief q must be justified.

Accommodating the difference, if any, between knowledge and justified true belief, we can rephrase the principle as:

If S’s belief q is to make S’s belief p justified (or is to make p something S knows), then S’s belief p must be justified (or S must know p).

We should note a familiar role the principle has. That is its place in the Epistemic Regress Argument.\(^6\) As BonJour says:
Thus empirical knowledge is threatened with an infinite and apparently
vicious regress of epistemic justification. Each belief is justified only if an
epistemically prior belief is justified, and that epistemically prior belief is
justified only if a still prior belief is justified, and so on.7

Of course, the Inferential Justification Principle alone does
not generate the regress. To get the regress several other
things are needed, among them the thesis that all justified
beliefs must be justified by other beliefs. Thus, both of the
above writers accept the Inferential Justification Principle
and reject the idea that knowledge involves, impossibly, an
infinite regress.

No philosopher has attempted to deal with the Epistemic
Regress Problem by allowing that a belief may be justified
by a belief which is neither justified nor a piece of knowl-
edge. Rather, we find analogues of the Inferential Justifica-
tion Principle in all other theories of knowledge. For
example, contextualism requires that a justification-
conferring belief itself be justified by being either defensible
against real worries or contextually basic, where either
would mean it is justified.8 And a prominent defeasibility
theorist puts his version of the principle thus:

Roughly speaking, we can say that a proposition, x, is justified for S if and
only if (1) S has available enough evidence, obtained in an epistemically
reliable manner, which confirms x, and (2) S does not have evidence
available which overrides that confirmation of x.9

Here the evidence “obtained in a reliable manner” is thereby
justified. Further, the principle is also embraced by the
epistemologist we will subject to scrutiny below. Thus
Goldman says:

[W]hen a person believes p by inference from antecedently held beliefs,
whether he knows p depends on more than the reliability of this final
inference procedure. It also depends on the antecedent beliefs and how they
were derived. Those beliefs must themselves be known, or at least believed
justifiably.10

And he maintains:

Where a belief results by inference from others, it cannot be justified unless
those other beliefs are justified.11

At least one author has explored the use of a version of the
principle which may be weaker than the one we have so far.
Thus Robert Audi says (the first sentence is more hypothet-
ical than it first appears to be):

I might, for example, know that there is a wind, on the basis of believing that
there is a rustling, even though I do not know that there is a rustling. . . .
Is this possible? In one kind of case it is not. Suppose I simply guess that the sound I hear is a rustling, but happen to be right. Might I then know there is a wind anyway, provided there is? Surely not; knowledge cannot be grounded in such guesswork, even when the guess is correct.

Imagine, however, that while I do not know there is a rustling . . . I make an educated guess and am thereby justified, to some extent, in believing that there is. If, on the basis of this somewhat justified belief that there is a rustling, I now believe that there is a wind, and there is, do I know this? This answer is not clear.

But he goes on to say,

If there can be an epistemic chain which ends with belief that is not knowledge only because the chain ends, in this way, with justification, then it appears that we are at least in the general vicinity of knowledge. We are at most a few degrees of justification away.12

Nonetheless, nothing in the arguments I am about to give requires a strong Inferential Justification Principle. In fact, we can weaken the Inferential Justification Principle to this:

If S’s belief q is to make S’s belief p justified, then q must possess some positive epistemic merit.13

And, again to accommodate the difference, if any, between knowledge and justified belief we get:

If S’s belief q is to make S’s belief p justified (or is to make p something S knows), then q must possess some positive epistemic merit.

The strength of the Inferential Justification Principle is really not relevant to my arguments below. Nonetheless, the principle cannot be stated without specifying some value for the strength, and so we need to be aware of the availability of the weaker version to be clear that my formulation of the problem does not depend on saddling a theory with a controversial task.

II. A Fuller Version of the Principle

The Inferential Justification Principle speaks of conditions under which one belief can justify another. But not every justified belief can justify another belief. What sort of relation has to obtain between two beliefs for one to justify the other? There are several ways one might understand this question. To see the sense in which I mean it, consider the following: It seems possible for S to be justified in believing q and for q to stand in some very strong relation to p, without q’s justifying S’s belief that p. This can happen even if q entails p. Inspector Japp and Hercule Poirot may have the same evidence and may both believe that Jones committed the
murder, without both being justified in believing that Jones is the guilty one. For example, Japp may know that Jones prepared the tea—a fact which leads Poirot to see he is the murderer—and yet Japp’s belief that Jones committed the murder be based on something else entirely—say, his belief that Jones stood to inherit a good deal of money (which, let us suppose, is in fact not justifying because it is clearly false). In such a case, we may say that Inspector Japp possesses justification (a justification Poirot uses) without his belief’s being justified. In a second sort of case, Poirot may possess justifying evidence which Japp does not even have, though they both believe that Jones did it. For example, the fact that Jones was seen buying the arsenic, taken with certain facts of which Japp knows, may even entail that Jones did it, though Japp does not believe that Jones was seen buying the arsenic, while Poirot does. In such a case, we may say that still there is justification for Japp’s belief, though he does not have it. Other locutions to describe such cases as these are also common. In the first sort of case, we may say that Japp has a justifying reason for his conclusion, though it is not *his* reason for his conclusion and so does not justify his conclusion. And in the second sort of case, we might say there is a good reason for believing his conclusion, though he does not believe it *for* good reason.¹⁴ For an evidence-providing belief to actually transmit justification, it must be the *reason-for-which* one believes.¹⁵ Accordingly, we may formulate as a fuller version of the Inferential Justification Principle:

If (i) *q* is the reason-for-which *S* believes *p* and (ii) *q* is to justify *S*’s belief *p* (or to make *p* something *S* knows), then *q* must possess some positive epistemic merit.

*Perhaps* one can have several reasons-for-which that are independent both as reasons-for-which and as justifications. One might, for example, believe that at least one woman at the party is a poet because one believes both that Susan is a woman and a poet present at the party and that Jane is a woman and a poet present at the party. *Perhaps* the lack of justification of either of the beliefs about the specific women need not affect the justificatory status of the other. I shall call such a case a “redundancy case.” One who accepts the fuller version of the Inferential Justification Principle should accept this amended version:

Cases of redundancy excluded, if *q* is the reason-for-which *S* believes *p* and *q* is to justify *S*’s belief *p* (or to make *p* something *S* knows), then *q* must possess some positive epistemic merit.
It is this version of the fuller Inferential Justification Principle on which we shall focus. In the next three sections I will argue that Goldman has failed in his attempts to incorporate in his theory an equivalent of the Inferential Justification rule or secure for his theory something which will do the work of the principle.\textsuperscript{16}

III. The Case of Alvin Goldman

It is quite difficult to believe that Goldman's theory cannot provide us with a principle which does the same work as the Inferential Justification Principle. Recent philosophy's ways of thinking about reasons-for-which one believes (or acts) lend a considerable initial plausibility to the sort of causal theory of epistemic justification he proposes. Hence, the material I bring to bear on this question is relatively elaborate. And I do not claim to have said enough to persuade until near the end of our discussion of him.

We will start with material from an early statement from Goldman:

[L]et us distinguish belief-dependent and belief-independent cognitive processes. The former are processes some of whose inputs are belief-states. The latter are processes none of whose inputs are belief-states. We may then . . . [adopt] the following two principles, the first a base-clause principle and the second a recursive-clause principle.

(6,\textsubscript{a}) If S's belief in \( p \) at \( t \) results . . . from a belief-independent process that is (unconditionally) reliable,\textsuperscript{17} then S's belief in \( p \) at \( t \) is justified.

(6,\textsubscript{b}) If S's belief in \( p \) at \( t \) results . . . from a belief-dependent process that is (at least) conditionally reliable,\textsuperscript{18} and if the beliefs (if any) on which this process operates in producing S's belief in \( p \) at \( t \) are themselves justified, then S's belief in \( p \) at \( t \) is justified.

If we add to (6,\textsubscript{a}) and (6,\textsubscript{b}) the standard closure clause, we have a complete theory of justified belief.\textsuperscript{19}

Since a closure clause is to be understood, this formulation gives us necessary conditions for a belief to be justified. The part of the necessary conditions which is relevant to our concerns is that requiring that the beliefs on which the justification producing process operates themselves be justified. This condition may well look to be at least an analogue of the Inferential Justification Principle. But, despite the fact that there is nothing else in the account to do the work the Inferential Justification Principle does, Goldman's substitute principle cannot do the same work. This can be seen to be so from the fact that the part of the necessary condition we have singled out is clearly false, as we will see in the next section.

The flaw in what I will call the "Reliabilist Principle," viz.,
if S's belief \( p \) is produced by a process, then if the belief \( p \) is justified, the beliefs on which the justification-producing process operates must be justified,

is quite easy to see. What is much more interesting is the fact that it is at least extremely difficult to amend the principle to take care of counterexamples to it. I will describe the problem in two parts; it is only at the second part that we will make use of Goldman's recourse to a substantial notion of a belief-producing process.\(^{20}\)

IV. A Problem for Goldman: Part One

The problem with the Reliabilist Principle is that, absent further qualifications, the inputs to a process, beliefs on which a process operates, are simply beliefs which are causally involved in the process's producing the belief(s) it produces. But not all beliefs causally involved in the production or sustaining of some belief must themselves be justified. Contra the Reliabilist Principle, there are beliefs which are causally involved and yet are not part of one's reason-for-which. In such cases, the Reliabilist Principle applies to all causally involved beliefs while the Inferential Justification Principle applies only to the reasons-for-which. And the Inferential Justification Principle is right, while the other is not. (Let me here anticipate an objection which may immediately occur to the reader: As I say below, the problem I am raising is not the deviant causal chain problem. The problem is not solved by allowing Goldman the use of a notion of non-deviantly causing.)

We can see the difference between reasons-for-which and merely causally involved beliefs by looking at some examples. Consider then Roger, who suffers from an Obsessive-Compulsive Disorder.\(^{21}\) Roger is taking a multiple-choice examination, and in order to think clearly at all about the examination, he needs to believe (and therefore does) that the boy in the seat before him is not named Charles. Roger is able to identify correctly the antonym of "febrile" as, let us suppose, c, and to sustain belief in that, only as long as he believes the boy in front of him is not named Charles. (Discovery that the boy in front of him is named Charles would cause even more anxious doubting than would his discovery that, for example, he had misread two of the alternatives.) Suppose that "febrile" is a word on his list of expressions to study for the exam and that his very good memory can tell him correctly what a standard definition of "febrile" is. Suppose further he is similarly aware of the

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definitions of the proposed antonyms among which he is to pick and that he is very intelligent. Does the fact that he is not justified in believing that the boy in front of him is not named Charles mean that he is not justified in believing that c is the correct answer to question 25? Surely not. But the Reliabilist Principle would have him so unjustified. So the Reliabilist Principle is not correct.

Let us call the belief about the boy in front of him which Roger has “a pure facilitator” to distinguish it from reasons-for-which. Reasons-for-which, but not pure facilitators, are one’s evidence-providing beliefs, ones to which the Inferential Justification Principle applies. Conceding for this discussion the idea that reasons-for-which are inputs to a belief-producing process, we can say that the problem with the Reliabilist Principle is that it covers both inputs which are the justification-relevant reasons-for-which and those which are the justification-irrelevant pure facilitators.

It may seem easy to distinguish causally involved beliefs which are relevant to the justification of some belief from those which are not relevant. We need to look at ways in which this might be done. Let us start with one which we are given by Robert Audi. Audi’s account is within the internalist tradition in epistemology, one which stresses the knower’s own epistemic assessments. Audi maintains that a believer whose reason for believing p is q, takes q to support p. Many epistemologists would not object to this distinction between pure facilitators and reasons-for-which, but Goldman, in the work we are considering, should.

There are three reasons why the appearance of “takes . . . to support” in a basic principle in his account is at best highly problematic. First of all, terms of epistemic evaluation, such as “support,” are members of the class of terms Goldman tells us he intends to explain and not invoke in the basic principles of the theory. He wants to give us a substantive and informative account of what epistemic justification really is. But if we have to add to Goldman’s (6B) above “and S believes them to support p,” we are adding in an ineliminable occurrence of just the sort of term Goldman is trying to explain. One might object that the term is eliminable by the theory. Can we not simply replace “S believes them to support p” by something like “S believes p is produced by a reliable process which has q as an input?” No. Goldman sensibly is not claiming that his account gives us a definition of the epistemic terms as they are now used by every justified believer. Of course, one might argue that just because Goldman is not claiming to define epistemic terms when used by every knower
or justified believer, the theory would not be made formally circular by our adding in “S believes them to support p.” But the resulting defect is a bad one, one few philosophers would find acceptable.

There is a second reason why Goldman should eschew the Audi solution. In coming from an internalist tradition, such an explanation of reasons-for-which invokes a model of justification which Goldman, completely explicitly, seeks not to employ in the basic explanatory models of the theory.27 The model is the Cartesian model of the self-conscious and self-critical cognizer. A third reason, related to the second, is that if we add in “S believes them to support p,” cases of the justification of one belief by another end up restricted to those containing a self-conscious use of notions of epistemic support. But then such cases require a very sophisticated cognizer. And this means the defeat of an ambition of naturalists from Hume onwards; namely, the ambition of seeing our epistemic abilities as continuous with those of “the brutes.”28

Before we look at how we might seek to preserve Goldman’s account, there are three points about the problem as I am raising it which need a brief discussion. It is sometimes said that causal theorists are really usually giving just necessary and not sufficient conditions for what they are explaining. And, secondly, it is also said that the reason for the restricted ambitions of causal theorists is the deviant causal chain problem.29 Hence, it is important to know that Goldman is trying to give a complete account,30 as we saw him say above. In addition, as should be clear by the time we have considered more examples, the causing of pure facilitators is not deviant in the way the deviant causes discussed in the literature are. Pure facilitators are actually common and need not be outside the usual functioning of their possessor. For example, many psychotherapists would say they often observe the workings of pure facilitators like that in the second of the next two examples. Thus the problem I am raising is not solved by allowing Goldman use of the notion of non-deviantly causing.

A last point: While we have started with an early account from Goldman, I will be examining possible resources available to him in his later discussions. I will be doing this particularly in Section V below.

The pure facilitator in the Roger case seems so far from being his reason-for-which that one may well feel confident that there is some way to amend the Reliabilist Principle which is acceptable to naturalists and excludes pure facilitators. I do not agree. Of course, proof that there is no possible way of so amending the Reliabilist Principle is itself
highly unlikely. What I will argue is that no way which I and a number of others have been able to think of comes close to being what is needed. Further, the argument will consider all of the kinds of relevant factors which the literature describes. In addition, I will argue the point in a context in which I will try to concede a great deal to possible proponents of the Reliabilist Principle.

One thing which seems to distinguish sharply between Roger’s pure facilitator and his reason-for-which is that the pure facilitator has nothing to do with the truth or falsity of his belief about the right answer. Further, truth sensitivity to one’s conclusion is just what one wants from one’s premises. So let us try to use this sort of feature to rework the Reliabilist Principle. What might such truth-sensitivity relations be grounded in? Two obvious sources are these: (1) extra-doaxastic relations among the extra-doaxastic things, if any, the beliefs are about, and (2) syntactical or semantical relations among beliefs. We will want shortly to add to these, but let’s start with these two as resources for amending the Reliabilist Principle. And now let us give the reliabilist unfettered access to these resources. That is, let us suppose there is a general relation, $C_1$, possibly disjunctive and very complex, which obtains when a conclusion is truth sensitive to its premises because of the way the extra-doaxastic world is going. And let us also suppose that there is another relation, $C_2$, again possibly disjunctive and very complex, which exhausts the semantical and syntactical relations which can be the source of truth sensitivity between premise and conclusion. And using such apparatus to amend the Reliabilist Principle, let us ask whether the consequent of the following conditional applies only to reasons and not to pure facilitators:

S’s belief $p$ is inferentially justified by the belief $q$ only if (a) $q$ is produced by a reliable process; (b) the beliefs are causally related, and (c) $q$ (or S’s belief $q$) bears $C_1$ and $C_2$ to $p$ (or S’s belief $p$).

Will only reasons-for-which fall under (a) and (b)? No. While we will shortly look at two ways of adding to (a) and (b), it is important to see why (a) and (b) as now stated do not suffice.

They do not suffice because it is logically possible for S’s belief $q$ to bear $C_1$ and $C_2$ to his or her belief $p$ and also, at the same time, be a pure facilitator for the belief $p$. The reason for this is three part: (i) Any adequate theory has to allow it is logically possible, at least for some values of $p$ and $q$, for one to have the beliefs making up one’s evidence
and conclusion and yet not accept what is one's conclusion for that reason. But then (ii) it is logically possible that $C_1$ and $C_2$ obtain whether or not $S$ believes $p$ because of $q$. This is so because $C_1$ relations are extra-doxtastic (and so independent of $S$'s beliefs $p$ and $q$), and $C_2$ relations are necessary relations (and so causally independent of causal relations among the beliefs). However, (iii) since there are in general no restricting conditions on the content pure facilitators can have, it is also possible that $q$ function as a pure facilitator, not a reason-for-which. But in such a case, $q$ can fulfill $C_1$ and $C_2$ while being a pure facilitator. Here's the sort of case being described: At one point Sam Smith, a noted historian, knows that nearly everyone in his profession admires him greatly and takes this as grounds for believing that at least one paper in the one volume devoted to discussing his theories praises him. But the belief that provides evidence in this case can function as a pure facilitator in another; accordingly, at a later time, when Sam has forgotten about his earlier inference, the same piece of knowledge is a pure facilitator and Sam, relaxed in the comfort of his facilitator, can read a paper sensibly and conclude, on the basis of the number of times his work is praised, that indeed at least one paper in the one volume devoted to discussing his theories praises him. (We can imagine that, though his belief about his status in his profession is not part of his evidence, coming to doubt it would destabilize his belief in the conclusion as much as would a discovery that he was wrong to interpret a series of remarks as praise.)

Another example which illustrates one of the implications of the problem: The same Sam sees a psychiatrist, Dr. Black; Sam has long believed that professional women regard him with scorn and, as a result, he has had considerable problems in working constructively with his female colleagues. Sam begins to think that the professional Dr. Black, a woman, does not regard him with scorn. As a consequence of his belief that Dr. Black is a professional woman who does not regard him with scorn, Sam is able to register the fact that Dr. Brown, a colleague, is a professional woman who does not regard him with scorn. From “Dr. Brown is a professional woman who finds me acceptable” Sam infers “Not all professional women find me unacceptable.” Part of what enabled him to do the inferring and sustain his belief in his conclusion was his other belief, a pure facilitator, “Dr. Black is a professional woman who finds me acceptable.” (We can imagine that if Sam were told...
that his therapist told demeaning stories about him, his conclusion would become as unstable as it would were he told the same about his colleague.) $C_1$ and $C_2$ fail to distinguish between his evidence-providing belief about his colleague and his pure facilitator about his therapist. But which is the evidence-providing belief and which is the pure facilitator is very important. Lack of justification in the evidence-providing belief, but not lack of justification in the pure facilitator, will render his conclusion unjustified.

The amended Reliabilist Principle can be strengthened. Suppose we add that S’s belief $p$ needs to be tied to what it is that makes $q$ good evidence. We can make S’s belief that $p$ and S’s transition from $q$ to $p$ track the value of $q$ as evidence. We could do this by adding that if $q$ were not good evidence, then S would not believe $p$. Consider, then, the strengthened-amended Reliabilist Principle:

S’s belief $p$ is inferentially justified by the belief $q$ only if (a) $q$ is produced by a reliable process; (b) the beliefs are causally related; (c) $q$ (or S’s belief $q$) bears $C_1$ and $C_2$ to $p$ (or S’s belief $p$); AND (d) if $q$ were not true or $C_1$ did not obtain, S would not believe $p$.

(Since $C_2$ relations are necessary relations, it is not clear what truth-conditions would be possessed by a counterfactual conditional supposing them not to exist.) Do we now have at least a condition which does not apply to pure facilitators and thus does not wrongly allow that an unjustified pure facilitator could render a conclusion unjustified? No. To see this, we will look at the addition as possessing two parts. Consider the idea that it is only evidential beliefs which are such that if they were not true, S would not believe the conclusion actually based on them. Now if we select S’s who know their facilitators, investigate the facilitator’s truth, and don’t proceed unless they can verify the pure facilitators as well as they can verify anything else, then it is going to be true that if their pure facilitators are false, the conclusion is no more likely to be held than it is when the evidential beliefs are false. An example: John Jones is a UN economist who has a phobia about dealing with reports from Third World countries; as a consequence, he frequently has tokens of “The request now before me is not from a Third World country” as pure facilitators. Jones researches the truth of his pure facilitators and refuses to consider requests submitted by Third World countries; when he is forced to consider such a request, he is doomed to come to a conclusion at odds with what he can even recognize as the evidence. Consider next the claim that
while both evidence-providing beliefs and pure facilitators can bear the same sort of \( C_1 \) relation to \( p \), it's true of evidential beliefs alone that if their \( C_1 \) relation to \( p \) does not hold, then the conclusion is not held. There are several ways of dealing with this proposal; here is the simplest: Let \( S \)'s pure facilitator be logically equivalent to the evidence-providing belief.\(^{35}\) In such a case, if it is true that the conclusion would not be drawn were the \( C_1 \) relation not to obtain, the pure facilitator will meet the conditions of the strengthened-amended Reliabilist Principle. Further, in cases in which the pure facilitator is deductively equivalent to the evidence-providing belief, no variant on taking the obtaining of \( C_1 \) as a necessary condition will work to distinguish the evidence-providing belief from the pure facilitator.

To summarize the argument thus far: There is a problem for the account of justified belief and knowledge which we are looking at. The problem is that the conditions it gives are, as stated, applicable to both justification-relevant reasons-for-which and justification-irrelevant pure facilitators. This means that unjustified pure facilitators are wrongly judged by the principle to detract from a positive assessment of justification. We have looked at several ways in which we might try to distinguish between pure facilitators and reasons-for-which. These ways were all designed to use the interest Goldman has in explaining justifiedness in terms of a propensity for truth transmission. Thus, we looked at a variety of groundings one might bring in for a truth-sensitivity relation between reasons-for-which and what they evidentially support: (i) \( C_1 \) world-to-world relations; (ii) \( C_2 \) belief-to-belief relations and (iii) clause (d), the strengthened-amended version's world-to-belief relations. None of these distinguish pure facilitators from reasons-for-which.

There is another resource in Goldman's arsenal and it develops importantly in his later accounts. We will consider it in the next section.

V. The Problem: Part Two

A central feature of Goldman's account is his use of processes and methods. It is important in his account that a justified belief is produced \textit{by a reliable process or method}. Further, one might well think that the difference between reasons-for-which and pure facilitators is simply a difference between parts of a process. And in a way it has got to be true that the difference between evidence-providing beliefs and pure facilitators is a difference in roles.\(^{36}\) But there is also a very large problem about whether a theory has the
conceptual resources to articulate this difference in roles in a way which gives us a means of restricting the Reliabilist Principle or its offspring.

To see this, let us start by reminding ourselves that terms like “role” and “process” are very general and vague terms. The world does not come parcelled out into one right categorization of processes. What counts as one process or the same process depends in large part on one’s classification scheme. Given a belief, there are many different ways of carving what caused it into processes. Indeed, unfortunately for reliabilists, it can be argued that every true belief can be described as the result of a reliable process. The resulting problem is called “the generality problem” and it poses a serious challenge to reliabilist theories of knowledge. My objection against the claim that an appeal to processes can solve the pure facilitator problem is independent of the generality problem, but it shares one of its features. That is, it queries whether the notion of a process is well equipped for much theoretical work.

There are several general resources we have for describing cognitive processes. One way would be to describe a cognitive process as a caused transition from a state with a certain syntactic and semantic structure to another such state. What we saw above in discussing C₂ relations shows that this way of describing cognitive state transitions will not give us a means of distinguishing between reasons-for-which and pure facilitators. Interestingly enough, in the later work Goldman appears to address and reject this strategy:

There are many possible causal chains that could connect the two states. Which precise causal chain connects them is a critical determinant of justifiedness. . . . Instead of conceiving [of our rules of epistemic rightness] as specifying mere cognitive-state transitions, we must conceive of them as specifying cognitive processes, where by ‘process’ we mean a determinate kind of causal chain.

The last sentence just quoted is footnoted. The footnote says,

There are nice metaphysical questions about the nature of processes. I am not sure that calling processes ‘causal chains’ captures exactly what needs to be said about processes. But since I lack satisfactory answers to the relevant questions, I will proceed without any further, detailed account of processes.

Nonetheless, we are given a list of some of the basic processes:

Among the prototypical cases of justification-conferring processes are: (1) forming beliefs by standard perceptual processes, (2) forming or retaining
beliefs by memory, and (3) certain patterns of deductive and inductive reasoning. (My emphasis.)

Can Goldman just appeal to the notion of an inference to distinguish between reasons-for-which and pure facilitators? Are reasons-for-which just one’s premises? Yes, maybe, but. If we ask whether Goldman is entitled to the notion of a reason-for-which, the claim that he can recover it from the notion of inferring is begging the question. For what “p was inferred from q” adds to “belief q caused belief p” is, at least in part, that q was the reason-for-which. We can say that in part the problem posed by pure facilitators for an account like Goldman’s is that it shows that terms like “premise,” “conclusion,” and “deductively inferred” cannot be understood simply in terms of caused transitions of beliefs with certain semantic and syntactic relations and that what more is added has been left without any satisfactory specification in Goldman’s account.

Given our increasing knowledge of brain functions, there is another way we might hope to distinguish reasons-for-which from pure facilitators. If beliefs are brain states, might we not, at some level of generality, be able to distinguish between the neurophysiology of reasons-for-which and that of pure facilitators? If a top-down approach cannot distinguish pure facilitators from reasons-for-which in the way Goldman needs, might not a bottom-up method give us the distinction?

It is sufficient in this context to note that whatever future research reveals, it will not now give us the means to amplify the Reliabilist’s Principle in such a way that the reliabilist can produce an analogue of the Inferential Justification Principle. But the present investigation is about just this last question. Can the reliabilist now produce a principle which does the same work as the Inferential Justification Principle? And as far as we have seen, the answer is no.

VI. Conclusion

The specific focus of my arguments has been Goldman’s evolving account of knowledge. Goldman is attempting to give us a substantial account of knowledge which excises itself from the traditional model of a believer self-consciously assessing his or her cognitive structures. There would seem to be many resources such an account can draw on in order to articulate a distinction necessary for a correct statement of (or for a principle capable of doing the work of) the Inferential Justification Principle. As we saw, none of these
equips Goldman to perform the task. Hence, any philosopher who attempts to give the sort of theory Goldman is developing will need to create resources not at present in Goldman’s account. And we also have reason to think this may not be easy to do in a way which solves the problem.

My arguments have a role in a still more general project, as I indicated at the beginning of this paper. I want to describe briefly the general concern which has informed my arguments. Seemingly folk psychologicist notions may have very important roles in principles concerned with the evaluation of parts or aspects of our lives. The notion of a reason-for-which, in the case of belief and in the case of action, is one such notion. What one’s reason-for-which is in the case of belief is very relevant to the epistemic assessment of that belief. And the reason-for-which one acted is very relevant to the prudential and moral quality of one’s act. Indeed, the arguments of this paper suggest strongly that such roles, at least in the case of belief, are intrinsic to the notion of a reason-for-which. Certainly, in the context in which we are working, a correct account of what a reason-for-which is both is required by and is sufficient for a correct statement of any principle which will do the work of the Inferential Justification Principle.

What does a theory have to look like in order to be able to formulate a good account of the role of “reason-for-which” in normative contexts? That question is the topic for another paper, so let us merely consider a motto from a recent writer, and a brief reflection on it:

The reason mental concepts cannot be reduced to physical concepts is the normative character of mental concepts.\(^{43}\)

This remark, in our present context, raises a question about whether the notion of a reason-for-which is really a proto-scientific, causal notion, a notion in a mere folk science.\(^{44}\)

**NOTES**


I have argued this point at some length in recent papers presented at conferences and colloquia.


4 Laurence BonJour, *The Structure of Empirical Knowledge* (Cambridge: Harvard University Press, 1985), p. 18. There is ample evidence in BonJour’s writings that any difference in scope between Alston’s “having adequate evidence” and his “being justified by a justificatory argument” is not relevant to our concern.


13 In addition, that is, to any merit a belief might have simply because it is believed.


15 This is Audi’s terminology in “Belief, Reason, and Inference.”

16 By “do the work of” I mean to allow that a principle might fail to be equivalent to the inferential justification principle but still allow us to make the discriminations between cases of justification and those of lack of justification in which we will be interested in the following discussion.

17 This is part of a reliability theory of justified belief (see note 19 below). For Goldman, only belief-independent processes with a high proportion of truths over falsehoods are unconditionally reliable. To allow for a weaker requirement, we could understand “unconditionally reliable” to require only that the majority of the beliefs produced are true.

18 Conditionally reliable processes tend to produce truths when their inputs are true.

19 “What Is Justified Belief?” p. 183. (We will consider below the effect of his later work on his ability to provide an analogue of the inferential justification principle.) I understand Goldman in this and in the later work to be presenting a reliabilist theory of knowledge. By this I mean that he attempts to explain what makes a belief justified or a piece of knowledge principally in terms of a notion of the belief’s being reliably produced. In saying this, I intend merely to place his work into a very unshy and broad classification.

20 The reader should note that the reliabilists’ use of the notion of a method or process has been found to be a much weaker part of the theory than one might at first think. The difficulty with their use of the notion of a method or process is called “the generality problem.” I discuss this problem briefly below.

21 My example is based on an example in *The Boy Who Couldn’t Stop*

22 I have argued in unpublished work that this is not correct, but our present discussion does not require us settle the issue.


26 "The working assumption is that the evaluative status of an action, trait, institution or any other object of evaluation supervenes on some sort of factual properties or relations... An initial task is to specify the pertinent properties," in "Precis and Update," p. 70. See also "What Is Justified Belief?" pp. 172 and 187. Compare Epistemology and Cognition, p. 86.


28 Cf. David Hume, An Enquiry Concerning Human Understanding, Section IV (II). Hume's position is, of course, that in a sense neither we nor the brutes reason as much as we think we do. But Goldman's apparatus seems designed to capture the sort of inductive process Hume is talking about and to regard it as a case in which some beliefs justify others. The problem is, then, that if we bring in attributions of epistemic assessments as entailed by attributions of knowledge, then knowledge is available only to sophisticated and relatively mature human beings.


30 At the same time, we should remember that the Roger example does not show that even as merely necessary conditions, Goldman's account is defective.

31 See my opening acknowledgements above.

32 Notice that the question of whether the principle applies only to justification-relevant beliefs is actually weaker than the question of whether the principle can do the same work as the inferential justification principle. Hence, we are actually asking that Goldman's theory perform a lesser task than we started out. Making such a concession enables us to focus more precisely on where the problem with his theory lies.

33 Goldman, Epistemology and Cognition, p. 84.

34 This condition is at least as strong as one of the tracking conditions for inferential knowledge given by Nozick, who is attempting to give a kind of naturalistic, reliabilist theory of knowledge. Nozick's other condition also obtains in the UN example discussed below. See Robert Nozick, Philosophical Explanations (Cambridge: The Belknap Press of Harvard University Press, 1981), pp. 230-240.

35 Perhaps plausibility demands that we add in that S is unaware of the equivalence.

36 Those who have reservations about whether reasons-for-which must be causes may understand this in a way different from the way it is understood by causal theorists.


I should say that I have argued, in unpublished work presented recently in response to a paper by Ruth Millikan at a conference at the University of Houston, that her teleological account of inference does not capture the notion of inference needed in epistemology. I do not think that such accounts will provide a resource which will aid a theory like Goldman's, but teleological analyses are not yet developed enough for it be to possible to argue this point generally.


Among the occasions on which the central argument of this paper has been presented are an Eastern Division APA Conference, a Pacific Division APA Conference, a meeting of the Canadian Philosophical Association, a New Jersey Regional Philosophical Association Conference and colloquia at the University of Illinois, Urbana-Champaign, UCLA, and Rutgers University. I have learned a great deal from the comments and criticisms of a large number of people. I am especially indebted to Robert Audi, Donald T. Campbell, Philippa Foot, Rosalind Hurthhouse, Gavin Lawrence, and Brian McLaughlin. A recent conversation with Richard Foley was helpful to me in setting the argument in its present context; Bredo Johnsen's comments on the penultimate draft were also very useful.