Epistemic Justification*

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According to an ancient and honorable tradition, knowledge is justified true belief. But what is this “justification?” Theologians of the Protestant Reformation (however things may stand with their contemporary epigoni) had a clear conception of justification; justification, they held, is by faith. Contemporary epistemologists, sadly enough, do not thus speak with a single voice. They don’t often subject the concept in question—the concept of epistemic justification—to explicit scrutiny; but when they do discuss it, they display a notable lack of unanimity. Some claim that justification is by epistemic dutifulness, others, that it is by coherence, and still others that it is by reliability. In what follows I shall try to get a clearer look at epistemic justification and allied conceptions. I shall argue that none of the above is the correct answer, and suggest an alternative.

But here we need a preliminary word as to what it is, more exactly, I mean to be talking about. How shall we initially locate epistemic justification? First, such terms as ‘justification’ and ‘justified’ are, as Roderick Chisholm suggests (See Chisholm, 1977), terms of epistemic appraisal; to say that a proposition is justified for a person is to say that his believing or accepting it has positive epistemic status for him. What we appraise here are a person’s beliefs, more exactly, his believings. We may speak of a person’s beliefs as warranted, or justified, or rational or reasonable, contrasting them with beliefs that are unwarranted, unjustified, irrational, or unreasonable. Secondly, epistemic justification or positive epistemic status clearly comes in degrees: at any rate some of my beliefs have more by way of positive epistemic status for me than others. And thirdly, among the fundamental concepts of epistemology we find, naturally enough, the concept of knowledge. It is widely agreed that true belief, while necessary for knowledge, is not sufficient for it. What more is required? Whatever exactly this further element may
be, it is either epistemic justification or something lurking nearby. Initially, then, and to a first approximation, we can identify justification as a normative property that comes in degrees, and that lies in the near neighborhood of what distinguishes true belief from knowledge.

I. CHISHOLMian INTERNALISM

Over the past 25 years or so, Roderick Chisholm has presented a series of ever more refined and penetrating accounts of the central notions of the theory of knowledge. His work is clearly the place to start. Chisholm belongs to the internalist tradition going back at least to Descartes. Here I have no space to explain what internalism is and how his work reflects its central idea;¹ I shall therefore hasten on. Chisholm begins his quest for epistemic principles by introducing an undefined technical locution: ‘\( p \) is more reasonable than \( q \) for \( S \) at \( t \)’; here the values for \( p \) and \( q \) will be such states of affairs as believing that all men are mortal and withholding the proposition that all men are mortal—that is, believing neither that proposition² nor its denial. Given is more reasonable than as an undefined locution. Chisholm goes on to define a battery of ‘terms of epistemic appraisal’ as he calls them: ‘certain,’ ‘beyond reasonable doubt,’ ‘evident,’ ‘acceptable,’ and so on. A proposition \( A \) is beyond reasonable doubt for a person at a time \( t \), for example, if it is more reasonable for him to accept that proposition then to withhold it; \( A \) has some presumption in its favor for him at \( t \) just if accepting it then is more reasonable than accepting its negation. And the epistemological principles Chisholm presents are formulated by way of these terms of epistemic appraisal.

Now Chisholm introduces ‘is more reasonable than’ as an undefined locution; but of course he intends it to have a sense, and to have a sense reasonably close to the sense it has in English. What he says in Foundations of Knowing (1982, hereafter ‘FK’), his most recent presentation of his epistemology, is that ‘Epistemic reasonability could be understood in terms of the general requirement to try to have the largest possible set of logically independent beliefs that is such that the true beliefs outnumber the false beliefs’ (p. 7). In his earlier Theory of Knowledge (1977, hereafter ‘TK’) Chisholm is a bit more explicit about intellectual requirements: ‘We may assume,’ he says, ‘that every person is subject to a purely intellectual requirement: that of trying his best to bring it about that for any proposition \( p \) he considers, he accepts \( p \) if and only if \( p \) is true’ (TK p. 14); and he adds
"One might say that this is the person's responsibility \textit{qua} intellectual being . . . One way, then of re-expressing the locution \textit{p} is more reasonable than \textit{q} for \textit{S} at \textit{t} is to say this: \textit{S} is so situated at \textit{t} that his intellectual requirement, his responsibility as an intellectual being, is better fulfilled by \textit{p} than by \textit{q}.

Reasonability, therefore, is a \textit{normative} concept; more precisely, it pertains to requirement, duty, or obligation. And Chisholm's central claim here is that a certain requirement, or responsibility, or duty, or obligation lies at the basis of such epistemic notions as evidence, justification, positive epistemic status, and knowledge itself. To say, for example, that a proposition \textit{p} is \textit{acceptable} for a person at a time is to say that he is so situated, then, that it is not the case that he can better fulfill his epistemic duty by withholding than by accepting \textit{p}; to say that \textit{p} is \textit{certain} for him is to say that there is no proposition \textit{q} such that he can better fulfill his intellectual obligation by accepting \textit{q} than by accepting \textit{p}.

The suggestions made in \textit{FK} and \textit{TK} differ as to what our intellectual requirement is, and differ in a more superficial way; neither, furthermore, is quite correct.\textsuperscript{2A} The basic idea, however, is that our epistemic duty or requirement is to try to achieve and maintain a certain condition—call it \textit{epistemic excellence}—which may be hard to specify in detail, but consists fundamentally in standing in an appropriate relation to truth. This is a duty I have \textit{"qua intellectual being"}—that is, just by virtue of being the sort of creature that is capable of grasping and believing (or withholding) propositions. We pay a price for our exalted status as intellectual beings; with ability comes responsibility. According to Chisholm, then, justification (and positive epistemic status generally) is a matter of \textit{aptness for fulfillment of epistemic duty}. I am justified in believing a given proposition is given circumstances to the extent that I can fulfill my epistemic duty or requirement by accepting it in those circumstances. This duty or obligation or requirement, furthermore, is one of \textit{trying} to bring about a certain state of affairs. My requirement is not to \textit{succeed} in achieving and maintaining intellectual excellence; my requirement is only to try to do so. Presumably the reason is that it may not be within my power to succeed.

This is a beguiling picture of the nature of justification and positive epistemic status; I think it is easy to see, however, that it cannot be right.\textsuperscript{3} I shall give two examples to argue the point. First, suppose \textit{S} knows that 9 out of 10 Frisians cannot swim and that Feike is a Frisian. He is aware of the fact that he knows these things, and that they disconfirm
(1) Feike can swim.
He has no evidence of any kind for (1); no perceptual evidence, no evidence from other things he believes—no evidence at all. Never-theless, (1) seems overwhelmingly attractive to $S$; it seems wholly and obviously true, as obvious as modus ponens itself. For $S$ very much admires swimming and swimmers; and, due to a psychological quirk or malfunction ($S$ is himself a very poor swimmer), he has a strong tendency to assume, of anyone he likes and admires, that she is an excellent swimmer. $S$ isn’t aware of this malfunction, however, and and his lack of awareness is in no way due to epistemic malfeasance or lack of epistemic dutifulness. In fact $S$ is extremely concerned with his epistemic duty; he is eager to bring it about that he stands in the right relation to the truth and is trying his level best to do so; indeed, he is nearly fanatic on the subject and devotes what some would consider an inordinate share of his energy to trying to achieve epistemic excellence.

Now what, under these conditions, would be the dutiful thing for $S$ to do? Obviously, he should accept (1). Is he so situated that he can better fulfill his obligation to the truth by withholding than by accepting (1)? Surely not. (1) seems utterly and obviously true to him; and while he knows that he knows some things that disconfirm it, the same holds for all sorts of propositions he knows to be true. (Thus for example, he also knows that Tientje is a Frisian and has himself personally witnessed her winning the Olympic 100 meter freestyle race.) The way for him to try to achieve epistemic excellence in these circumstances, surely, is for him to act on what he believes about how best to achieve this end. But (1) seems obviously true to him; so, naturally enough, he believes that the way to achieve the end in question is to accept (1). It is true that his cognitive faculties are playing him false here, but he has no inkling of this fact, and his lack of this self-knowledge is in no way due to epistemic carelessness or other dereliction of duty. So if he tries to achieve epistemic excellence here, he will certainly accept (1). Indeed, there may be no other proposition such that $S$ can better fulfill his duty to the truth by accepting it than by accepting (1); if so, then on Chisholm’s official account of positive epistemic status, (1) would be certain for $S$. (1), therefore, is in these circumstances overwhelmingly apt for fulfillment of epistemic duty; if positive epistemic status were what Chisholm says it is, (1) would have positive epistemic status in excelsis for $S$. But surely it does not. Even if it is true, $S$ certainly doesn’t know that it is, and the idea that it could have certainty, the maximal degree of positive epistemic status for him, under these conditions, seems wholly fantastic.
Of course, \( S \) has permissive justification for (1); he is violating no epistemic duty in accepting it; he is entirely within his epistemic rights in accepting it. Nevertheless the proposition in question doesn’t have the sort of status for him enough of which constitutes knowledge. I don’t mean merely that he doesn’t know it (even if it turns out to be true); it is rather that the sort of status it has for him is not such that even if it had more or the maximal degree of that sort of status, then he would know it. To have the status for him required by knowledge, something quite different is demanded.

A second example: according to Chisholm, an object \( x \) is appearing to a person \( S \), or appearing in a certain way to \( S \) if (very roughly) \( x \) is appropriately causing \( S \) to be appeared to in that way (FK, pp. 16-17). Now suppose that (due to cerebral malfunction or the machinations of a Cartesian evil demon) I have a strong tendency or impulse to believe.

(2) Nothing is appearing red to me whenever I am appeared to redly. This tendency is even stronger than the tendency normal people display, in the same circumstances, to believe the appropriate denial of (2); it seems to me utterly obvious, under these conditions, that there isn’t anything appearing red to me. I haven’t the faintest inkling of this defect in my nature, and my failure to be aware of it is in no way due to lack of epistemic dutifulness. (Indeed, we may add in this case, as in the last, that doing my epistemic duty is the dominant passion of my life.) Then, surely, the dutiful thing for me to do would be to accept (2); but so doing would have little by way of positive epistemic status for me. Of course I would be permissively justified in accepting (2); indeed, I may have more than permissive justification; in trying as hard as I do to achieve epistemic excellence, I perform works of epistemic supererogation. But no amount of dutifulness or supererogatory effort is sufficient for the kind of positive epistemic status necessary for knowledge; for that an element of quite another kind is required. The problem is that my cognitive faculties are not working properly; I display cognitive malfunction, so that no matter how magnificently I do my epistemic duty, no matter how hard I try. I won’t have much by way of positive epistemic status. I will be within my rights, of course; I will not properly subject to blame or censure; But (2) will have little positive epistemic status.

Clearly enough, we can vary the above sorts of examples. Perhaps you think that what goes with satisfying duty in excelsis is effort, perhaps (in a Kantian vein) you think that genuinely dutiful action demands acting contrary to inclination. Very well, alter the above cases accordingly. Suppose, for example, that Paul (due to lesion, or demon)
nonculpably believes that his nature is deeply misleading. Like the rest of us, he has an inclination, upon being appeared to redly, to believe that there is something red lurking in the neighborhood; unlike the rest of us, he believes that this natural inclination is misleading and that on those occasions there really isn’t anything that is appearing thus to him. He undertakes a strenuous regimen to overcome this inclination; after intense and protracted effort he succeeds: upon being appeared to redly he no longer believes that something red is appearing to him. His devotion to duty costs him dearly. The enormous effort he expends takes its toll upon his health; he is subject to ridicule and disapprobation on the part of his fellows; his wife protests his unusual behavior and finally leaves him for someone less epistemically nonstandard. Nonetheless he persists in doing what he nonculpably takes to be his duty. It is obvious, I take it, that even though Paul is unusually dutiful in accepting, on a given occasion, the belief that nothing is appearing red to him, that belief has little by way of positive epistemic status for him.

What these examples show, I think, is that positive epistemic status is not (or is not merely) a matter of aptness for fulfillment of epistemic duty or obligation; aptness for the fulfillment of such duties is at most one aspect or moment of positive epistemic status. Clearly a proposition can be maximally apt for epistemic duty fulfillment for me, but nonetheless enjoy little by way of positive epistemic status for me.

II. COHERENTISM AND RELIABILISM

A second suggestion as to the nature of positive epistemic status is coherentism—represented at its contemporary best, perhaps, by Keith Lehrer’s Knowledge (1974). I argue (1986; forthcoming) that the various coherentist suggestions as to the nature of positive epistemic status, like Chisholm’s, are clearly mistaken. The heart of the problem is this. According to the coherentist, positive epistemic status is strictly a matter of logical or quasi-logical relationships among my beliefs; but clearly my beliefs could stand in this relationship even if my epistemic faculties were wildly defective in producing them, in which case they would have little by way of positive epistemic status (See Plantinga, 1986, Sec. IV). Sadly enough, I don’t have space here to outline those arguments; you will either have to take my word for their correctness or consult (Plantinga, 1986).

Let us therefore turn our attention to reliabilism, which is presently perhaps the most popular of the three views under consideration. In (forthcoming) I examine three reliabilist accounts of positive epistemic status (those given by Nozick (1981), Dretske
(1981) and Goldman (1979)) arguing that each is unsatisfactory; each is such that a belief could meet the condition it lays down for positive epistemic status and nonetheless have little or none of that commodity. The problem, again, is that my beliefs can meet the conditions they lay down for positive epistemic status even if my epistemic faculties are wildly defective, radically dysfunctional, in producing the beliefs in question, in which case they will have little by way of positive epistemic status. Here I shall concentrate on Goldman's account, referring the reader to (Plantinga, forthcoming) for comments on the other two.

Alvin Goldman gives an account of justification (1979), that is reliabilist in excelsis. "The justificational status of a belief", he says, "is a function of the reliability of the process or processes that cause it, where (as a first approximation) reliability consists in the tendency of a process to produce beliefs that are true rather than false" (p. 10). Here there is no talk of epistemic norms or requirement or permission; this is a naturalistic account of justification. That property, on this account, is simply a matter of the reliability of the cognitive processes producing the belief in question; issues of duty and permission do not arise. After some interesting preliminary skirmishes, he gives his official account in a sort of recursive form:

(a) If S's belief in p results from a reliable cognitive process, and there is no reliable or conditionally reliable process available to S which, had it been used by S in addition to the process actually used, would have resulted in S's not believing p at t, then S's belief in p at t is justified.
(b) If S's belief in p at t results ("immediately") from a belief-dependent process that is (at least) conditionally reliable, 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 (pp. 13, 20).

He then adds an appropriate closure clause.

Suppose we turn to the base clause (a). Here there are problems of several sorts; I shall mention only one. What are these "cognitive processes" of which (a) speaks? Goldman characterizes them as follows:

Let us mean by a 'process' a functional operation or procedure, i.e., something that generates a mapping from certain states—"inputs"—into other states—"outputs." The outputs in the present case are states of believing this or that proposition at a given moment. On this interpretation, a process is a type as opposed to a token. This is fully appropriate, since it is only types that have such statistical properties as a producing truth 80% of the time; and it is precisely such statistical properties that determine the reliability of a process. (p. 11).
It is clear, I think, that the outputs of these processes are beliefs, that is *believings*: such events as Paul’s believing that all men are mortal, for example. Presumably, then, the inputs will also be events—such events, perhaps, as Paul’s mother telling him that all men are mortal.

There are plenty of problems about the ontology of these processes;⁴ even if we temporarily ignore them, the main problem, as I see it, still remains. Note first that any particular token—any relevant sequence of concrete events—will be a token of many different types. Consider a specific visual process in Paul, where the input consists, let’s say, in retinal stimulation and the output consists, for some particular scene s on his television, in his believing that he sees s. The process in question will presumably involve a large number of events; perhaps it will include an event consisting in Paul’s being appeared to in a characteristic way. Now this sequence of events will be a token of many different types—the cognitive process, the visual process, the cognitive process occurring on a Thursday, the visual process occurring in Paul, the visual process occurring in Paul at 2:30 PM on Jan. 1, 1986, and many more. It is these types that are to be evaluated for reliability; but obviously the types may differ wildly among themselves with respect to reliability. Which is the relevant type? Which type is the one such that its reliability determines the justification Paul has for the belief in question? This is the problem of generality noted by Goldman (p. 12) and developed by Richard Feldman (1985).

Now obviously we cannot take the relevant type to be, say, cognitive process, or vision; for the outputs of such processes will have many different degrees of justification. If the reliablity of a given belief—Paul’s belief that he is watching television, for example—is to be determined by the reliability of the relevant type of which it is an output, then all the outputs of that type must be indistinguishable with respect to justification: they must have the same degree of justification. This means that the relevant types must display great specificity. (As Goldman says in (1986), his most recent discussion of epistemic justification, “the critical type is the narrowest type casually operative in producing the belief token in question” (chapter 3). Consider, for example, an occasion on which Paul sees a mountain goat. Here we have a sequence of concrete events, a sequence that takes (perhaps) being appeared to in way W⁵ as input and as output yields the event of Paul’s forming the belief: that’s a mountain goat. Now what is the relevant type, the type whose reliability determines the degree of justification this belief has for Paul? Not, of course, vision, or vision in the mountains, or vision on Mt. Shuksan, but something much more specific: being appeared to in such and such a way under such and such light and atmospheric conditions, perhaps. Even this won’t be
specific enough, however; for people differ with respect to their familiarity with mountain goats, liability to buck fever, visual acuity, and the like. These process types, therefore, are of differing degrees of reliability for different people and hence yield differing degrees of justification for different people; we must add further parameters to the type in question. Indeed, for any belief $B$, type $T$ and specification $T^*$ of $T$ (where, for example, the type night vision is a specification of the type vision) if $p$ is in the output of both $T$ and $T^*$, and $T$ and $T^*$ differ with respect to reliability, then $T$ will not be the type the reliability of which determines the justification of $B$. A type $T$ will be a relevant type for a belief $B$ of Paul's (relevant in that its reliability determines the justification of $B$) only if it is maximally specific with respect to reliability (‘max’ for short); there will be no specification of that type with a different degree of reliability.

Now it wouldn’t be easy, I think, to give an example, for a given belief, of a max type. Nevertheless I think we can see that the degree of justification of a belief issued by a max type and the degree of reliability enjoyed by that type will not nearly always be related in the way required by Goldman’s theory. Suppose, for example, $S$ suffers from a serious cognitive dysfunction induced by a rare type of brain tumor. Associated with this tumor are a number of specific cognitive processes, most of which cause $S$ to believe absurdly false propositions. One of these processes, however, causes him to hold the belief that he has a tumor; the output of this process is the belief that he has a tumor. $S$ hasn’t the slightest shred of evidence for this belief: no symptoms, nothing at all. ($S$ thinks of his other unusual beliefs as resulting from no more than an engagingly original turn of mind.) The process in question, furthermore, is extremely reliable; it occurs only in the sort of pathology $S$ displays, and of course in those cases the belief in question is always true. $S$’s belief that he has a tumor, therefore, meets Goldman’s conditions for having a high degree of positive epistemic status; it is the instantiation of the last member of a highly reliable cognitive process. Nevertheless it would be absurd to claim that the belief in question has a high degree of positive epistemic status for him. It has no more positive epistemic status for him than do the other beliefs caused by the tumor, despite its happening to be true. He has no evidence of any kind for the belief; his holding this belief is, from a cognitive point of view, no more that a lucky (or unlucky) accident. Indeed, we can add, if we wish, that $S$ has powerful evidence for the conclusion that he is not thus suffering; he has just been examined by a trio of world famous experts from New York, who mistakenly assure him that his brain is entirely normal. In this case, then, $S$’s belief that he has a brain tumor is not only such
that he has no evidence for it; he has first rate evidence against it. Surely it has very little positive epistemic status for him, despite the fact that it satisfies the conditions Goldman lays down for epistemic justification.

Examples of this sort can obviously be multiplied; but I don’t here have the space to multiply them. The general recipe is to find appropriately pathological process types of the right degree of generality which are in fact reliable, but (due to the pathology involved) do not confer positive epistemic status on the beliefs in their outputs. (Such types, we might say, are from a cognitive point of view accidentally reliable, much as an aneroid barometer might be accidentally reliable if its works had been smashed in an industrial accident that also, somehow, caused its needle to be appropriately attached to the works of another, undamaged, barometer). Reliability, then, is not sufficient for positive epistemic status. Something different or further is obviously involved—something to which it is now time to turn.

III. ON WORKING PROPERLY

We have seen that various proposed analyses of justification come to grief when we reflect on the variety of ways in which our noetic faculties can fail to function properly. For each of the main contemporary accounts of positive epistemic status, there are a wide range of counterexamples—counterexamples involving cognitive malfunction, failure of the relevant cognitive faculties to function properly. I therefore suggest that a necessary condition of positive epistemic status is that one’s cognitive equipment, one’s belief forming and belief sustaining apparatus, be free of such cognitive malfunction. A belief has positive epistemic status for you only if your cognitive apparatus is functioning properly, working the way it ought to work, in producing that belief in you.

I shall have more to say about the notion of proper functioning below. For the moment, let us provisionally entertain the idea that one necessary condition of a belief’s having positive epistemic status for me is that the relevant portion of my noetic equipment involved in its formation and sustenance be functioning properly. What else is involved? Suppose we also concede that Chisholm is right in emphasizing permissive justification, doing one’s epistemic best, as an element of positive epistemic status; I’m not sure that in fact permissive justification is an element of positive epistemic status, but let’s suppose for the moment that indeed it is. Still, these two cannot be the whole story. Suppose you were suddenly and without your knowledge transported to an environment wholly different from
earth; you awake on a planet near Alpha Centauri. There conditions are quite different; elephants (or their counterparts) are invisible to human beings but emit a sort of radiation that causes human beings to form the belief that a trumpet is sounding. An Alpha Centaurian elephant wanders by; you are subjected to the radiation, and form the belief that a trumpet is sounding nearby. There is nothing wrong with your cognitive faculties; but this belief has little by way of positive epistemic status for you. Nor is the problem merely that the belief is false; we can add that a trumpet really is sounding nearby, (but isn’t audible to you).

The problem is that your cognitive faculties and the environment in which you find yourself are not properly attuned. The problem is not with your cognitive faculties: they are in good working order; the problem is with the environment. (In the same way, your automobile might be in perfect working order, despite the fact that it will not run well on top of Mt Everest.) So we must add another component to positive epistemic status: your faculties must be in good working order, you must be epistemically dutiful, and your environment must be appropriate for your particular repertoire of epistemic powers.

Suppose we use the term ‘warrant’ to name the element in positive epistemic status distinct from permissive justification. It is tempting to suggest that warrant just is proper functioning, so that one has warrant for a given belief to the degree that one’s faculties are functioning properly (in producing and sustaining that belief) in an environment appropriate for one’s cognitive equipment. But this too cannot be the whole story. Couldn’t it happen that my cognitive faculties are working properly (in an appropriate environment) in producing and sustaining a certain belief in me, while nonetheless that belief has little by way positive epistemic status for me? Say that a pair of beliefs are (for want of a better term) *productively equivalent* if they are produced by faculties functioning properly to the same degree and in environments of equal appropriateness. Then couldn’t it be that a pair of my beliefs should be productively equivalent while nonetheless one of them has more by way of positive epistemic status—even a great deal more—than the other? Obviously that not only could be but is the case. I have more by way of positive epistemic status for *modus ponens* (more exactly, its corresponding conditional) than for the memory belief, now rather dim and indistinct, that forty years ago I owned a second hand 16 gauge shotgun and a red bicycle with balloon tires. Although both warrant and the property of being properly produced come in degrees, there seems to be no discernible functional relationship between them. But then we can’t see warrant as simply
a matter of a belief's being produced by faculties working properly in an appropriate environment. We still have no answer to the question what is warrant?; that particular frog is still grinning residually up from the bottom of the mug.

Fortunately there is an easy response. Not only does the first belief, the belief in the corresponding conditional of *modus ponens*, have more by way of positive epistemic status for me than the second, it is also one I accept much more firmly. It seems much more obviously true to me; I have a much stronger tendency or inclination or impulse to accept it than to accept the other. When our cognitive establishment is working properly, the strength of the impulse towards believing a given proposition will be proportional to the degree it has of positive epistemic status. So when my faculties are functioning properly, a belief has positive epistemic status for me to the degree that I find myself inclined to accept it.

But aren't such ideas as that of *working properly* and related notions such as *cognitive dysfunction* deeply problematic? What is it for a natural organism—a tree, for example, or a horse—to be in good working order, to be functioning properly? Isn't 'working properly' relative to our aims and interests? A cow is functioning properly when she gives the appropriate kind and amount of milk; a garden patch is as it ought to be when it displays a luxuriant preponderance of the sorts of vegetation we propose to promote. But here it seems patent that what constitutes proper functioning depends upon our aims and interests. So far as nature herself goes, isn't a fish decomposing in a hill of corn functioning just as properly, just as excellently, as one happily swimming about chasing minnows? But then what could be meant by speaking of 'proper functioning' with respect to our cognitive faculties? A chunk of reality—an organism, a part of an organism, an ecosystem, a garden patch—'functions properly' only with respect to a sort of grid we impose on nature—a grid that incorporates our aims and desires.

Now from a *theistic* point of view—a point of view that I accept—the idea of our cognitive equipment's functioning properly is no more problematic than, say, that of a Boeing 747's working properly. Something we have constructed—a heating system, a rope, a linear accelerator—is functioning properly when it is functioning in the way in which it was designed to function. But according to theism human beings, like ropes and linear accelerators, have been designed; they have been designed and created by God. According to the theistic way of looking at the matter, we human beings have been created by God, and created in his image; in certain important respects we resemble him. Now God is an actor, a creator, one who chooses certain ends and takes action to accomplish them. God
is therefore a *practical* being. But he is also an *intellectual* or *intellect-\ing* being. He holds beliefs, has knowledge, apprehends concepts.

In setting out to create human beings in his image, then, God set out to create us in such a way that we can reflect his capacity to grasp concepts and hold beliefs. Furthermore, he proposed to create us in such a way that we can reflect his ability to hold *true* beliefs. He therefore created us with cognitive faculties designed to enable us to achieve true beliefs with respect to a wide variety of propositions—propositions about our immediate environment, about our own interior life, about the thoughts and experiences of other persons, about our universe at large, about right and wrong, about the whole realm of *abstracta* (properties, propositions, numbers, and the like) about modality, and about himself. These faculties work in such a way that under the appropriate circumstances we form the appropriate belief. More exactly, under those circumstances the appropriate belief is *formed in* us; in the typical case we do not *decide* to hold or form the belief in question, but simply find ourselves with it.

*Experience*, obviously enough, plays a crucial role in belief formation—both sensuous experience, such as being *appeared to greenly*, and the sort of experience involved in feeling impelled or disposed to accept a give belief. *A priori* beliefs, for example, are not, as this denomination mistakenly suggests, formed prior to or in the absence of experience. Thinking of (the corresponding conditional of) *modus ponens* feels different from thinking of, say, *affirming the consequent*; and this difference in experience is crucially connected with our accepting the one and rejecting the other. Of course experience plays a different role here from the role it plays in the formation of perceptual beliefs; it plays a still different role in the formation of memory beliefs, moral beliefs, beliefs about the mental lives other persons, beliefs we form on the basis of inductive evidence, and the like. What we need here is a full and appropriately subtle and sensitive description of the role of experience in the formation of these various types of beliefs; that project will have to await another occasion (as one says when one doesn’t know how to accomplish the project).

On the (or a) natural theistic view of the cognitive enterprise, then, God has created us with an establishment of faculties enabling us to achieve true beliefs on a wide variety of topics. And of course it is easy enough to say what it is for our faculties to be working properly; they are working properly when they are working in the way they were intended to work by the being who designed them. This, I take it, is the basic root of the idea of proper functioning: an object is functioning properly if and only if it is functioning in the way it was designed to function. But then we must
append a qualification to the idea that positive epistemic status is a matter of proper functioning; for clearly enough S’s faculties could be working properly even if S’s beliefs have no positive epistemic status for him. S’s faculties could have been designed by a mischievous Cartesian demon who delights in deception and finds it diverting to contemplate creatures who are both systemically deceived and proud of their status as the epistemic lords of the universe; or perhaps S’s epistemic faculties have been redesigned by an Alpha Centaurian scientist who cares nothing for their relation to truth. So even if we say that S’s faculties are working properly, it doesn’t follow that S has positive epistemic status for his beliefs. What we must add is what the theistic view does add: that our faculties have been designed by a being who wishes to enable us to achieve true belief over a wide and varied range of topics and areas.

But can a nontheist also make use of this notion? The notion of proper functioning is, perhaps, more problematic from a nontheistic perspective—more problematic; but by no means hopeless. Can’t anyone, whether theist or not, see a horse, let’s say, as suffering from a disease, as displaying a pathological condition? Can’t anyone see that an injured bird has a wing that isn’t working properly? In any event, the nontheist can accept something like this notion. Even if he doesn’t think we human beings have been designed and created by a powerful and highly competent being who proposed to endow us with the ability to achieve true beliefs, he may nonetheless think of this idea as a convenient and useful fiction. He may join Hans Vaihinger in Die Philosophie des als ob, and explain proper functioning in terms of this fiction, as he sees it; he may say that our cognitive faculties are working properly when they are working in the way they would work if the theistic story were true. He may therefore treat this story the way corresponding stories are treated by some who accept ideal observer theories in ethics, or social contract theories in political philosophy, or Piercian theories of truth, or possible worlds theories in metaphysics. I can sensibly hold that an action is right if and only if it would be approved by an ideal observer, without adding that in fact there exists an ideal observer; a person can see possible worlds theory as a source of insight and understanding, even if he thinks it is not to be taken seriously as sober metaphysics. In the same sort of way a nontheist can accept the present account of positive epistemic status.

By way of conclusion then: the main contemporary accounts of positive epistemic status are all deeply flawed. Each founders on the same rock: each neglects to take into account the ways in which our cognitive faculties can fail to function properly, and each
overlooks the crucial connection between positive epistemic status, on the one hand, and our cognitive faculties functioning properly on the other. Indeed, warrant, as I see it, just is the proper functioning of our epistemic equipment. In a nutshell, a belief \( B \) has positive epistemic status for \( S \) if and only if that belief is produced in \( S \) by his epistemic faculties working properly in an appropriate environment; and \( B \) has more positive epistemic status than \( B^* \) for \( S \) iff \( B \) has positive epistemic status for \( S \) and either \( B^* \) does not or else \( S \) is more strongly inclined to believe \( B \) than \( B^* \). (Seen from this perspective, Chisholm’s principles are best thought of as providing partial descriptions of the way in which our cognitive faculties function when they are working properly.) This picture of warrant and positive epistemic status, obviously enough, needs articulation, development and qualification; nevertheless, I think, it is a better picture than any of its rivals.

**References**


Chisholm, R. *Foundations of Knowing* (1982), (Minneapolis: University of Minnesota Press, 1982).


**Notes**

*This paper is an abridged and truncated version of (Plantinga, forthcoming). In the present version I have omitted whole sections, ruthlessly abbreviated others, and omitted hosts of important qualifications.

1 I give such an explanation in (forthcoming).

2 I ignore, here, the complication that in *Foundations of Knowing* Chisholm recasts his epistemological theory in terms of direct attribution of properties, thus abandoning the earlier formulation in terms of believing or accepting propositions. Everything I say about Chisholm’s views can be restated so as to accommodate this shift, though in some cases at the cost of considerable complication.

3 Much of Chisholm’s epistemological work is given over to the project of formulating and defending epistemic principles. I do not propose to argue that the principles he suggests are mistaken; I mean to argue only that his suggestion as to what positive epistemic status *is*, is mistaken.

4 See (Plantinga, forthcoming).
Alternatively, perhaps inputs would be such events as Paul's undergoing retinal stimulation of kind K for some kind K. (This wouldn't affect the argument that follows.)

This addition does not run afoul of the second clause of (a); for if S were to adopt the "process" of consulting his available evidence or consulting medical authorities (the only other process available to him) he would become very much interested in the whole question of tumors, study the matter in considerable detail, and finally wind up concluding that he did indeed have a tumor.

See (Plantinga, forthcoming).

Goldman's new book Epistemology and Cognition (1986) introduces a fascinating new wrinkle here. I don't have the space to set out his new theory; but the bare bones are as follows. The later Goldman begins by noting that justification is essentially a normative concept, one having to do with rules standards, permissions and obligations. The basic idea is that one of S's beliefs is justified, at a time t if and only if (1) it is permitted by a rule which is a member of a "right" system of such rules and (2) this permission is not undermined by S's cognitive state at t; and a system of rules is right, essentially, if and only if the processes permitted by the rules are reliable, have an appropriately high truth ratio. There are many fascinating questions and complications here, questions and complications I do not have the space to enter; let me say just that I believe this theory to be subject to precisely the problem that afflicts Goldman's earlier theory. There are many systems of justification rules that meet the above condition for being right, but nonetheless sanction processes whose output beliefs have little or no positive epistemic status. (See Plantinga, forthcoming).

As explained in (Plantinga, forthcoming).