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# JUSTIFICATION AND THEISM

Alvin Plantinga

The question is: how should a theist think of justification or positive epistemic status? The answer I suggest is: a belief **B** has positive epistemic status for **S** only if **S**'s faculties are functioning properly (i.e., functioning in the way God intended them to) in producing **B**, and only if **S**'s cognitive environment is sufficiently similar to the one for which her faculties are designed; and under those conditions the more firmly **S** is inclined to accept **B**, the more positive epistemic status it has for her. I conclude by making some qualifications and applications and examining some objections.

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; while there are many discussions of the conditions under which a person is justified in believing a proposition, there are few in which the principle topic is the *nature* of justification. 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*.<sup>1</sup> The differences among these views are enormous; this is by no means a case of variations on the same theme. Indeed, disagreement is so deep and radical it is sometimes hard to be sure the various disputants are discussing approximately the same issue. Now what should a Christian, or more broadly, a theist, make of this situation? How should such a person react to this baffling welter of conflict, this babble or Babel of confusion? In what follows I shall try to get a clearer look at epistemic justification and allied conceptions. In particular, I propose to examine this topic from an explicitly Christian, or more broadly, theistic point of view: how shall we think of epistemic justification from a theistic perspective? What can Christianity or theism contribute to our understanding of epistemic justification?

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<sup>2</sup> suggests,



terms of epistemic appraisal; to say that a proposition is *justified* for a person is to say that his believing or accepting it (here I shall not distinguish these two) has *positive epistemic status* for him. What we appraise here are a person's *beliefs*: more exactly, his *believings*. Someone's belief that there is such a person as God may be thus appraised, as well as her belief that human life evolved from unicellular life by way of the mechanisms suggested by contemporary evolutionary theory, and the less spectacular beliefs of everyday life. 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. The evidentialist objector to theistic belief, for example, argues that those who believe in God without evidence are unjustified in so doing, and are accordingly somehow unreasonable—guilty of an intellectual or cognitive impropriety, perhaps, or, alternatively and less censoriously, victims of some sort of intellectual dysfunction. 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, naturally enough, we find the concept of *knowledge*. It is widely agreed that true belief, while necessary for knowledge, is not sufficient for it. What more is required? It is widely agreed, again, that whatever exactly this further element may be, it is either epistemic justification or something intimately connected with it. Now it would be convenient just to *baptize* that quantity as 'justification', thus taking that term as a proper name of the element, whatever exactly it is, enough of which (Gettier problems, perhaps, aside) distinguishes knowledge from mere true belief. The term 'justification', however, has a deontological ring; it is redolent of duty and permission, obligation and rights. Furthermore, according to the long and distinguished tradition of Cartesian internalism (represented at its contemporary best by Roderick Chisholm's work<sup>3</sup>), aptness for epistemic duty fulfillment is indeed what distinguishes true belief from knowledge; using this term as a mere proper name of what distinguishes true belief from knowledge, therefore, can be confusing. Accordingly, I shall borrow Chisholm's term 'positive epistemic status' as my official name of the quantity in question—the quantity enough of which distinguishes mere true belief from knowledge. (Of course we cannot initially assume that positive epistemic status is a *single* or *simple* property; perhaps it is an amalgam of several others.) Initially, then, and to a first approximation, we can identify justification or positive epistemic status as a normative (possibly complex) property that comes in degrees, and which is such that enough of it (ignoring Gettier problems for the moment) is what distinguishes true belief from knowledge.

I. *Positive Epistemic Status and Theism*

Now how shall we think of positive epistemic status, or, indeed, the whole human cognitive enterprise, from a Christian or theistic point of view? What bearing does theism have on the human cognitive enterprise? What features of theism bear on this topic? The central point, I think, is this: according to the theistic way of looking at the matter, we human beings, like ropes and linear accelerators, have been designed; we have been designed and created by God. We have been created by God; furthermore, according to Christian and Jewish versions of theism, we have been created by him *in his own image*; in certain crucial respects we resemble him. Now God is an actor, an agent, 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 *intellecting* being. He has knowledge; indeed, he has the maximal degree of knowledge. He holds beliefs (even if his way of holding a belief is different from ours); and because he is omniscient, he believes every truth and holds only true beliefs. He therefore has the sort of grasp of concepts, properties and propositions necessary for holding beliefs; and since he believes every true proposition, he has a grasp of every property and proposition.<sup>4</sup>

In setting out to create human beings in his image, then, God set out to create them in such a way that they could reflect something of his capacity to grasp concepts and hold beliefs. Furthermore, as the whole of the Christian tradition suggests, his aim was to create them in such a way that they can reflect something of his capacity for holding *true* beliefs, for attaining *knowledge*. This has been the nearly unanimous consensus of the Christian tradition; but it is worth noting that it is not inevitable. God's aim in creating us with the complicated, highly articulated establishment of faculties we do in fact display *could* have been something quite different; in creating us with these faculties he could have been aiming us, not at truth, but at something of some other sort—survival, for example, or a capacity to appreciate art, poetry, beauty in nature,<sup>5</sup> or an ability to stand in certain relationships with each other and with him. But the great bulk of the tradition has seen our imaging God in terms (among other things) of knowledge: knowledge of ourselves, of God himself, and of the world in which he has placed us; and here I shall take for granted this traditional understanding of the *image dei*.

God has 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 lives, about the thoughts and experiences of other persons, about our universe at large, about right and wrong, about the whole realm of abstracta—numbers, properties, propositions, states of affairs, possible worlds and their like, about modality—what is necessary and possible—and about himself. These faculties work in such a way that under

the appropriate circumstances we form the appropriate belief. More exactly, 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. Upon considering an instance of *modus ponens*, I find myself believing its corresponding conditional; upon being appeared to in the familiar way, I find myself holding the belief that there is a large tree before me; upon being asked what I had for breakfast, I reflect for a moment and then find myself with the belief that what I had was eggs on toast. In these and other cases I do not *decide* what to believe; I don't total up the evidence (I'm being appeared to redly; on most occasions when thus appeared to I am in the presence of something red; so most probably in this case I am) and make a decision as to what seems best supported; I simply find myself believing. Of course in *some* cases I may go through such a procedure. For example, I may try to assess the alleged evidence in favor of the theory that human life evolved by means of the mechanisms of random genetic mutation and natural selection from unicellular life (which itself arose by substantially similar random mechanical processes from nonliving material); I may try to determine whether the evidence is in fact compelling or, more modestly, such as to make the theory plausible. Then I may go through a procedure of that sort. Even in this sort of case I still don't really *decide* anything: I simply call the relevant evidence to mind, try in some way to weight it up, and find myself with the appropriate belief. But in more typical and less theoretical cases of belief formation nothing like this is involved.

*Experience*, obviously enough, plays a crucial role in belief formation. Here it is important to see, I think, that two rather different sorts of experience are involved. In a typical perceptual case there is sensuous experience: I look out at my back yard and am appeared to greenly, perhaps. But in many cases of belief formation, there is present another sort of experiential component as well. Consider a memory belief, for example. Here there may be a sort of sensuous imagery present—I may be appeared to in a certain indistinct fleeting sort of way in trying to recall what I had for breakfast, for example. But this sort of sensuous imagery is in a way (as Wittgenstein never tired of telling us) inessential, variable from person to person, and perhaps in the case of some persons altogether absent. What seems less variable is a different kind of experience not easy to characterize: it is a matter, not so much of sensuous imagery, as of feeling impelled, or inclined, or moved towards a certain belief—in the case in question, the belief that what I had for breakfast was eggs on toast. (Perhaps it could be better put by saying that the belief in question has a sort of experienced attractiveness about it, a sort of drawing power.) Consider an *a priori* belief: **if all men are mortal and Socrates is a man, then Socrates is mortal**. Such a belief is not, as the denomination *a priori* mistakenly suggests, formed *prior to* or in the absence of experience; it is rather formed *in response to experience*. Thinking

of the corresponding conditional of **modus ponens** *feels* different from thinking of, say, the corresponding conditional of **affirming the consequent**; thinking of  $2+1=3$  feels different from thinking of  $2+1=4$ ; and this difference in experience is crucially connected with our accepting the one and rejecting the other. Again, when I entertain or think of an example of **modus ponens**, there is both sensuous imagery—Descartes' clarity and distinctness, the luminous brightness of which Locke spoke; but there is also the feeling of being impelled to believe or accept the proposition; there is a sort of inevitability about it. (As I said, this isn't easy to describe.) 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 moral beliefs, beliefs about our own mental lives, beliefs about the mental lives of other persons, beliefs we form on the basis of inductive evidence, and so on. 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 really has no idea how to accomplish the project.

God has therefore created us with an astonishingly complex and subtle establishment of cognitive faculties. These faculties produce beliefs on an enormously wide variety of topics—our everyday external environment, the thoughts of others, our own internal life (someone's internal musings and soliloquies can occupy an entire novel), the past, mathematics, science, right and wrong, our relationships to God, what is necessary and possible, and a host of other topics. They work with great subtlety to produce beliefs of many different degrees of strength ranging from the merest inclination to believe to absolute dead certainty. Our beliefs and the strength with which we hold them, furthermore, are delicately responsive to changes in experience—to what people tell us, to perceptual experience, to what we read, to further reflection, and so on.

Now: how shall we think of positive epistemic status from this point of view? Here is a natural first approximation: a belief has positive epistemic status for a person only if his faculties are **working properly**, working the way they ought to work, working the way they were designed to work (working the way God designed them to work), in producing and sustaining the belief in question. 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 cognitive malfunction. It must be functioning in the way it was designed to function by the being who designed and created us. Initially, then, let us say that a belief has positive epistemic status, for me, to the degree that my faculties are functioning properly in producing and sustaining that belief; and my faculties are working properly if they are working in the way they were designed to work by God.

The first thing to see here is that this condition—that of one's cognitive

equipment functioning properly—is not the same thing as one’s cognitive equipment functioning *normally*, or in normal conditions—not, at any rate, if we take the term ‘normally’ in a broadly statistical sense. If I give way to wishful thinking, forming the belief that I will soon be awarded a Nobel Prize for literature, then my cognitive faculties are not working properly—even though wishful thinking may be widespread among human beings. Your belief’s being produced by your faculties working normally or in normal conditions—i.e., the sorts of conditions that obtain for the most part—must be distinguished from their working *properly*. It may be (and in fact is) the case that it is not at all abnormal for a person to form a belief out of pride, jealousy, lust, contrariness, desire for fame, wishful thinking, or self-aggrandizement; nevertheless when I form a belief in this way my cognitive equipment is not functioning properly. It is not functioning the way it ought to.

I shall have more to say about the notion of proper functioning below. For the moment, let us provisionally entertain the idea that the 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. It is easy to see, however, that this cannot be the whole story. Suppose you are 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, we may suppose, are invisible to human beings, but emit a sort of radiation unknown on earth, a sort of radiation that causes human beings to form the belief that a trumpet is sounding nearby. 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; even if we can add that a trumpet really *is* sounding nearby (in a soundproof telephone booth, perhaps, so that it isn’t audible to you), your belief will have little by way of positive epistemic status for you. To vary the example, imagine that the radiation emitted causes human beings to form the belief, not that a trumpet is sounding, but that there is a large gray object in the neighborhood. Again, an elephant wanders by: while seeing nothing of any particular interest, you suddenly find yourself with the belief that there is a large gray object nearby. A bit perplexed at this discovery, you examine your surroundings more closely: you still see no large gray object. Your faculties are displaying no malfunction and you are not being epistemically careless or slovenly; nevertheless you don’t know that there is a large gray object nearby. That belief has little by way of positive epistemic status for you.

The reason 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 approximately the same way, your automobile might be in perfect working order, despite the fact that it will not run well at the top of Pike's Peak, or under water, or on the moon. We must therefore add another component to positive epistemic status: your faculties must be in good working order, and the environment must be appropriate for your particular repertoire of epistemic powers. (Perhaps there are creatures native to the planet in question who are much like human beings, but whose cognitive powers differ from ours in such a way that Alpha Centaurian elephants are not invisible to them.)

It is tempting to suggest that positive epistemic status *just is* proper functioning (in an appropriate environment), 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: the better one's faculties are functioning, the more positive epistemic status. But it is easy to see that this cannot be correct. 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 very little by way of 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 enough, that could be; as a matter of fact it is plausible to think that *is* the case. *Modus ponens* has more by way of positive epistemic status for me than does 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; but both, I take it, are produced by cognitive faculties functioning properly in a congenial environment. Although both epistemic justification and **being properly produced** come in degrees, there seems to be no discernible functional relationship between them: but then we can't see positive epistemic status as simply a matter of a belief's being produced by faculties working properly in an appropriate environment. We still have no real answer to the question **what is positive epistemic status?**; 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; I have a much stronger inclination or impulse to accept that proposition than to accept the other. When my 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—



or if the relationship isn't one of straightforward proportionality, the appropriate functional relationship will hold between positive epistemic status and this impulse. So when my faculties are functioning properly, a belief has positive epistemic status to the degree that I find myself inclined to accept it; and this (again, if my faculties are functioning properly and I do not interfere or intervene) will be the degree to which I *do* accept it.

As I see it then, positive epistemic status accrues to a belief **B** for a person **S** only if **S**'s cognitive environment is appropriate for his cognitive faculties and only if these faculties are functioning properly in producing this belief in him; and under these conditions the degree of positive epistemic status enjoyed by **B** is proportional to the strength of his inclination to accept **B**. To state the same claim a bit differently: 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 (1) **B** has positive epistemic status for **S** and (2) either **B\*** does not or else **S** is more strongly inclined to believe **B** than **B\***.

## II. *Eight Objections, Qualifications, or Applications*

So far, of course, what I have said is merely programmatic, just a picture. Much more needs to be said by way of qualification, development, articulation. Let me therefore respond to some objections, make some qualifications and additions, and mention some topics for further study.

(1) 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.

Reply: from a *theistic* point of view, of course, there is no problem here. The idea of my faculties 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, linear accelerators and ocean liners, have been designed; they have been designed and created by God. Our faculties are working properly, then, when they are working in the way they were designed to work by the being who designed and created us and them. Of course there may be considerable room for disagreement and considerable difficulty in determining just how our faculties have in fact been designed to function, and consequent disagreement as to whether they are functioning properly in a given situation. There is disease, disorder, dysfunction, malfunction of the mind as well as of the body. This can range from the extreme case of Descartes' lunatics (who thought their heads were made of glass or that they themselves were gourds) to cases where it isn't clear whether or not cognitive dysfunction is present at all. I stubbornly cling to my theory, long after wiser heads have given it up as a bad job: is this a matter of cognitive dysfunction brought about by excessive pride or desire for recognition on my part? Or is it a perfectly natural and proper display of the sort of cognitive inertia built into our cognitive faculties (in order, perhaps, that we may not be blown about by every wind of doctrine)? Or a display of some other part of our cognitive design whose operation guarantees that new and unfamiliar ideas will persist long enough to get a real run for their money? Or what? So there may be great difficulty in discerning, in a particular instance, whether my faculties are or are not functioning properly; but from a theistic point of view there is no trouble in principle with the very *idea* of proper function.

But can a nontheist also make use of this notion of working properly? Is the idea of proper functioning tightly tied to the idea of design and construction in such a way that one can use it in the way I suggest only if one is prepared to agree that human beings have been designed? This is a topic I shall have to leave for another occasion;<sup>6</sup> here let me say just this much. This notion of proper functioning is, I think, more problematic from a nontheistic perspective—more problematic, but by no means hopeless. Can't anyone, theist or not, see that a horse, let's say, suffering from a disease, is displaying a pathological condition? Can't anyone see that an injured bird has a wing that isn't working properly? The notions of proper function and allied notions (sickness, dysfunction, disorder, malfunction and the like) are ones we all or nearly all have and use. If in fact this notion is ultimately inexplicable or unacceptable from a nontheistic point of view, then there lurks in the neighborhood a powerful theistic argument—one that will be attractive to all those whose inclination to accept and employ the notion of proper function is stronger than their inclinations to reject theism.

(2) Roderick Chisholm<sup>7</sup> sees fulfillment of epistemic duty as crucial to positive epistemic status; in fact he analyzes or explains positive epistemic status in terms of aptness for fulfillment of epistemic duty. Must we go with him, at least far enough to hold that a belief has positive epistemic status for me only if I am

appropriately discharging my epistemic duty in forming and holding that belief in the way I do form and hold it? This is a difficult question. No doubt there *are* epistemic duties, duties to the truth, duties we have as cognitive beings; but the question is whether a necessary condition of my knowing a proposition is my violating or flouting no such duties in forming the belief in question. I am inclined to doubt that there is an element of this kind in positive epistemic status. It seems that that belief may constitute knowledge even if I am flouting an intellectual duty in the process of forming and holding it. Suppose I am thoroughly jaundiced and relish thinking the worst about you. I know that I suffer from this aberration, and ought to combat it, but do nothing whatever to correct it, taking a malicious pleasure in it. I barely overhear someone make a derogatory comment about you; I can barely make out his words, and, were it not for my ill will, I would not have heard them correctly. (Others thought he said your thought was deep and rigorous; because of my ill will I correctly heard him as saying that your thought is weak and frivolous.) In this case perhaps I am not doing my cognitive duty in forming the belief in question; I am flouting my duty to try to rid myself of my inclination to form malicious beliefs about you, and it is only because I am not doing my duty that I do form the belief in question. Yet surely it seems to have positive epistemic status for me.

Consider another kind of example. Suppose I am convinced by a distinguished epistemologist that (like everyone else) I have a duty to do my best to try to bring it about that for every proposition I consider, I believe that proposition if and only if it is true. Suppose he also convinces me that on most of the occasions when we form ordinary perceptual beliefs, these beliefs are false. I therefore undergo a strenuous, difficult regimen enabling me, at considerable cost in terms of effort and energy, to inhibit my ordinary belief-forming impulses so that I am able to withhold most ordinary perceptual beliefs. Now suppose I hear a siren: I take a quick look and am appeared to in the familiar way in which one is appeared to upon perceiving a large red fire truck. The thought that I must withhold the natural belief here flashes through my mind. I have been finding the regimen burdensome, however, and say to myself: "This is entirely too much trouble; I am sick and tired of doing my epistemic duty." I let nature take its course, forming the belief that what I see is a large red fire truck. Then (assuming that my beliefs do in fact induce in me a duty to try to inhibit the natural belief) I am forming a belief in a way that is contrary to duty; but don't I nonetheless know that there is a red fire truck there? I think so. I am therefore inclined to think that I could know a proposition even if I came to believe it in a way that is contrary to my epistemic duty. The matter is delicate and unclear, however, and complicated by its involvement with difficult questions about the degree to which my beliefs are under my voluntary control. I am inclined to think that fulfillment of epistemic duty, while of course an estimable condition, is neither

necessary nor sufficient for positive epistemic status; but the relationship between positive epistemic status and epistemic duty fulfillment remains obscure to me.

(3) If a belief is to have positive epistemic status for me, then my faculties must be functioning properly in producing the *degree* of belief with which I hold **A**, as well as the belief that **A** itself. I am driving down a freeway in Washington D.C.; as I roar by, I catch a quick glimpse of what seems to be a camel in the median strip; if my faculties are functioning properly, I may believe that I saw a camel, but I won't believe it very firmly—not nearly as firmly, for example, as that I am driving a car. If, due to cognitive malfunction (I am struck by a sudden burst of radiation from a Pentagon experiment gone awry) I do believe the former as firmly as the latter, it will have little by way of positive epistemic status for me.<sup>8</sup>

(4) When my epistemic faculties are functioning properly, I will often form one belief *on the evidential basis of* another. The notion of proper function does not apply, of course, only to basic beliefs, that is, beliefs not formed on the evidential basis of other beliefs; my faculties are also such that under the right conditions I will believe one proposition on the basis of some other beliefs I already hold. I may know that either George or Sam is in the office; you inform me that Sam is not there; I then believe that George is in the office on the basis of these other two beliefs. And of course if my faculties are functioning properly, I won't believe a proposition on the evidential basis of just *any* proposition. I won't, for example, believe a proposition on the evidential basis of itself (and perhaps this is not even possible). I won't believe that Homer wrote the Illiad on the evidential basis of my belief that the population of China exceeds that of Japan. Nor will I believe that Feike can swim on the basis of the proposition that 99 out of 100 Frisians cannot swim and Feike is a Frisian. Proper functioning here involves believing a proposition on the basis of *the right kind* of proposition.

(5) A very important notion here is the idea of *specifications*, or *design plan*. We take it that when human beings (and other creatures) function properly, they function *in a particular way*. That is, they not only function in such a way as to fulfill their purpose (in the way in which it is the purpose of the heart to pump blood), but they function to fulfill that purpose in just one of an indefinitely large number of possible ways. Our cognitive faculties have been designed, no doubt, with reliability in mind; they have been designed in such a way as to produce beliefs that are for the most part true. But they are not designed to produce true beliefs in just any old way. There is a proper way for them to work; we can suppose there is something like a set of plans for us and our faculties. A house is designed to produce shelter—but not in just any old way. There will be plans specifying the length and pitch of the rafters, what kind of shingles are to be applied, the kind and quantity of insulation to be used, and the like. Something similar holds in the case of us and our faculties; we have been designed

in accordance with a specific set of plans. Better (since this analogy is insufficiently dynamic) we have been designed in accordance with a set of specifications, in the way in which there are specifications for, for example, the 1983 GMC van. According to these specifications (here I am just guessing), after a cold start the engine runs at 1500 RPM until the engine temperature reaches 140 degrees F.; it then throttles back to 750 RPM. In the same sort of way, our cognitive faculties are designed to function in a certain specific way—a way that may include development and change over time. It is for this reason that it is possible for a belief to be produced by a belief producing process that is *accidentally* reliable. This notion of specifications or design plan is also the source of counterexamples to the reliabilist claim that a belief has positive epistemic status if it is produced by a reliable belief producing mechanism.<sup>9</sup>

(6) We do have the idea of our cognitive faculties working properly in an appropriate environment and we also have the idea of positive epistemic status as what accrues to a belief for someone whose epistemic faculties are thus functioning properly. Still, there are cases in which our faculties are functioning perfectly properly, but where their working in that way does not seem to lead to truth—indeed, it may lead away from it. Perhaps you remember a painful experience as less painful than it was. (Some say, it is thus with childbirth.) Or perhaps you continue to believe in your friends honesty after evidence and objective judgment would have dictated a reluctant change of mind. Perhaps your belief that you will recover from a dread disease is stronger than the statistics justify. In all of these cases, your faculties may be functioning just as they ought to, but nonetheless their functioning in that way does not obviously seem to lead to truth.

The answer here is simplicity itself: what confers positive epistemic status is one's cognitive faculties working properly or working as designed to work *insofar as that segment of design is aimed at producing true beliefs*. Not all aspects of the design of our cognitive faculties need be aimed at the production of truth; some might be such as to conduce to survival, or relief from suffering, or the possibility of loyalty, and the like. But someone whose holding a certain belief is a result of an aspect of our cognitive design that is aimed not at truth but at something else won't properly be said to know the proposition in question, even if it turns out to be true. (Unless, perhaps, the same design would conduce both to truth and to the other state of affairs aimed at.)

(7a) consider Richard Swinburne's "Principle of Credulity": "So generally, . . . I suggest that it is a principle of rationality that (in the absence of special considerations) if it seems (epistemically) to a subject that *x* is present, then probably *x* is present; what one seems to perceive is probably so. How things seem to be is good grounds for a belief about how things are."<sup>10</sup> This principle figures into his theistic argument from religious experience: "From this

it would follow that, in the absence of special considerations, all religious experiences ought to be taken by their subjects as genuine, and hence as substantial grounds for belief in the apparent object—God, or Mary, or Ultimate Reality or Poseidon.” (254). Swinburne understands this “principle of rationality” in such a way that it relates *propositions*: the idea is that on any proposition of the form **S seems (to himself) to be experiencing a thing that is F**, the corresponding proposition of the form **S is experiencing a thing that is F** is more probable than not: “If it seems epistemically to *S* that *x* is present, then that is good reason for *S* to believe that it is so, in the absence of special considerations . . . . And it is good reason too for anyone else to believe that *x* is present. For if *e* is evidence for *h*, this is a relation which holds quite independently of who knows about *e*” (p. 260).

To understand Swinburne’s thought here we must briefly consider how he thinks of probability. He accepts a version of the logical theory of probability developed by Jeffrey, Keynes and Carnap; Swinburne himself develops a version of this theory in *An Introduction to Confirmation Theory*<sup>11</sup>. On this theory for any pair of propositions [**A**, **B**] there is an objective, logical probability relation between them: the probability of **A** conditional on **B** ( $P(\mathbf{A}/\mathbf{B})$ ). This relation is *objective* in that it does not depend in any way upon what anyone (any human being, anyway) knows or believes; it is *logical* in that if  $P(\mathbf{A}/\mathbf{B})$  is **n**, then it is necessary (true in every possible world) that  $P(\mathbf{A}/\mathbf{B})$  is **n**. (Of course logical probability conforms to the Calculus of Probability.) Carnap spoke of the probabilistic relation between a pair of propositions as *partial entailment*; we may think of the logical probability of **A** on **B** as the degree to which **B** entails **A**, with entailment *simpliciter* as the limiting case. We could also think of the logical probability of **A** on **B** as follows: imagine the possible worlds as uniformly distributed throughout a logical space: then  $P(\mathbf{A}/\mathbf{B})$  is the ratio between the volume of the space occupied by worlds in which both **A** and **B** hold to the volume of the space occupied by worlds in which **B** holds. And Swinburne’s suggestion, as we have seen, is that on any proposition of the form **S seems (to himself) to be experiencing a thing that is F**, the corresponding proposition of the form **S is experiencing a thing that is F** is more probable (logically probable) than not.

I find this dubious. First there are notorious difficulties with the very notion of probability thought of this way. (I’ll mention one a couple of paragraphs further down.) But second, even if we embrace a logical theory of probability of this kind we are still likely to have grave problems here. Why suppose that on the proposition **It seems to Paul that Zeus is present** it is more probable than not (probability taken as logical probability) that Zeus really is present? Here we are not to rely on our having discovered that as a matter of fact most of what most people think is true; what we must consider is the probability of

Zeus's presence on the proposition **it seems to Sam that Zeus is present alone**, apart from any background knowledge or beliefs we might have. (Alternatively, this is the case where our background information "consists of nothing but tautologies", as it is sometimes put.) But if all we have for background information is tautologies (and other necessary truths) why think a thing like that? Wouldn't it be just as likely that Sam was mistaken, the victim of a Cartesian demon, or an Alpha Centaurian scientist, or any number of things we can't even think of? What would be a reason for thinking this? That in most possible worlds, most pairs of such propositions are such that the second number is true if the first is? But is there any reason to think that? (That is, is there any reason apart from *theism* to think that; if theism is true, then perhaps most beliefs in most possible worlds are indeed true, if only because God does most of the believing.)

But there is a quite different way in which we might think of this principle. Suppose we think of it from the perspective of the idea that positive epistemic status is a matter of the proper function of our epistemic faculties. It is of course true that when our faculties are functioning properly, then for the most part we do indeed believe what seems to us to be true. This isn't inevitable: consider the Russell paradoxes, where we wind up rejecting what seems true (and what still seems true even after we see where it leads). A madman, furthermore, might find himself regularly believing what didn't seem to him true; and an incautious reader of Kant, intent upon accentuating his free and rational autonomy might undertake a regimen at the conclusion of which he was able to reject what he finds himself inclined by nature to believe. But all else being equal, we ordinarily believe what seems to us to be true, and what seems to us true (when our faculties are functioning properly in a suitable environment) will have more by way of positive epistemic status for us than what does not. The explanation, I suggest, is not that **p** is logically probable on the proposition **p seems to Paul to be true**; the explanation is much simpler: it is the fact that when my faculties are functioning properly, the degree of positive epistemic status a proposition has for me just is (modulo a constant of proportionality) the degree to which I am inclined to believe that proposition.

(7b) Similar comments apply to Swinburne's "Principle of Testimony: "the principle that (in the absence of special considerations) the experiences of others are probably as they report them" (272). Here again Swinburne apparently understands this principle in terms of his understanding of probability: the proposition **Sam's experience is F** is more probable than not, in the logical sense, on the proposition **Sam testifies that his experience is F**. But this seems dubious: is there any reason to think that in most possible worlds in which Sam claims to have a headache, he really does have a headache? Or that the volume of 'logical space' occupied by worlds in which Sam testifies that he has a headache and in fact does, is more than half of the volume of worlds in which Sam testifies that

he does? What could be the basis of such a claim? Swinburne's suggestion is that if we do not accept principles of this sort, we shall land in the "morass of skepticism." But we can avoid that morass without accepting these implausible claims about logical probability. Thomas Reid<sup>12</sup> speaks of "Credulity"—the tendency we display to believe what we are told by others. This tendency is of course subject to modification by experience: we learn to trust some people on some topics and distrust others on others; we learn never to form a judgment about a marital altercation until we have spoken to both parties; we learn that people's judgment can be skewed by pride, selfishness, desire to exalt oneself at the expense of one's fellows, love, lust and much else. Nonetheless there is this tendency, and under the right circumstances when you tell me **p** (that your name is 'Paul', for example) then (if **p** is true, and I believe **p** sufficiently firmly and my faculties are functioning properly in the formation of this belief) I know **p**. And here we need not try to account for this fact in terms of the logical probability of one proposition on another; we can note instead that (1) when our faculties are functioning properly, we are typically inclined to believe what we are told and (2) if we believe what is true and what we are are sufficiently strongly inclined to believe, then if our faculties are functioning properly (and the cognitive environment is congenial) what we believe is something we know.

(7c) Finally, consider Swinburne's claim that *simplicity* is a prime determinant of *a priori* or intrinsic probability, at least for explanatory theories: "Prior probability depends on simplicity, fit with background knowledge, and scope. A theory is simple in so far as it postulates few mathematically simple laws holding between entities of an intelligible kind. . . . I am saying merely that a theory which postulates entities of an intelligible kind, as opposed to other entities, will have a greater prior probability, and so, *other things being equal*, will be more likely to be true. . . . For large scale theories the crucial determinant of prior probability is simplicity (52-53)." Here Swinburne is speaking of *prior* probability, not *a priori* or intrinsic probability: "the prior probability of a theory is the probability before we consider the detailed evidence of observation cited in its support" (52). The prior probability of a theory also depends on its fit with our background knowledge. But if we consider the *a priori* or *intrinsic* probability of the theory, then fit with background information drops out, so that we are left with content (or 'scope', as Swinburne calls it in *The Existence of God*) and simplicity as the determinants of intrinsic probability; and of these two, it is simplicity that is the more important: ". . . sometimes it is convenient to let *e* be all observational evidence and let *k* be mere 'tautological evidence'. In the latter case the prior probability  $P(h/k)$  will depend mainly on the simplicity of *h* (as well as to a lesser extent on its narrowness of scope)" (p. 65).

Now I believe there are real problems here. The chief problem, it seems to me, is with the very notion of intrinsic, logical probability. On the theory in



question, as we have seen, for any pair of propositions there is an objective, logical probability between them. As a special case of this relation we have intrinsic probability: the probability of a proposition conditional on nothing but necessary truths. Take such a contingent proposition as **Paul Zwier owns an orange shirt**; on this view, there is such a thing as the probability of that proposition conditional on the proposition  $7+5=12$ . And the problem here is substantially twofold. In the first place there is no reason, so far as I can see, to think that contingent propositions *do* in general have an intrinsic logical probability; and if they do, there seems to be no way to determine, even within very broad limits, what it might be.

But second and more important: there are many large classes of propositions such that there seems to be no way in which intrinsic probability can be distributed over their members in a way that accords both with the calculus of probability and with intuition. Consider, for example, a countably infinite set of **S** of propositions that are mutually exclusive in pairs and such that necessarily, exactly one of them is true: **S** might be, for example, the set of propositions such that for each natural number **n** (including 0), **S** contains the proposition **there exist exactly n flying donkeys**. Given nothing but necessary truths, none of these propositions should be more likely to be true than any others; if there is such a thing as a logical probability on nothing but necessary truths, one number should be as probable as another to be the number of flying donkeys. But the members of this countably infinite set can have the same probability only if each has probability 0. That means, however, that the proposition **there are no flying donkeys** has intrinsic probability 0; hence its denial—**there are some flying donkeys**—has an intrinsic probability of 1. Further, according to the Probability Calculus, if a proposition has an intrinsic probability of 1, then its probability on any evidence is also 1; hence no matter what our evidence, the probability on our evidence that there are flying donkeys is 1. Still further, it is easy to see that (under these assumptions) for any number **n**, the probability that there are at least **n** flying donkeys also has an intrinsic probability of 1<sup>13</sup> and hence a probability of 1 on any evidence. And of course this result is not limited to flying donkeys; for any kind of object such that for any number **n** it is possible that there be **n** objects of that kind—witches, demons, Siberian Cheesehounds—the probability that there are at least **n** of them (for any **n**) is 1 on any evidence whatever.<sup>14</sup>

The only way to avoid this unsavory result is to suppose that intrinsic probabilities are distributed in accordance with some series that converges to 0: for example, **there are no flying donkeys** has an intrinsic probability of 1/2, **there is just one flying donkey** gets 1/4, and so on. But then we are committed to the idea that some numbers are vastly more likely (conditional on necessary truths alone) than others to be the number of flying donkeys. In fact we are

committed to the view that for any number  $n$  you please, there will be a pair of natural numbers  $m$  and  $m^*$  such that  $m^*$  is  $n$  times more likely (conditional on necessary truths alone) to be the number of donkeys than  $m$ . And this seems just as counterintuitive as the suggestion that for any number  $n$  you pick, the probability (on any evidence) that there are at least  $n$  flying donkeys is 1.

It therefore seems to me unlikely that such propositions have intrinsic probability at all; but similar arguments can be brought to bear on many other classes of propositions. Accordingly, I think the whole idea of intrinsic probability is at best dubious. But even if there is such a thing, why should we suppose that *simpler* propositions, all else being equal, have more of it than complex propositions? Is there some *a priori* reason to suppose that reality prefers simplicity? Where would this notion come from? Swinburne, again, believes that if we don't accept some such principle as this, we shall fall into that skeptical bog: if we don't accept some such principle, we will have no reason for preferring simple to complex hypotheses, but in many contexts all that our favored hypotheses have going for them (as compared to others that fit the same data just as well) is simplicity.

But suppose we look at the matter from the point of view of the present conception of positive epistemic status. Despite the real problems in saying just what simplicity is (and in saying in any sort of systematic way when one theory is simpler than another) there clearly *is* such a thing as simplicity, and it clearly does contribute to the positive epistemic status a theory or explanation has for us. But why think of this in terms of the problematic notion of intrinsic logical probability? Why not note instead that when our faculties are functioning properly, we do opt for simple theories as opposed to complex ones (all else being equal); we can therefore see the greater positive epistemic status of simple theories (again, all else being equal) as resulting from the fact that when our faculties are functioning properly, we are more strongly inclined to accept simple theories than complex ones.

(8) There are presently three main views as to the nature of positive epistemic status: Chisholmian Internalism, Coherentism, and Reliabilism. The present conception of positive epistemic status as a matter of degree of inclination towards belief when epistemic faculties are functioning properly—the conception that seems to me to go most naturally with theism—provides a revealing perspective from which, as it seems to me, we can see that none of these three views is really viable. For each we can easily see that the proposed necessary and sufficient condition for positive epistemic status is not in fact sufficient (and in some cases not necessary either)—and not sufficient just because a belief could meet the condition in question but still have little by way of positive epistemic status because of cognitive pathology, failure to function properly. I don't have the space here to go into the matter with the proper thoroughness<sup>15</sup>; I shall say just

the following.

First, the Chisholmian Internalist (or at any rate its most distinguished exemplar) sees positive epistemic status as a matter of aptness for epistemic duty fulfillment. Chisholm begins 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 belief that all men are mortal**—that is, believing neither the proposition in question nor its denial. Given 'is more reasonable than' as an undefined locution, he 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 than 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. 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. In *Foundations of Knowing*, his most recent full dress presentation of his epistemology, he says 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. The principles of epistemic preferability are the principles one should follow if one is to fulfill this requirement."<sup>16</sup> In his earlier *Theory of Knowledge* 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<sup>17</sup>;

and he adds that

One might say that this is the person's responsibility qua intellectual being . . . One way, then, of re-expressing the locution '*p* is more reasonable than *q* for *S* at *t*' is to say this: '*S* is so situated at *t* that his intellectual requirement, his responsibility as an intellectual being, is better fulfilled by *p* than by *q*'.

Reasonability, therefore, is a *normative* concept; more precisely, it pertains to requirement, duty, or obligation. And Chisholm's central claim here is that a certain epistemic 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 p is *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

**p**; to say that **p** is *beyond reasonable doubt* for him is to say that he is so situated, then, that he can better fulfill his intellectual responsibility by accepting **p** than by withholding it. The basic idea is that our epistemic duty or requirement is to try to achieve and maintain a certain condition—call it ‘epistemic excellence’—which may be hard to specify in detail, but consists fundamentally in standing in an appropriate relation to truth. A proposition has positive epistemic status for me, in certain circumstances, to the extent that I can fulfill my epistemic duty by accepting it in those circumstances. This duty or obligation or requirement, furthermore, is one of *trying* to bring about a certain state of affairs. My requirement is not to *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. Perhaps I don’t know how to achieve intellectual excellence; or perhaps I do know how but simply can’t do it. So my duty is only to *try* to bring about this state of affairs.

This is a simple and attractive picture of the nature of justification and positive epistemic status. I think it is easy to see, however, that it is deeply flawed: for it is utterly clear that aptness for the fulfillment of epistemic duty or obligation is not sufficient for positive epistemic status. Suppose Paul is subject to cognitive dysfunction: then there could be a proposition **A** that has little by way of positive epistemic status for him, but is nonetheless such that believing it is maximally apt for epistemic duty fulfillment for him. Suppose Paul is subject to a cerebral disturbance that causes far-reaching cognitive dysfunction: when he is appeared to in one sense modality, he forms beliefs appropriate to another. When he is aurally appeared to in the way in which one is appeared to upon hearing church bells, for example, he has a nearly ineluctable tendency to believe that there is something that is appearing to him in that fashion, and that that thing is orange—bright orange. This belief, furthermore, seems utterly convincing; it has for him, all the phenomenological *panache* of *modus ponens* itself. He knows nothing about this defect in his epistemic equipment, and his lack of awareness is in no way due to dereliction of epistemic duty. As a matter of fact, Paul is unusually dutiful, unusually concerned about doing his epistemic duty; fulfilling this duty is the main passion of his life. Add that those around him suffer from a similar epistemic deficiency: Paul lives in Alaska and he and all his neighbors have suffered all their lives from similar lesions due to radioactive fallout from a Soviet missile test. Now suppose Paul is aurally appeared to in the way in question and forms the belief that he is being appeared to in that way by something that is orange. Surely this proposition is such that believing it is the right thing to do from the point of view of epistemic duty; nevertheless the proposition has little by way of positive epistemic status for him. Paul is beyond reproach; he has done his duty as he saw it; he is within his epistemic rights; he is permissively justified, and more. Nevertheless there is a kind of positive epistemic status this

belief lacks—a kind crucial for knowledge. For that sort of positive epistemic status, it isn't sufficient to satisfy one's duty and do one's epistemic best. Paul can be ever so conscientious about his epistemic duties and still be such that his beliefs do not have that kind of positive epistemic status.

Clearly enough, we can vary the above sorts of examples. Perhaps you think that what goes *in excelsis* with satisfying duty is *effort*; perhaps (in a Kantian vein) you think that genuinely dutiful action must be contrary to inclination. Very well; alter the above cases accordingly. Suppose, for example, that Paul (again, due to cognitive malfunction) 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 thus appearing 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 red is appearing to him, he has little by way of positive epistemic status for that belief.

We may therefore conclude, I think, that positive epistemic status is not or is not merely a matter of aptness for fulfillment of epistemic duty or obligation. Could it be *coherence*, as with Lehrer<sup>18</sup> Bonjour<sup>19</sup>, and several Bayesians? Coherentism, of course, comes in many varieties; here I don't have the space to discuss any of them properly. From the present perspective, however, there is at least one crucial difficulty with them all: they all neglect the crucial feature of proper function. According to coherentism, all that is relevant to my beliefs having positive epistemic status for me is a certain internal relationship among them. But surely this is not so. Consider, for example, the case of the Epistemically Inflexible Climber. Paul is climbing Guide's Wall, in the Grand Tetons; having just led the next to last pitch, he is seated on a comfortable ledge, belaying his partner. He believes that Cascade Canyon is down to his left, that the cliffs of Mt. Owen are directly in front of him, that there is a hawk flying in lazy circles 200 feet below him, that he is wearing his new *Fire* rock shoes, and so on. His beliefs, we may stipulate, are coherent. Now imagine that Paul is struck by a burst of high energy cosmic radiation, causing his beliefs to become fixed, no longer responsive to changes in experience. His partner gets him down the wall and, in a last ditch attempt at therapy, takes him to the opera in Jackson,

where the Metropolitan Opera on tour is performing “La Traviata” with Pavarotti singing the tenor lead. Paul is appeared to in the same way as everyone else there; he is inundated by waves of golden sound. Sadly enough, the effort at therapy fails; Paul still believes that he is on the belay ledge at the top of the next to last pitch of Guide’s Wall, that Cascade Canyon is down to his left, that there is a hawk flying in lazy circles 200 feet below him, and so on. Furthermore, since he believes the very same things he believed when seated on the ledge, his beliefs are coherent. But surely they have very little by way of positive epistemic status for him. Clearly, then, coherence is not sufficient for positive epistemic status.

I turn finally to reliabilism, the last of the three chief contemporary ideas as to the nature of positive epistemic status. The view I have suggested in this paper is closer to reliabilism, especially in the form suggested by William Alston<sup>20</sup>, than to either of the other two; indeed, perhaps you think it *is* a form of reliabilism. I don’t propose to argue about labels; still, as I see it, that would be less than wholly accurate. Of course reliability crucially enters into the account I suggest. According to that account, we implicitly think of positive epistemic status as involving our faculties’ functioning properly; but clearly we wouldn’t think of positive epistemic status in this way if we didn’t think that when our faculties function as they ought, then for the most part they are in fact reliable. Still, there is more to a belief’s having positive epistemic status than its being reliably produced. There are even more brands of Reliabilism than of Coherentism; and what is true of one may not be true of another. But the leading idea of at least many central brands of reliabilism is that a belief has positive epistemic status if and only if it is produced by a reliable belief producing mechanism or process; and the degree of its positive epistemic status is determined by the degree of reliability of the process that produces it. Thus Alvin Goldman: “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.”<sup>21</sup>

Here there are problems of several sorts; one of the most important is the dreaded *problem of generality*, developed by Richard Feldman in “Reliability and Justification.”<sup>22</sup> But there are other problems as well, problems that arise out of the neglect of the idea of proper function. As we saw above, a crucial part of our notion of positive epistemic status is the idea of a design plan or specifications. But then not just any reliable belief producing process can confer positive epistemic status. Suppose I am struck by a burst of cosmic rays, resulting in the following unfortunate malfunction. Whenever I hear the word ‘prime’ in any context, I form a belief, with respect to one of the first 1000 natural numbers, that it is not prime. So you say “Pacific Palisades is prime residential area”; or “Prime ribs is my favorite” or “First you must prime the pump” or “(17’) entails

(14)” or “The prime rate is dropping again” or anything else in which the word occurs; in each case I form a belief, with respect to a randomly selected natural number, that it is not prime. This belief producing process or mechanism is indeed reliable; in the vast majority of cases it produces truth. But it is only *accidentally* reliable; it just happens, by virtue of a piece of epistemic serendipity, to produce mostly true beliefs. And the force of the suggestion that the process in question is accidentally reliable, I suggest, is just that under the envisaged conditions my faculties are not working in accordance with the design plan or the specifications for human beings; that’s what makes the reliability in question *accidental* reliability. Furthermore, it does not confer positive epistemic status. Here the process or mechanism in question is indeed reliable; but my belief—that, say, 41 is not prime—has little or no positive epistemic status. Nor is the problem simply that the belief is false; the same goes for my (true) belief that 631 is not prime, if it is formed in this fashion. So reliable belief formation is not sufficient for positive epistemic status.

By way of conclusion, then: from a theistic perspective, it is natural to see positive epistemic status, the quantity enough of which is sufficient, together with truth, for knowledge in the following way: positive epistemic status accrues to a belief **B** for a person **S** only if **S**’s cognitive environment is appropriate for his cognitive faculties and only if these faculties are functioning properly in producing this belief in him—i.e., only if his cognitive faculties are functioning in the way God designed human cognitive faculties to function, and only if **S** is in the sort of cognitive environment for which human cognitive faculties are designed; and under these conditions the degree of positive epistemic status enjoyed by **B** is proportional to the strength of his inclination to accept **B**. Alternatively: 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\***. Still another way to put the matter: a belief **B** has degree **d** of positive epistemic status for a person **S** if and only if the faculties relevant to producing **B** in **S** are functioning properly (in an appropriate environment), and **S** is inclined to degree **d** to believe **B**.

There remains, of course, an enormous amount to be said and an enormous amount to be thought about. For example: (1) What about *God’s* knowledge? God is the premier example of someone who knows; but of course his faculties are not designed either by himself or by someone else. So how shall we think of his knowledge? The answer, I think, lies in the following neighborhood: “Working properly” is used *analogically* when applied to God’s cognitive faculties and ours, the analogy being located in the fact that a design plan for a *perfect* knower would specify cognitive powers of the very sort God displays. But of

course this notion needs to be developed and worked out in detail. (2) Our spiritual forebears at Princeton used to speak of the *noetic effects of sin*. Clearly (from a Christian perspective) sin has had an important effect upon the function of our cognitive faculties; but just how does this work and how does it bear on specific questions about the degree of positive epistemic status enjoyed by various beliefs? (3) This way of thinking of positive epistemic status, I believe, makes it much easier to understand the degree of positive epistemic status enjoyed by *moral* beliefs and by *a priori* beliefs; but just what sort of account is correct here? (4) How, from this perspective, shall we think of the dreaded Gettier problem? (5) The present account is clearly an *externalist* account of positive epistemic status; but how do internalist factors fit in? (6) From the present perspective, how shall we think about skepticism? (7) How is the present account related to the broadly Aristotelian account of knowledge to be found in Medieval thinkers? (8) How shall we construe *epistemic probability*—more exactly, how shall we construe the relationship between **A** and **B** when **A** is a good non-deductive reason for **B**, or where **B** is epistemically probable with respect to **A**? Here the present account of positive epistemic status is clearly suggestive;<sup>23</sup> but how, precisely, does it work? (9) Over the last few years several philosophers<sup>24</sup> have been arguing that rational belief in God does not require propositional evidence or argument, that it can be properly basic; how shall we think of that claim from the present perspective? These and many others are questions for another occasion.

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## NOTES

1. See my "Positive Epistemic Status and Proper Function" in *Topics in Philosophy: Vol. II, Epistemology*, ed. James Tomberlin (Northridge: California State University), forthcoming in 1988.

2. See R. Chisholm, *Theory of Knowledge* (New York: Prentice Hall, 2nd Edition) pp. 5ff.

3. See my "Chisholmian Internalism" in *Philosophical Analysis: A Defense by Example*, ed. David Austin, (Dordrecht: D. Reidel, 1987).

4. Indeed, it is ludicrous understatement to say that God has a grasp of every proposition and property: from a theistic point of view the natural way to view propositions and properties is as God's thoughts and concepts. (See my "How to be an Anti-realist", *Proceedings of the American Philosophical Association*, Vol. 56, #1, 1983.)

5. In C. S. Lewis' novel *Out of the Silent Planet* the creatures on Mars are of several different types displaying several different kinds of cognitive excellences: some are particularly suited to scientific endeavors, some to poetry and art, and some to interpersonal sensitivity.

6. See my "Positive Epistemic Status and Proper Function" (footnote 1).



7. See his *Theory of Knowledge*, p. 14, and *Foundations of Knowing*, (Minneapolis: University of Minneapolis Press, 1982), p. 07. See also my "Chisholmian Internalism" in *Philosophical Analysis: A Defense by Example* (above, footnote 3).

8. Must all of my cognitive faculties be functioning properly for any belief to have positive epistemic status for me? Surely not. And what about the fact that proper function comes in degrees? How well must the relevant faculties be working for a belief to have positive epistemic status for me? On these questions see "Positive Epistemic Status and Proper Function" (footnote 1).

9. See below, pp. 000.

10. *The Existence of God* (Oxford: at the Clarendon Press, 1979) p. 254. Subsequent references to Swinburne's work will be to this volume.

11. See R. Swinburne, *An Introduction to Confirmation Theory*, (London: Methuen & Co. Ltd., 1973).

12. My whole account of positive epistemic status, not just this example, owes much to Thomas Reid with his talk of faculties and their functions and his rejection of the notion (one he attributes to Hume and his predecessors) that self-evident propositions and propositions about one's own immediate experience are the only properly basic propositions.

13. The proposition **there are at least n flying donkeys** is equivalent to the denial of (a) **There are 0 flying donkeys or there is just 1 flying donkey, or there are just 2 flying donkeys or . . . there are just n-1 flying donkeys**. By hypothesis, the probability of each disjunct of (a) is 0; hence by the Additive Axiom the probability of the disjunction is 0, so that the probability of its denial is 1.

14. See my "The Probabilistic Argument from Evil", *Philosophical Studies*, 1979.

15. See my "Chisholmian Internalism" (above, footnote 3) for detailed criticism of Chisholmian internalism; see my "Coherentism and the Evidentialist Objection to Theistic Belief" in *Rationality, Religious Belief, and Moral Commitment*, ed. William Wainwright and Robert Audi (Ithaca: Cornell University Press, 1986) for detailed criticism of coherentism, and see my "Positive Epistemic Status and Proper Function" (above, footnote 1) for criticism of reliabilism.

16. p. 07.

17. p. 14.

18. Keith Lehrer, *Knowledge* (Oxford: Oxford University Press, 1974).

19. Lawrence Bonjour, *The Structure of Empirical Knowledge* (Cambridge: Harvard University Press, 1986).

20. See his "Concepts of Epistemic Justification", *The Monist*, Vol. 68, no. 1 (Jan., 1985) and "An Internalist Externalism" forthcoming in *Synthese*.

21. "What is Justified Belief?" in *Justification and Knowledge: New Studies in Epistemology*, ed. George Pappas (Dordrecht: D. Reidel, 1979), p. 10.

22. *The Monist*, v. 68, #2 (April, 1985) pp. 159ff.

23. See Richard Otte's "Theistic Conception of Probability", in the present issue.

24. See, for example, William Alston's "Christian Experience and Christian Belief", Nicholas Wolterstorff's "Can Belief in God be Rational if it has no Foundations?", and my "Reason and Belief in God", all in *Faith and Rationality*, ed. N. Wolterstorff and A. Plantinga (Notre Dame: University of Notre Dame Press, 1983).