Beyond Foundationalism and the Coherence Theory

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not only philosophical discourse but all discourses, including scientific discourse, nonassertoric and nonrepresentational. Language in general, not just philosophical language, becomes nonrepresentative. Truth and knowledge in science, too, are matters of social practice and approval, not representation. Science, too, must cease to be inquiry and become conversation.

Is Rorty happy with this? There is no question that the rejection of Platonic realism is the central theme and moving force of the entire book, as witness its title. There is no room in this paper to develop further interpretations and arguments.[4] I have only tried to show, in a limited extent, "how the other side looks to us."

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BEYOND FOUNDATIONALISM AND
THE COHERENCE THEORY *

ONE of the legacies of positivist epistemology is a tendency to divorce epistemological questions from psychological questions. Epistemology is a normative discipline; it is concerned, among other things, with questions about how reasoning ought to proceed. Such questions can be answered, we are told, independently of investigation into the processes that in fact occur when reasoning takes place. Questions about justified belief are thus "translated" from the mental realm—'What kinds of transitions between mental states make for justified belief?'—to the logical realm—'What kinds of arguments are "good" arguments?'. This approach to epistemological questions pervades much of contemporary philosophy.

I believe that this approach is mistaken. The approach I favor, a psychological approach to questions about knowledge and justification, is the naturalized epistemology of W. V. Quine and Alvin Goldman.[1] In this paper, I will explore the implications of this approach for questions about justification, and, in particular, for the debate between foundationalists and coherence theorists.

Foundationalism and the coherence theory of justification may be viewed as two sides of a Kantian antinomy. Arguments for each view are predominantly negative; they are arguments for the claim that the opposing view is untenable. When the best available argument for a view is that competing views are untenable, one is left with the suspicion that a different conclusion would have been reached had one only considered the competing positions in a different order. More importantly, this suggests that the competing views may rest on a common false presupposition.

I do not believe that the standard objections to either foundationalism or the coherence theory have been adequately addressed. If I am correct in this, then it is worth considering whether there are other possible views about the nature of justification. I will argue that foundationalism and the coherence theory share a common false presupposition and that this lies in their anti-psychological approach to epistemological questions. Once this false presupposition is rejected, the insights of both foundationalism and the coherence theory may be joined in a single unified theory of justification.

I. KNOWLEDGE AND JUSTIFIED BELIEF

The standard account of knowledge is that knowledge is some sort of justified, true belief. This account is often presented as a rival to causal theories of knowledge. Causal theorists of knowledge believe that knowledge is reliably produced true belief. This, we are told, leaves justification out of the picture.

I do not believe that this way of presenting the causal theory of knowledge is correct. Causal theorists of knowledge do not deny that knowledge is some sort of justified true belief; they merely give a nonstandard account of what it is for a belief to be justified. They claim that a belief is justified just in case it is caused by a reliable process. Self-styled justified-true-belief theorists of knowledge typically give a quite different account of justification.

This may sound like a merely terminological dispute, but I do not

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[1] See especially W. V. Quine, "Epistemology Naturalized" and "Natural Kinds," in *Ontological Relativity and Other Essays* (New York: Columbia, 1969); and Alvin Goldman, "Discrimination and Perceptual Knowledge," this JOURNAL, LXXIII 1976): 771–791, and "What Is Justified Belief?" in G. Pappas, ed., *Justification and Knowledge* (Boston: Reidel, 1979), pp. 1–23.

believe that it is. The notion of justification was not invented by philosophers. Answers to questions about justification play an important action-guiding role. It is thus important to develop a theory that tells us what justification is. Causal theorists of knowledge are not exempt from this task. I do not believe, however, that they have tried to avoid dealing with it.

The claim that knowledge requires justified true belief is a mere truism. What is controversial is the proper analysis of the notion of justification. There are two ways in which one might try to go about giving an analysis of justification. One is to tackle this problem directly; the other is to try to give an account of knowledge. A proper account of knowledge will include an account of justification. This must be true, unless the truism that knowledge requires justified belief is false. In claiming that knowledge is reliably produced true belief, causal theorists of knowledge are thus not abandoning the notion of justification, but rather committing themselves to a reliabilist account of justification.[2]

It is thus worth pointing out that there is room for dispute about what justification consists in. This is important because there is a standard account of justification which is so widely accepted—indeed, so widely taken for granted—that its merits as a theory of justification are rarely examined. This is especially unfortunate, I believe, because the standard account is false.

II. THE ARGUMENTS-ON-PAPER THESIS

The standard account of what it is to be justified in believing a proposition is an apsychological account. If such an account is correct, questions about justification amount to nothing more than questions about the quality of various sorts of arguments. I will thus call the view that underlies the standard account the *arguments-on-paper thesis*.

Let us suppose that, for any person, it is possible, at least in principle, to list all the propositions that person believes. The arguments-on-paper thesis is just the view that a person has a justified belief that a particular proposition is true just in case that proposition appears on the list of propositions that person believes, and either it requires no argument, or a good argument can be given for it which takes as premises certain other propositions on the list.[3]

[2] In "Innate Knowledge," in Stephen Stich, ed., *Innate Ideas* (Berkeley: Univ. of California Press, 1975), pp. 111–120, Goldman suggested that the causal theory of knowledge amounts to an account of knowledge without justification. In his more recent "What Is Justified Belief?" *op. cit.*, Goldman insists that a causal theory of knowledge brings with it a causal theory of justification.

[3] The following is a representative sampling of those who have held the argu-

Crucial to this explanation of the arguments-on-paper thesis is the notion of a "good argument." Foundationalism and the coherence theory of justification provide us with rival accounts of what it is to be a "good argument."

On the foundationalist version of the thesis, some of the propositions on the list of propositions one believes will have a special epistemic status: these propositions will be such that, if a person believes one of them, that person is justified in that belief. It has been widely held that some propositions are incorrigible; they are known if they are believed. If there are any incorrigible propostions, these propositions have the required epistemic status. There may be some propositions, however, that are not incorrigible and yet have the required status. Let us suppose that all propositions that have the required special epistemic status are starred whenever they occur on the list of propositions a person believes. The foundationalist will now provide us with a list of rules of inference. It is then claimed that a proposition requires no argument if and only if it is starred, and that an argument for a proposition is a good one just in case all its premises are starred and all the rules that must be applied to get from the premises to the conclusion are on the appropriate list. Various claims are often made for the epistemic status of the rules of inference, but we need not be concerned with these here.

Coherence theorists suppose that there are no starred propositions. The coherentist thus makes different claims about what makes for a

ments-on-paper thesis in this century, with references: A. J. Ayer, *The Central Questions of Philosophy* (New York: William Morrow, 1974), p. 63; Roderick Chisholm, *Perceiving: A Philosophical Study* (Ithaca, N.Y.: Cornell, 1957), p. 16, *Theory of Knowledge*, 2d ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1977), p. 109, and *Person and Object* (La Salle, Ill.: Open Court, 1976), pp. 182/3; James Cornman, "Foundational vs. Non-foundational Theories of Empirical Knowledge," in G. Pappas and M. Swain, eds., *Essays on Knowledge and Justification* (Ithaca, N.Y.: Cornell, 1978), p. 230; Roderick Firth, "Ultimate Evidence," in R. Swartz, ed., *Perceiving, Sensing and Knowing* (Berkeley: Univ. of California Press, 1965), 495, and "Coherence, Certainty and Epistemic Priority," in Chisholm and Swartz, eds. *Empirical Knowledge* (Englewood Cliffs, N.J.: Prentice-Hall, 1969), *passim;* Carl Ginet, *Knowledge, Perception and Memory* (Boston: Reidel, 1975), p. 52; Keith Lehrer, *Knowledge* (New York: Oxford, 1974), p. 17; C. I. Lewis, *An Analysis of Knowledge and Valuation* (La Salle, Ill.: Open Court, 1946), pp. 265–314; Otto Neurath, "Protocol Sentences," in Ayer, ed., *Logical Positivism* (New York: Free Press, 1959), p. 203; Mark Pastin, "Meaning and Perception," this JOURNAL, LXXIII, 17 (Oct. 7, 1976): 575, and "Modest Foundationalism and Self-Warrant," in Pappas and Swain, eds., *op. cit., passim;* John Pollock, *Knowledge and Justification* (Princeton, N.J.: University Press, 1974), pp. 33–39; Karl Popper, *Objective Knowledge* (New York: Oxford, 1979), p. 6; Bertrand Russell, *Problems of Philosophy* (New York: Oxford, 1912), p. 134; and *Human Knowledge* (New York: Simon & Schuster, 1948), p. 155; Wilfrid Sellars, *Science Perception and Reality* (London: Routledge & Kegan Paul, 1963), p. 169; Ernest Sosa, "How Do You Know?" in Pappas and Swain, eds., *op. cit.*, p. 188.

good argument. It is claimed that there is a relation, call it C, which a proposition might bear to a set of propositions and which is such that, if a proposition appears on the list of propositions a person believes and bears C to the set of all the remaining propositions on that list, this provides a good argument for that proposition. In keeping with the spirit of the arguments-on-paper thesis, C must of course be definable solely in terms of relations among propositions.

III. THE PSYCHOLOGICAL TURN

There are familiar objections against both foundationalism and the coherence theory, as presented above. Against foundationalism, it has been argued that there are no propositions the content of which guarantees that anyone who believes them is justified in believing them; in short, there are no starred propositions.[4] Against the coherence theory, it has been argued that the mere fact that a set of propositions cohere with one another is no evidence of their truth; in short, there is no such relation as C.[5] In response to these objections, various epicycles have been added to both foundationalist and coherentist accounts, but I do not believe that these objections have ever been answered.

I would therefore like to propose an account alternative to both foundationalism and the coherence theory, and here I have in mind not just a rival account of what it is to be a good argument, but rather an account that rejects the framework common to both of these theories. In this section, I will argue that the arguments-on-paper thesis is false;[6] in the following sections, I will develop an account that avoids the standard objections to both foundationalism and the coherence theory.

Consider Alfred. Alfred justifiably believes that p and justifiably believes that if p then q; he also believes that q. Is Alfred justified in believing that q?

Notice, first, that if the arguments-on-paper thesis is true, then, on any reasonable foundationalist or coherentist account, Alfred is justified in believing q. Foundationalists must allow that Alfred is justified in believing q, for it must surely be allowed that modus ponens is on the list of rules available for constructing good argu-

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[4] See, e.g., Sellars, *op. cit.*, pp. 127–196; Michael Williams, *Groundless Belief* (New Haven, Conn.: Yale, 1977), pp. 25–59.

[5] See, e.g., C. I. Lewis, "The Bases of Empirical Knowledge," in Chisholm and Swartz, eds., *op. cit.*, p. 128.

[6] Similar arguments have been offered by Gilbert Harman, *Thought* (Princeton, N.J.: University Press, 1973), pp. 24–33; Barry Stroud in his "Inference, Belief, and Understanding," *Mind*, LXXXVIII, 350 (April 1979): 179–196; Goldman, "What Is Justified Belief?" p. 9.

ments.[7] Since Alfred is justified in believing p and if p then q, there are "good" arguments available for each of these propositions, and, given that modus ponens is an available rule, an acceptable argument for q is easily constructed. Similarly, coherence theorists will surely grant that a proposition that follows from others by modus ponens coheres with them, and thus, they too must insist that Alfred is justified in believing q.

It is clear, however, that Alfred need not be justified in believing q. Alfred may well be aware that he believes that p and that if p then q, and yet fail be believe that q on these grounds. If Alfred has a strong distrust of modus ponens, and yet believes q because he likes the sound of some sentence that expresses the proposition that q, then surely Alfred is not justified in believing that q. Nor will it do to suggest that this problem can be cleared up if we merely stipulate that Alfred must also believe that if p and if p then q, then q; for the same problem arises all over again.

Alfred is justified in believing that q only if his belief that q *depends* on his beliefs that p, and if p then q. The notion of belief dependence cannot be accounted for in terms of the contents of the various beliefs held. The arguments-on-paper thesis is thus false.

In rejecting the arguments-on-paper thesis, we must take a psychological turn.[8] The notion of belief dependence must be accounted for by looking at the belief states of persons and, in particular, at the relations among them. Questions about the justification of beliefs are thus intimately tied to questions about the sorts of processes responsible for the presence of those beliefs. This is the first step toward a naturalized epistemology, and the failure of the arguments-on-paper thesis shows that it is a step we must take.

I will not attempt to give an account of what it is for one belief to depend on another. I will, however, adopt the following working hypothesis: if one belief depends on another, the former must be *causally* dependent on the latter; one belief cannot depend on another when the two are causally independent. This suggestion, I believe, allows us to recognize an important insight of foundationalism.

[7] This assumption is used only for purposes of illustration. Foundationalists must accept some rules of inference, and, if modus ponens is not among these, an analogous example can be constructed making use of one of the accepted rules. Similarly, for coherence theorists, the assumption is unnecessary.

[8] Lehrer, *op. cit.*, p. 124/5, has resisted this move. He presents an example that purports to show that the psychological turn should not be taken. In their simplest form, examples of the type Lehrer offers presuppose that a person's reason for holding a certain belief must always be tied to the reason for which the belief was acquired; this presupposition is false. When this presupposition is not made, it is not obvious that Lehrer's intuitions about the example are correct.

IV. THE HIERARCHICAL STRUCTURE OF JUSTIFICATION

That causal dependence is a necessary condition of belief dependence leads immediately to the conclusion that the structure of belief dependence is hierarchical. The argument for this conclusion is nothing more than the familiar *regress argument*, an argument frequently advanced by foundationalists.

Consider some person's justified belief that p. What might make a person justified in having such a belief? Either that belief is not justified, even in part, by its dependence on other beliefs, or there is a set of beliefs B such that p is justified in virtue of its dependence on the members of B. We may now ask of each of the members of B whether that belief is justified in virtue of its dependence on other beliefs, and so on. A tree structure results.

Clearly, it is not possible, in tracing the source of a belief's justification in this way, that one should come across an unjustified belief; a belief cannot be justified in virtue of its dependence on an unjustified belief. There are then three possibilities. Either (1) at least one branch of the tree will be made up of infinitely many distinct justified beliefs; (2) there will be no branches made up of infinitely many distinct beliefs, but at least one branch, in effect, will turn back on itself; that is, there will be some branch that forms a closed circle; or (3) all branches will be finite in length and contain no circles; all branches will terminate with what we shall call a *terminal belief*—a belief that is not justified in virtue of its dependence on other beliefs.

The fact that belief dependence requires causal dependence guarantees that justificatory trees fall into the last of these three categories. Consider the causal chain of events that accounts for a person's holding a particular belief. A complete explanation of the presence of a belief will include a complete description of this chain of events. There must be a first belief on this causal chain; thus, there must be a belief on any such chain which is justified, though not justified in virtue of its dependence on any other beliefs. It therefore follows that each justified belief is either such that, though justified, it is not justified in virtue of its dependence on any other beliefs, or such that it is justified, ultimately, in virtue of its dependence on beliefs which, though justified, are not justified in virtue of their dependence on other beliefs.[9]

[9] One might try to escape this conclusion by arguing that the notion of belief, like that of baldness, is vague. If the notion of belief were vague in this way, this would undermine my argument. I know of no reason for thinking, however, that this is so. We make use of the notion of belief in explaining action. If such explanations were to break down with further investigation of the etiology of action, we

I have said nothing about the content of terminal beliefs, for I am interested not so much in their content as in their existence. If the view championed by J. J. Gibson,[10] that perception is detection, is correct, terminal beliefs are perceptual beliefs. On the other hand, the view that perception is hypothesis, favored by R. L. Gregory,[11] would suggest that perceptual beliefs are not typically terminal. I will briefly sketch each of these two views.

Gibson's view gives foundationalists a good part of what they have always wanted. If Gibson is correct, the causal chain of events that leads to the production of a perceptual belief typically does not itself include any believings. Perceptual beliefs, when justified, are thus typically not justified in virtue of their dependence on other beliefs.

Gregory, on the other hand, claims that if we examine the etiology of a perceptual belief we will typically find that it is dependent on other previously acquired beliefs, many of which are also perceptual. These, in turn, will also typically depend on other previously held beliefs; and so on. Of course the position that all beliefs are causally dependent on previously held beliefs is incoherent, and this is not the position that Gregory holds. If Gregory is right, however, then if we trace the etiology of a typical perceptual belief we will find that it is dependent on many beliefs that were acquired in the past, and perhaps as long ago as early childhood.

There is no need for me to enter this psychological controversy. I wish only to argue that some beliefs must be terminal, and each justified belief must either be terminal or be dependent on terminal beliefs. Although this conclusion sounds very much like foundationalism, it is important to emphasize the contrast between foundationalism and the view I am defending here. The argument just given demonstrates the existence of terminal beliefs; it does not demonstrate the existence of what foundationalists have called "self-justifying beliefs." First, it should be noted that this argument does not in any way suggest that terminal beliefs are justified in virtue of their content, nor does it suggest that a belief that is terminal at one time must be terminal at another. Moreover, it does not show that a belief might not depend on itself; this argument in no way precludes the possibility that, in tracing the etiology of a belief, it should be discovered that an agent's holding the belief that

might have to conclude that the notion of belief is as vague as that of baldness. There is no reason yet, however, to draw this conclusion.

    [10] *The Senses Considered as Perceptual Systems* (Boston: Houghton-Mifflin, 1966).

    [11] *The Intelligent Eye* (New York: McGraw-Hill, 1970).

p at time t is dependent, in part, on his holding the belief that p at some time earlier than t. Most importantly, however, the justificatory trees that have been described are nothing more than trees of belief dependence. Although justification is clearly in part a matter of belief dependence, this is not to say that there is nothing more to justification than belief dependence.[12] Indeed I will argue that relations among beliefs other than those captured by the justificatory trees just described play a crucial role in making beliefs justified.

V. THE ROLE OF BACKGROUND BELIEFS

I have argued thus far that part of what determines whether a particular person is justified in holding a particular belief at a particular time is the process responsible for the presence of that belief in that person at that time.[13] Such processes, however, are not the sole determinants of justification.

Consider the following example. Joe and Moe are both looking at a bowl of fruit, and this causes both Joe and Moe to believe that there is an apple in front of them. Let us suppose that the psychological processes responsible for the presence of these beliefs in Joe and Moe are the same, and thus the tree diagram illustrating the beliefs (if any) upon which Moe's belief that there is an apple in front of him depends is the same as the corresponding diagram for Joe. Let us suppose further that Joe also believes that he is myopic and, thus, that if the basket of fruit in front of him were artificial fruit, he would not be able to tell at this distance; Moe has no such belief. In spite of Joe's belief that he cannot distinguish what is in front of him from artificial fruit, Joe still believes that he is looking at a genuine apple.[14]

In this circumstance, Moe is justified in believing that there is an apple in front of him, but Joe is not. Since the processes that produced their beliefs are the same, something other than the process responsible for the presence of their beliefs must be involved in determining whether they are justified. In this case, it is quite clear what this additional factor is. Although the process responsible for the presence of Joe's belief would ordinarily be adequate for justification, it is not adequate for justification given Joe's background beliefs—beliefs which do not appear on the justificatory tree tracing the etiology of the belief in question. In determining whether a

[12] Sydney Shoemaker and Richard Boyd argued with me relentlessly to get me to see this point. I would never have come to see it if not for discussions with Philip Kitcher.

[13] I am very much indebted in this section, as I am throughout the paper, to Goldman's "What Is Justified Belief?"

[14] Joe is, of course, being irrational; but surely this is possible.

process is adequate for justification, we must examine not only features intrinsic to the process itself, but also background beliefs which may play no part at all in the process. A belief's justificatory status is thus a function of (at least) the process responsible for its presence, as well as the background beliefs had by the agent at the time in question.

The importance of background beliefs should not be underestimated. It has sometimes been suggested that some beliefs, though not incorrigible, are justified independently of their relations to other beliefs.[15] This cannot, however, be true. As long as a belief is not incorrigible, its justificatory status will vary not only with changes in the process responsible for its presence but also with changes in background beliefs. Thus, for any given belief-forming process, there will always be background beliefs that would make that process inadequate for justification. *All nonincorrigible beliefs are thus justified, in part, in virtue of their relations to other beliefs.* The qualification is unnecessary, of course, if there are no incorrigible beliefs. I have nothing to add to the arguments available against the existence of incorrigible beliefs, and since there is a growing consensus that such beliefs do not exist, I will take for granted in what follows that the justificatory status of all beliefs has been shown to depend, in part, on other beliefs.

VI. BEYOND FOUNDATIONALISM AND THE COHERENCE THEORY

Foundationalists have argued that the structure of belief dependence is hierarchical; that some beliefs, though justified, are not dependent on others; and that all other justified beliefs must ultimately be dependent on these. If the argument I have given in section IV is correct, foundationalists are correct about all these points.

Coherence theorists have argued that no belief is justified independently of its relations to other beliefs. This claim too is vindicated by the account I offer. Although there must be some beliefs such that an account of the process responsible for their presence does not involve other beliefs, an account of what makes these processes adequate for justification must involve other beliefs. A complete account of what makes a particular belief justified will always involve beliefs other than the one in question.

Foundationalists have argued that the coherence theory of justification "cuts justification off from the world." Justified beliefs are beliefs that, in some sense or other, are likely to be true.

[15] This view has come to be known as "modest foundationalism." See, e.g., Firth, "Coherence, Certainty, and Epistemic Priority," *op. cit.*, and Mark Pastin, "Modest Foundationalism and Self-Warrant," *op. cit.*

A proper theory of justification must therefore explain in what sense it is that justified beliefs are likely to be true. Since it is the way the world is which makes beliefs true or false, a proper theory of justification must explain what it is about justified beliefs which makes it likely that they should "match up" with the way the world is. The outline of a theory of justification which I have offered explicitly makes room for such an account. Any adequate account of the features of belief-producing processes that make for justified belief must surely indicate the relation between these processes and the world. The fact that the account offered is a causal account requires that, in filling in the outline offered, the connection between justified beliefs and the world must be included.

Coherence theorists have argued that foundationalism is not plausible unless foundationalists can come up with some plausible candidates for foundational (or "starred," as I have called them) beliefs, and that no such plausible candidates have ever been offered. Though I have not made any suggestions about which beliefs might be terminal, this does not leave me vulnerable to the coherence theorist's objection. Foundationalists have made quite elaborate claims for the epistemic status of foundational beliefs; I make no such claims for the superficially similar terminal beliefs of my account. What makes a belief terminal at a particular time is simply that the chain of events responsible for its presence does not include any believings. There can be little doubt that there are such beliefs, though nothing short of a psychological theory of the mechanisms involved in belief acquisition will tell us what they are. Needless to say, I am not prepared to offer such a theory.

I thus hope that the outline of a theory of justified belief which I have offered incorporates those features of foundationalism and the coherence theory which have made each of these views attractive and yet avoids those features which have made each of these views unacceptable. Let me close this section with a brief discussion of the notion of *epistemic priority*.

Some philosophers have suggested that there is a special class of beliefs that are "epistemically prior" to other beliefs; it has sometimes been claimed that this special class might consist of beliefs about one's present state of mind, or, alternatively, about medium-sized physical objects. I believe that claims about epistemic priority are to be understood as claims about the relative position of beliefs on the justificatory trees described above. In these terms, we may distinguish among a number of different theses about epistemic priority.

The following is a very weak claim about epistemic priority. There is some class of beliefs that tend to be epistemically prior— i.e., lower in justificatory trees—than some other class of beliefs. This claim is clearly true. Consider the class of beliefs about medium-sized physical objects and the class of beliefs about subatomic particles. Beliefs in the former class tend to occur lower in justificatory trees than beliefs in the latter class; beliefs about subatomic particles tend to depend on beliefs about medium-sized physical objects, rather than vice versa. This is of course compatible with the claim that, for example, if the structure of human sense organs were different, the epistemic ordering of these two classes might have been different. It is also compatible with the claim that some beliefs about subatomic particles are epistemically prior to some beliefs about medium-sized physical objects.

Foundationalists have argued for a stronger claim about epistemic priority: the class of beliefs that are in fact terminal must be terminal; the class of beliefs that are in fact epistemically prior to other beliefs must be epistemically prior to other beliefs. I think this view is plausible only if the terminal beliefs are incorrigible. Let us suppose that there is a terminal belief t that is not incorrigible. Since t is not incorrigible, there is some evidence e which one might obtain that t is false. Let us suppose that one comes to believe e, and on this basis one gives up one's belief that t. Let us further suppose that e is later discovered to be misleading evidence and that one thus comes to believe t again, this time on the basis of one's belief that e is misleading. Thus, although t was once a terminal belief, it now no longer is. Since such a chain of events might occur, no (nonincorrigible) terminal belief is necessarily terminal. The fact that one belief is epistemically prior to another at a particular time does not in any way guarantee that the order of epistemic priority will not shift at a later time.

Most importantly, it should be pointed out again that the fact that a certain class of beliefs is terminal at a particular time, and thus epistemically prior to all other beliefs at that time, does not show that what makes these beliefs justified has nothing to do with other beliefs higher up in the tree. In spite of the "foundational" structure of justificatory trees, no beliefs are justified independently of their relations to other beliefs.

VII. RELIABILISM

The outline of a theory of justification which I have presented is neutral on the question of what makes a belief-forming process adequate for justification. For the purposes of this paper, namely,

to extract the elements of truth from foundationalism and the coherence theory and combine them in a unified theory of justification, it is unnecessary to take a stand on this question. Nevertheless, there is only one theory currently in the field which addresses this question, *reliabilism*, and it will thus be worth while to see how my outline looks in reliabilist dress.[16]

Reliabilism is the view that knowledge is reliably produced true belief, and thus that justified belief is reliably produced belief. This view is presented in what is now a *locus classicus* of reliabilism, Alvin Goldman's "Discrimination and Perceptual Knowledge".[17] In presenting my account of justification in reliabilist terms, I will follow Goldman's analysis closely.

A belief-producing process is reliable just in case it tends to produce true beliefs in actual situations as well as in counterfactual situations that are relevant alternatives to the actual situation. A belief is justified just in case the process responsible for its presence is reliable.

Given an epistemic agent, a proposition, and a time at which that agent believes that proposition, the determinants of the relevant alternatives to that proposition, for that agent, at that time, fall into two categories: the way the world is, and the way the agent believes the world to be. Goldman does not offer an account of how relevant alternatives are determined, nor is such an account available in the literature. In spite of this, it will be useful to see how, in particular cases, relevant alternatives are determined.

Let us bring Joe and Moe back to center stage. Joe, it will be remembered, believes that there is an apple in front of him in spite of the fact that he believes that if he were looking at artificial fruit he would be unable to tell the difference. Joe's belief that he is looking at an apple is thus clearly unjustified. How do we account for this within the Goldman framework?

The process that produces Joe's belief, we have supposed, is a standard perceptual process. This is a perfectly respectable belief-

[16] This is not quite true. There is also the account offered by Gilbert Harman in *Thought*.

[17] Reliabilism is also defended by D. M. Armstrong in his *Belief, Truth and Knowledge* (New York: Cambridge, 1973).

What kinds of causal processes or mechanisms must be responsible for a belief if that belief is to count as knowledge? They must be mechanisms that are, in an appropriate sense, "reliable." Roughly, a cognitive mechanism or process is reliable if it not only produces true beliefs in actual situations, but would also produce true beliefs, or at least inhibit false beliefs, in relevant counterfactual situations (771).

forming process, but it is not adequate for justification unless it tends to produce true beliefs in both actual and relevant counterfactual situations. Joe's belief that he cannot tell the difference between genuine and artificial fruit at this distance makes a certain counterfactual situation relevant that would otherwise not be relevant: namely the situation in which he is actually looking at artificial fruit. The process that produced Joe's belief in the actual situation would tend to produce false beliefs in this relevant counterfactual situation, and thus Joe is unjustified in believing that he sees an apple. Since what makes this counterfactual situation relevant is Joe's belief about his myopia and since Moe does not have a similar belief, this counterfactual situation is not relevant for Moe. The process that produced Moe's belief, namely, the very same process that produced Joe's, is reliable because it tends to produce true beliefs in actual situations as well as in those which are relevant for Moe. Moe thus has a justified belief.

It might seem, in light of this example, that the relevant alternatives for justification should be determined only by the way the agent believes the world to be, and not also by the way the world is. Nevertheless, situations outside the agent's doxastic realm may serve to determine relevant alternatives. Just as there are cases of morally culpable ignorance, there are cases of epistemically culpable ignorance. Had Moe been frequently fooled by artificial fruit before, he would be no more justified than Joe. The way the world is thus enters in in determining relevant alternatives.

Alternatively, it might be argued that one needn't take into account the way the world is believed to be in order to determine relevant alternatives. It might be argued that all the facts about justification which can be accounted for by allowing an agent's beliefs to determine some of the relevant alternatives can equally well be accounted for by by-passing the agent's beliefs and looking only at certain facts about the way the world is. Beliefs thus play no role in the determination of relevant alternatives.

This argument is a non sequitur. Consider a particular belief that seems to determine a particular relevant alternative, e.g., Joe's belief that he is myopic. Now consider the causal chain that leads to the production of Joe's belief. This chain of events surely determines that the situation in which Joe is looking at artificial fruit is a relevant alternative to the actual situation. The only reason that this chain of events determines the relevant alternative, however, is that it also determines that Joe will come to believe he is unable to tell the difference between artificial fruit and genuine fruit from

this distance. Chains of events that do not thus determine Joe's belief will not determine relevant alternatives.

Relevant alternative situations are thus determined, in part, by an agent's beliefs, and questions of justification are determined by the tendency of the process responsible for the presence of a belief to produce true beliefs in relevant alternative situations. I have urged that all justified beliefs must either be or depend on beliefs that do not depend on others, simply because there must be some first belief involved in any belief-forming process. Nevertheless, no belief is justified independently of its relations to other beliefs; for in order to be justified a belief must be produced by a process that tends to produce true beliefs in relevant counterfactual situations, and relevance is always determined, in part, by an agent's beliefs. Concessions are thus made to both foundationalism and the coherence theory.

It is a short step from a reliabilist account of justified belief to a reliabilist account of knowledge, for knowledge is merely reliably produced true belief. Here, however, we "up the ante" in setting the standards of reliability adequate for knowledge. A process must tend to produce true beliefs in a wider range of counterfactual circumstances if it is to be sufficiently reliable for knowledge than if it is to be merely reliable enough for justified belief. A single example should make this point clear.

Alphonse is looking at a bowl of fruit and, as a consequence, comes to believe that there is an apple in front of him. Alphonse is terribly myopic, although he's never had any reason to believe this, and if the apple in front of him were made of wax, Alphonse wouldn't notice the difference. In this situation, Alphonse's belief that there is an apple in front of him is surely justified—he does not realize that he is myopic, and his ignorance is not culpable—but he does not have knowledge. Here it seems that the fact that Alphonse is myopic determines a relevant alternative as regards knowledge, but not as regards justification.

The determinants of the relevant alternatives as regards justification are thus the class of the agent's beliefs, as well as a subclass of the true propositions about the world apart from the agent's beliefs. The determinants of the relevant alternatives as regards knowledge are the class of the agent's beliefs as well as a larger subclass of the true propositions about the world.

This concludes my outline of a theory of justification. Many questions remain open. Most obviously, it remains to be shown how relevant alternatives are determined, and a great deal remains to be

said about terminal beliefs. Nevertheless I hope this sketch serves to focus questions about the nature of justification in a more productive way than the endless battle between foundationalists and coherence theorists might have suggested was possible.

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FOUNDATIONALISM AND EPISTEMIC DEPENDENCE *

Foundationalist theories of knowledge have generally been taken to hold that if there is any knowledge at all, there is at least some knowledge with a special status. Generically, such knowledge may be called foundational; it has also been characterized as basic, as direct, as nonderivative, and in other ways. Coherence theories of knowledge, by contrast, have generally been taken to deny the possibility of foundational knowledge. Recently the controversy has been sharpened. For one thing, many philosophers have argued that foundationalism need not posit beliefs that are infallible or in any way beyond rational criticism. Coherentism has also been refined. But despite concessions on both sides, most epistemologists consider these two approaches to knowledge irreconcilable and tend to favor one or the other if they favor any theory of the structure of knowledge at all.

Professor Kornblith's interesting paper maintains that a sound theory of knowledge will not be found in either camp, and he proposes a view which he regards as embodying the main insights of both positions. His starting point is a critique of a view—"the arguments-on-paper thesis"—which he takes to represent a serious error vitiating both foundationalist and coherence theories of justification. This view is that a person justifiably believes a proposition if and only if it "appears on the list of propositions that person believes, and either it requires no argument, or a good argument can be given for it which takes as premises other propositions on the list" (599). Against this he contends (roughly) that in order for one's belief that p to justify one's belief that q, the latter belief must "depend" on the former; and since the arguments-on-paper