

First published in the *American Philosophical Quarterly*, 1967, 4(4), 281–290. Reprinted in M. Roth & L. Galis (Eds.), *Knowing: Essays in the analysis of knowledge*, Random House, 1970; R. M. Chisholm & R. J. Swartz (Eds.), *Empirical knowledge*, Prentice-Hall, 1973.

## Why I Know so Much More than You Do

WHAT does it mean to say that person  $X$  “knows” that  $p$ ? With a unanimity remarkable for philosophers, it is generally agreed that for this to be true, it must obtain that

(a)  $p$  is the case,

(b)  $X$  believes that  $p$ , and

(c)  $X$  is justified in believing  $p$ .

Whether conditions (a)–(c) jointly suffice for  $X$  to know that  $p$ , however, has recently been disputed by several writers.<sup>1</sup> I shall attempt to show that these doubts are unfounded, and that the justified true belief analysis of knowledge (hereafter referred to as the “JTB thesis”) is indeed adequate. But I shall then proceed to agitate related perplexities about the concept of “knowledge” and conclude with a possibly heretical suggestion about its continued usefulness for technical epistemology.

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<sup>1</sup>See Gettier (1963), Clark (1963), Sosa (1964), Saunders and Champawat (1964), Lehrer (1965) and Harman (1966). The justified-true-belief view of knowledge has been well stated by Ayer (1956, Ch. 1), Chisholm (1957, Ch. 1) and Woozley (1949, Ch. 8), though Woozley rashly puts the justification condition as having evidence for what one knows, and recently defended in one respect or another by Arner (1959), Saunders (1966) and Harrison (1963). While condition (b) has occasionally been disputed on the rather foolish ground that “believes” is sometimes understood to imply “does not feel sure of,” the necessity of (a) and (b) for knowing that  $p$  is essentially noncontroversial. The status of (c), however, is more problematic. Armstrong (1961, p. 120), Malcolm (1963, p. 225ff), and Sosa (1964) contend from an overly narrow equating of “justification” with “evidence” that justification is not always requisite to knowing. In contrast, Gettier (1963), Clark (1963), Lehrer (1965) and Harman (1966) accept the necessity of (c) for knowing  $p$  but deny its sufficiency given (a, b), while Saunders and Champawat (1964) question the possibility of finding any set of conditions which are necessary and sufficient for all instances of “knowledge.”

Though not strictly addressed to the analysis of “knowing,” recent discussion by Chisholm (1964), Brown (1965) and Saunders (1965) concerning self-justifying beliefs, and Hintikka’s (1962) widely acclaimed exploration of the modal logic of knowledge and belief are also background context for the present work.

# I

Estranged from his wife and beset by financial troubles, John Duosmith has become conspicuously despondent. Today, a man's body is found in Duosmith's hotel room with Duosmith's revolver in its hand, a bullet therefrom in its head, and a suicide note signed by Duosmith on the table. Mrs. Duosmith identifies the body as that of her husband, pointing out his characteristic birthmark, the private details of their recent quarrel cited in the note, and so on for many other items which make it overwhelmingly evident to Mrs. Duosmith that the corpse of John Duosmith lies before her, and hence that her husband is dead.

And John Duosmith is indeed dead. But what has happened is this: Last night, Duosmith received a secret visit from his identical twin brother Jim, a petty criminal whose existence John had concealed from his wife and who now begged John to hide him from certain colleagues seeking retribution for something Jim had done. Seeing a chance to make a new life for himself, John shot his brother and arranged the scene to appear as though he, John, had killed himself. But as John left the hotel, he was spotted by Jim's pursuers who, mistaking him for his twin, promptly executed their plans for Jim's demise. So John Duosmith is dead while his wife, for the best of reasons, also believes this to be so.

But does Mrs. Duosmith *know* that her husband is dead? Mr. Gettier and others<sup>2</sup> say "No," and my own linguistic intuition agrees with this judgment. The force of this and similar examples cited by Gettier *et seq.* is drawn from the principle that true beliefs grounded upon false premisses do not count as knowledge, no matter how reasonable those premisses may themselves be under the circumstances. That is,

- (A) If person  $X$  believes  $p$ —justifiably—only because he believes  $q$ , while he justifiably believes  $q$  on the basis of evidence  $e$ , then  $q$  as well as  $p$  must be the case if  $X$ 's belief in  $p$  is to qualify as "knowledge."

Consequently, if  $p$  is true while  $q$  is false in such a case, as apparently illustrated by the Duosmith episode and Gettier's examples, it follows that a person may justifiably believe true proposition  $p$  and still not *know* that  $p$ . Now in fact, these examples do not show this, nor can the JTB thesis ever be threatened by principle (A). But before I point out why this is so, it is best to undermine confidence that linguistic intuition can be trusted to provide a sound interpretation of cases like these.

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<sup>2</sup>See fn. 1.

## II

It is Sunday afternoon, and Mrs. Jones is on her way to borrow an egg from her neighbor, Mrs. Togethersmith. She fears that she may be too late, however, for she is aware that every Sunday afternoon for the past several years, the Togethersmith family—Mr. and Mrs. Togethersmith and their two children—has gone for a drive in the country. As she steps outside, Mrs. Jones sees the Togethersmith car departing with Mr. Togethersmith at the wheel, and thinks to herself, “Pity, there she goes.” Mrs. Jones believes that Mrs. Togethersmith is driving away because, for excellent reasons, she believes that the entire Togethersmith family is in the departing car. But in fact, while Mrs. Togethersmith, her husband, and one of their children are indeed in the departing car, the other Togethersmith child is on this one occasion attending a friend’s birthday party. Inasmuch as it is not true that the entire Togethersmith family is driving away, is Mrs. Jones’s justified true belief, that Mrs. Togethersmith is driving away, *knowledge*? Principle (A) appears to deny this, since Mrs. Jones arrived at her true belief about Mrs. Togethersmith by means of a justified but false belief about the whereabouts of the entire Togethersmith family. But the falsehood here seems so *irrelevant*. For “The entire Togethersmith family is driving away” is equivalent to the conjunction “Mrs. Togethersmith is driving away, Mr. Togethersmith is driving away, and all the Togethersmith children are driving away,” the components of which are supported by Mrs. Jones’s evidence just as well separately as conjoined—in fact, it is difficult to say whether Mrs. Jones’s belief about Mrs. Togethersmith derives from her belief about the Togethersmith family as a whole, or is a part-cause of it. In any event, linguistic intuition is disposed to deny that the absence of one Togethersmith child from the departing family car disqualifies Mrs. Jones’s justified true belief about Mrs. Togethersmith’s departure as an instance of knowledge.

But if so, what about Mr. Jones, who, wanting a 12-inch board, measures one with his new tape rule, obtains a 10-inch reading, and concludes “That’s too small,” when the tape rule is defective and this board is really 11 inches? (We assume that Jones has had much past experience with tape rules, all of which amply warrants his trust in the present reading.) Mr. Jones’s justified belief, that this board is under 12 inches, is true even though it is derived from his false justified belief that this board is 10 inches. Since intuitively this case is no different in kind from Mrs. Duosmith’s belief about her dead husband, we should deny that Jones *knows* this board is less than 12 inches. Yet “This board is 10 inches” is equivalent to the conjunction “This board is under 12 inches, this board is at least 10 inches, and this board is not between 10 and 12 inches,” only the last component of which is false while its first component requires for its justification only a proper part of the evidence which supports Jones’s belief in the whole conjunction. So by formal parallel, it might also seem that Mr. Jones’s conclusion that this board

is undersize should not be epistemically inferior to Mrs. Jones's belief in Mrs. Togethersmith's departure.

More intensive analysis of these two cases would show not so much that one or both violate principle (A) as that when a person's justified true belief  $p$  is accompanied by a justified false belief  $q$ , it may well prove troublesome to decide whether or not his belief in  $p$  is related to his belief in  $q$  in such fashion that the falsity of the latter should disqualify the former as knowledge. That this is in general a failure of conception, not just an insufficiency of data concerning the believer's detailed reasoning, is shown by the following more sophisticated example.

Dr. Pillsmith, a competent practitioner of medicine, is well aware that

- (1) Among persons who have not been vaccinated against Hypofluvia, 999,999 out of a million who show symptoms  $S$  are afflicted with this disease,
- (2) Among vaccinated persons showing symptoms  $S$ , only one in ten is afflicted with Hypofluvia,
- (3) Only one person in a million showing symptoms  $S$  has been vaccinated against Hypofluvia,

and that consequently,<sup>3</sup>

- (4) More than 999,998 persons in a million who show symptoms  $S$  are afflicted with Hypofluvia.

Attempting to diagnose the condition of his latest patient, Dr. Pillsmith observes that

- (5) Philip Blotely shows symptoms  $S$ ,

and, lacking further information about Blotely's medical history, infers unhesitatingly from (1)–(5) both that not been vaccinated

- (6) Philip Blotely has not been vaccinated against Hypofluvia

and that

- (7) Philip Blotely has Hypofluvia.

Now it so happens that Blotely was, in fact, vaccinated against Hypofluvia, but has contracted it just the same. So Pillsmith's diagnosis (7) is both justified and true—but is it knowledge? At first it might seem that the falsity of (6) thwarts

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<sup>3</sup>Since for any three attributes  $A$ ,  $B$ , and  $C$ ,  $\Pr(A | B) = \Pr(C | B) \times \Pr(A | BC) + \Pr(\bar{C} | B) \times \Pr(A | B\bar{C}) \geq [1 - \Pr(C | B)] \times \Pr(A | B\bar{C})$ .

this, for were Pillsmith to surmise the truth of Blotely’s vaccination, his knowledge of (2) and (5) would prevent him from justifiedly accepting (7). Yet (6) is at the same time irrelevant to the diagnosis in that Pillsmith can get to (7) from (5) and (1)-(3) by way of (4) without ever considering whether or not Blotely has been vaccinated. And if Pillsmith does make his diagnosis in this way, must (6) still be true if Pillsmith’s justified belief, that Blotely has Hypofluvia, is to count as knowledge? Surely not, since falsehood (6) takes no part in the inference. Yet we can also argue that justification of (7) by (5) and (0)-(3) via (4) implicitly presupposes the truth of (6), for derivation of (4) from (1)-(3) argues in effect: Given any person with symptoms  $S$ , either he has or has not been vaccinated against Hypofluvia. If he hasn’t, it is virtually certain that he has Hypofluvia; otherwise, Hypofluvia is counterindicated, but this is too unlikely a possibility to be considered seriously.

It seems to me that the intuition which was so sure in Sect. I that Mrs. Duosmith doesn’t really know her husband is dead is quite at a loss to say whether or not Dr. Pillsmith knows that Blotely has Hypofluvia. There is quicksand underfoot here, and we must not too hastily presume that Duosmith-type examples, which apparently refute the JTB analysis of knowledge by way of principle (4), are all that they seem to be.

### III

It is now time to make explicit an important technical detail which is usually slighted in philosophical discussions of knowledge. This is that the judgmental attitudes in which a proposition can be held are not just belief and disbelief, or belief, disbelief, and uncertainty, but a whole spectrum of credibilities spanning many shades of uncertain belief and doubt. Consequently, assertion that knowing presupposes believing is specious unless it is made clear just how strong a belief is so required. Once this question of degree is raised, however, we can easily see from the absurdity of “He knows that  $p$  but isn’t entirely sure of it,”<sup>4</sup> or “I know that  $p$  but have some doubts about whether it is really so,” that only maximal belief is acceptable for knowledge. Hence condition (b) of the JTB thesis must be explicated as “ $X$  feels completely sure of  $p$ ” or “ $X$  believes  $p$  absolutely,” while similarly, (c) must be read as “ $X$  is justified in believing  $p$  absolutely,” “ $X$  has a right to have not the slightest doubt about  $p$ ,” or the like. (Also, since it may

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<sup>4</sup>At first thought, this might seem to make sense as a variant of “He really knows that  $p$  but can’t bring himself to admit it.” But *not admitting to belief in* is not at all the same as *having some doubts about*, and “He knows that  $p$  but won’t admit it” implies not “He is not sure of  $p$  and won’t admit that  $p$ ,” but either “He doesn’t really have any doubt about  $p$  but can’t bring himself to say so,” or “He still isn’t really convinced of  $p$  even though he has overwhelming evidence for it.”

be argued that if  $X$  is justified in believing  $p$  in degree  $d$  then  $X$  is also justified to almost the same extent in believing  $p$  to a degree which is almost  $d$ , “ $X$  is justified in believing  $p$  absolutely” should be further explicated as “ $X$  has more justification for believing  $p$  absolutely than for feeling any doubt about  $p$ .”)

When is absolute belief justified? While a convincing general answer is not easy to come by (see Sect. IV), a necessary condition for evidential justification is surely the following:

(B) If person  $X$  feels completely sure of  $p$  on the basis of evidence  $e$ , then  $X$ 's belief in  $p$  is justified only if  $e$  necessitates  $p$ .

That is,  $X$  is not justified in feeling certain of  $p$  in virtue of his awareness of  $e$  unless  $p$  is certain, given  $e$ . This is entirely compatible with admitting that  $X$  may be justified in feeling *almost* certain of  $p$  on grounds  $e$  if  $p$  is extremely likely, given  $e$ . It only denies that it is rational for  $X$  to close his mind completely to the possibility of not- $p$  even though  $e$ , so long as this possibility does in fact exist. Moreover, while (B) does not specify what sense of necessity—logical, causal, or whatever—is required, it is in any case analytically true that

(C) If  $e$  while not  $q$ , then it is not the case that  $e$  necessitates  $q$ .

Finally, I think it will be agreed that in general,

(D) If person  $X$  feels completely sure of  $p$  only because he feels completely sure of  $q$ , but his belief in  $q$  is not justified, then neither is his belief in  $p$  justified.

(I would hold that (D) is always the case, but there is room for argument on this point when  $q$  is “basic” for  $X$ —see Sect. IV—and it is not essential here that (D) be completely universal.)

Let us now reconsider principle (A), which envisions a person's believing  $p$  on the basis of his belief  $q$ , and  $q$  on the basis of evidence  $e$ . For this to pose any threat to the JTB analysis of knowledge, the degree of belief at issue must be *absolute* belief. But it follows from (B) and (C) that  $X$  can justifiably believe  $q$ —absolutely—on the basis of evidence  $e$  only if  $q$  is the case; so stipulation of  $q$ 's truth in the final clause of (A) is in this case otiose. That is, if  $X$  feels completely sure of  $p$  only because he is convinced of  $q$ , and the latter only because he is aware of  $e$ , then to hypothesize that  $q$  is false is also, by (B) and (C), to presuppose that  $X$ 's absolute belief in  $q$  is unjustified, and hence by (D) that neither is he justified in feeling completely sure of  $p$ . Thus in our Duosmith example (and similarly for Gettier's cases), while Mrs. Duosmith had excellent reason to feel *virtually* certain that her husband was dead, the bare fact that, overwhelming evidence to the contrary notwithstanding, the body before her was not that of her husband

shows that this evidence did not warrant her having no doubt whatsoever that her husband was dead. Likewise, for our more problematic examples in Sect. II, we can say without hesitation that Mrs. Jones, Mr. Jones, and Dr. Pillsmith did not *know* that Mrs. Togethersmith was departing, that this board was less than 12 inches, and that Blotely had Hypofluvia, respectively, because while the evidential bases for these conclusions made them extremely likely, a vestige of uncertainty still remained. In short, if the “belief” cited in principle (A) is allowed to include degrees of belief weaker than complete conviction, the truth of (A) resides in that the falsity of  $q$  is symptomatic that the degree of  $p$ -belief justified by  $e$  is less than absolute.

## IV

But while the argument from principle (A) thus fails to impeach the JTB thesis, the claim that justification is always prerequisite to knowledge is far from unproblematic. Most conspicuously troublesome is that if  $X$ 's knowing  $p$  requires there to exist evidence  $e$  such that  $X$ 's belief in  $p$  is justified by  $X$ 's awareness (i.e., knowledge) of  $e$ , then  $X$ 's belief in  $e$  also requires such justification and we are off on a regress. In particular, the justification requirement might seem to exclude the possibility of perceptual knowledge and self-awareness where  $X$ 's belief in  $p$  is not inferred from other beliefs but is aroused directly by sensory stimulation or given introspectively. Moreover, as will be seen, the demand for justification undergoes a remarkable transformation when we turn from other-person to first-person knowledge, while the conditions of justification even for the inferred beliefs of others are not so straightforward as they might at first appear.

Actually, no puzzle of “justification” can ever discredit the JTB thesis, for the simple reason that whatever is needed for  $X$  to know that  $p$ , if  $X$  does know  $p$  then he is certainly justified in believing  $p$ . (Witness, e.g., the absurdity of “ $X$  knows that  $p$ , but he has no right to believe it so strongly.”) So we can maintain that  $X$  knows that  $p$  iff  $p$  is a justified true belief of  $X$ 's without concern for how murky the concept of justification may itself be. I submit, therefore, that the greatest philosophic challenge which issues from the JTB position is not to settle whether this view is entirely correct (though the import of my argument in Sect. III is that we have no good reason to doubt this), but to determine what it is about  $X$ 's knowing  $p$  that accredits  $X$ 's  $p$ -belief as “justified.” The intent of this section is to rough out a tentative solution to this problem, which is more untidily complex than heretofore recognized, in full expectation that many more exchanges will be needed to round out the present survey in convincing detail.

Let a person's belief in  $p$  be described as “basic” if he does not believe  $p$  as a result of his believing something else. (For example, when  $X$  perceives that  $p$ , his belief in  $p$  is simply for him a *given* which becomes a basis for inference

but is not derived from anything else he knows.) Then  $X$ 's *basic convictions* are beliefs of which  $X$  feels completely sure without having inferred them from evidence. Unless knowledge can be inferred from beliefs which do not themselves qualify as knowledge (a counterintuitive possibility which I shall not discuss), the regression argument shows that if  $X$  knows anything at all, he must also have basic knowledge, i.e. justified true basic convictions, and our first task in this section is to find some acceptable sense in which a basic conviction may be said to be justified. Two alternatives present themselves: either (1) basic convictions are self-justifying, or (2) some basic convictions have nonevidential justification.

In support of (1), it might be argued that the justification of  $X$ 's belief in  $p$  consists in  $p$ 's bearing a certain relation  $J$  to some set  $B$  of  $X$ 's true basic convictions. If  $J$  is such that each  $b_i \in B$  is also related to  $B$  in manner  $J$ , then all basic convictions in  $B$  are also by definition justified. For example, if " $X$  is justified in believing  $p$ " were to be analyzed as " $p$  is logically entailed by  $X$ 's true basic convictions," then  $X$ 's basic convictions are justified by the reflexivity of entailment. But this approach leaves much to be desired. For one, an intuitively acceptable  $J$ -relation with the needed formal properties is not easy to come by. (It is simple to argue, e.g., that logical entailment does not in itself confer evidential justification.) Further, how is the set  $B$  to be circumscribed? Does veracity suffice for a basic conviction to belong to  $B$ —i.e., for it to be justified? If so, we should have to grant that a dogmatic thinker who habitually works himself into a state of absolutely closed judgment on controversial issues without considering any of the relevant evidence is justified in holding any such belief which by chance happens to be true. But if we hold that a basic conviction can be true without necessarily being justified, whatever else is needed for the latter constitutes a nonevidential source of justification and thus carries us into alternative (2).

There are many intriguing thought experiments by which our intuitions about nonevidential belief-warrants can be bared, starting with increasingly bizarre or futuristic ways (e.g., electrical stimulation of the retina) in which sensory input might elicit true perceptual beliefs; but here it will suffice to consider just one which cuts directly to the heart of the matter. Suppose that Tom Seersmith claims to be able to foretell the outcomes of horse races. Upon investigation, we learn that when Seersmith thinks about a forthcoming race, he is often overwhelmed, quite without any reason for it, with a feeling of complete certainty that a certain horse will be the winner. Before the last Kentucky Derby, Seersmith felt sure that it would be won by a horse named Fleetfoot, and as it turned out his prediction was correct. Did Seersmith *know* that Fleetfoot was going to win, and if so, in what sense was his belief justified?

Whatever the personal peculiarity which endows Seersmith with convictions about forthcoming horse races, if his prognostication record has shown only chance



accuracy in the past, we would be loath to say that Seersmith either knew or was justified in believing that Fleetfoot would win the Derby even though his belief in this instance happened to be true. Even if Seersmith's previous race predictions have usually been correct, with a hit rate high enough to convince us that there is something extraordinary about this man, we would still deny that he was justified in feeling absolutely sure that Fleetfoot would win so long as his predictions are not infallible. But suppose we discover that Seersmith's horse race prognoses *are* infallible—i.e., we become convinced that whenever Seersmith feels sure that race  $r$  will be won by horse  $h$ , it is absolutely certain that  $h$  will win  $r$ . Then surely we would be forced to admit that Seersmith knew that Fleetfoot would win the Derby, even though how he knew would baffle us. (As I follow Seersmith through prediction after prediction and see that he is never wrong, I find myself saying, "I can't understand it, but somehow, he *knows!*") The justification—nonevidential—for Seersmith's belief is simply that since generalization

$(\forall h) (\forall r) (\text{Tom Steersmith believes that horse } h \text{ will win race } r \supset h \text{ wins } r)$

is a nomological principle of our world, Seersmith's basic conviction that Fleetfoot would win the Derby was true not by mere happenstance but of nomic necessity. For if Seersmith's horse race precognitions cannot be wrong, what better justification could there possibly be for his having them ?

Now let's change the case slightly. Tom Seersmith's brother Dick also feels occasional convictions about the outcomes of forthcoming horse races, but unlike his brother, Dick's percentage of correct anticipations is substantially less than perfect. Careful research discloses, however, that Dick's accuracy depends critically upon the horse's name. Whenever Dick feels sure that horse  $h$  will win race  $r$ , he is never mistaken so long as  $h$ 's name contains exactly two syllables, but when the predicted winner's name is shorter or longer than this, Dick's precognitive effectiveness is somehow impaired. Dick, too, felt sure that Fleetfoot would win the Derby—but did he *know* this? In principle, Dick's case is exactly like that of brother Tom, since by natural law his preconceptions about bisyllabically designated horse-race victors cannot err. Yet intuition is more hesitant here, for at times Dick also feels certain that  $h$  will win  $r$  when he should not, namely, when ' $h$ ' is not bisyllabic. And if Dick is unaware that the anticipated winner's name makes a difference for the reliability of his forecast, we might question whether he is entitled to feel such perfect confidence in his pre-cognition even when, unknown to him, it is in fact nomologically infallible. Thus it might be denied that Dick *knew* of Fleetfoot's forthcoming victory if he did not recognize that this particular belief had stronger truth-credentials than his average forecast. But this line of argument is unsound. If Dick were aware of his general precognitive fallibility, it would indeed seem reasonable for him to have inferential meta-doubts about his belief in Fleetfoot's victory—if he had, in fact, had any. But to make a person's

knowing  $p$  contingent upon his knowing that he knows  $p$  would precipitate an intolerable regress, nor should a person's true belief in  $p$  be disqualified as knowledge merely by his having additional erroneous convictions as well. (To hold that a person can know nothing if he ever believes falsely seems extreme to the point of absurdity, though as will be seen in Sect. V it contains an important grain of truth.) If Dick's conviction that Fleetfoot would win the Derby was truly basic for him, uninfluenced by any meta-beliefs concerning his general prognostic proficiency, then it was for him no less an instance of *knowing* than it was for brother Tom, and was justified on the very same grounds, namely, that inasmuch as Dick felt certain Fleetfoot would win, it was certain that Fleetfoot would win.

And now one more twist. Suppose that Harry is still another Seersmith whose case is like Dick's except that Harry's precognitions of form "horse  $h$  will win race  $r$ " are always (nomologically) correct when and only when  $r$  is run on a dry track. Inasmuch as Fleetfoot won the Derby on a dry track, was Harry's conviction that Fleetfoot would win an instance of knowledge? Harry's belief, too, was infallible in that there exists a nomic principle in virtue of which, given that Harry felt sure that Fleetfoot would win and that the track was dry, it was certain that Fleetfoot would win. But Harry differs from Dick in that Dick's infallible precognitions are intrinsically identifiable as such—i.e., whether or not a forecast by Dick falls under the law which vouchsafes its accuracy is revealed by its syllabic composition—whereas the reliability of Harry's forecast cannot be determined without additional information which does not generally become available until race time. And since Harry thus cannot discriminate his infallible precognitions from those which are not (assuming that he does not also have advance knowledge of the track conditions), it might be argued that he had no right to feel so sure that Fleetfoot would win the Derby. But this doubt is only a refinement of the one we have already rejected in Dick's case. If it is not necessary for Harry to know that he knows  $p$ , or to know that he can trust his belief  $p$  absolutely, in order for him to know  $p$  or for his  $p$ -belief to be justified, then neither can we reasonably hold that his being *able* to acquire this meta-knowledge is requisite for the latter. (How could such an ability possibly be germane except by way of the knowledge which, with its help, Harry does acquire?) Consequently, so long as a person's basic believing of  $p$  belongs to a class whose members are nomologically infallible, its epistemological status should not depend upon whether or not this class is defined by properties inherent in the belief itself. (It is relevant to this point that knowing what we know about Harry, we could win a pretty penny at the races by noting Harry's prediction and waiting to see the track conditions before deciding whether to bet.)

The principle which appears to govern our Seersmith examples (though intuition speaks only with a subdued and halting voice here) is that a basic conviction counts as "knowledge," and is by the same token justified, if and only if it not merely is true, as could occur by chance, but is infallibly true by virtue of its

being of a kind (perhaps defined in part by relational attributes) whose accuracy is guaranteed by natural law. This is at best an uneasy conclusion, however, for without further qualification it trembles on the brink of triviality: If  $V$  is the attribute of veridicality, then any belief of type  $V$ —i.e., any which happens to be true—is also infallibly true vis-a-vis type  $V$  and hence qualifies as knowledge unless “natural law” is defined to exclude generalizations which are logical truths. (That we would *like* to make some such exclusion is, I think, intuitively evident, but how to accomplish it effectively is another question.) Moreover, this criterion applies only to the basic convictions of other persons, for *my* beliefs, basic or otherwise, are justified by standards rather different from this.

Suppose that I set out to determine which of us, you or I, knows the more. I start by listing all propositions which you believe (or more precisely, all which I believe that you believe) and then prune this list by deleting everything on it which, in my judgment, is either false or is unwarranted for you. To display what *I* know, however, (or rather, what I believe that I know), I list all the propositions believed by me—and *stop*. For while I am perfectly willing to admit that there are facts of which I have no knowledge, I do not believe, nor can I bring myself to believe, any specific proposition of form “ $p$ , but I don’t know that  $p$ .” This is closely related to the oddity of “ $p$ , but I don’t believe it,” but has a significance the latter does not. I reject “ $p$ , but I don’t believe it” because my believing this would entail my believing  $p$  and hence falsify the conjunction as a whole—i.e., it is impossible for me to believe a true proposition of this form. I could, however, truly believe “ $p$ , but I don’t know it” were  $p$  to be the case while I believed but did not know that  $p$ .<sup>5</sup> Hence my refusal to admit, when I am convinced of  $p$ , that I may not know that  $p$ , has the force of maintaining that in *my* case, believing truly suffices for knowing. (And yet, when I reflect upon why I don’t consider all *your* true beliefs to be knowledge, I am also willing to admit in general terms that some of mine may not be knowledge, either. This is an apparent inconsistency which will be resolved in Sect. V.)

This first-person/other-person difference in knowledge criteria is present even when, from your vantage point, my true belief is amply justified. Suppose that I believe mathematical theorem  $T$  because I have just discovered a convincing proof of it, and when I inform you that I know  $T$ , you ask me what grounds I have for thinking that I know this. The only reply which seems relevant is for me to recapitulate the steps by which I deduced  $T$ —except that when I do this, you

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<sup>5</sup>While Hintikka (1962) has proposed essentially the same analysis of “ $p$ , but I don’t believe it” as offered here, his modal system allows that a person can defensibly claim to believe “ $p$ , but I don’t know it.” However, Hintikka’s intuitive apology for this (p. 83) construes it to involve a degree of  $p$ -belief less than perfect conviction, and the fact that his system does not recognize the unacceptability of “I don’t know that  $p$  even though I am absolutely sure of it” would seem to reveal a lacuna in its axioms.

quite properly point out that what I have given you is grounds for believing  $T$  whereas what you asked for is grounds for believing that I know  $T$ . My supplying of proof for  $T$  *demonstrates* to you that my belief in  $T$  is justified, but *asserts* nothing which implies this. On the other hand, if I try to give you an account of how it is that I know  $T$ , it will go something like: “Well, I know that  $L_1$  and  $L_2$  are logically true, so when I see that  $T$  is an immediate consequence of  $L_1$  and  $L_2$ , this makes me aware that  $T$  is also the case.” What I am telling you is that my awareness of certain facts, namely, that  $L_1$  and  $L_2$  are logically true and jointly entail  $T$ , is a *cause* of my knowing  $T$ . But from your perspective, my awareness of this evidence *provides* (noncausally, by fulfilling an existence requirement) the justification which is an analytic component of my knowing  $T$ . That is, in more general terms, when I have come to know  $p$  by a valid line of reasoning from unimpeachable premisses, the inferential procedure which to you is a *condition* on my knowing  $p$  is to me only the *occasion* for this. What justifies my believing  $p$  is simply  $p$ ’s being the case; for once I have convinced myself that  $p$ , I require nothing else to consider it right that I feel sure of  $p$ —what more could possibly be relevant? In fact, it is nomically impossible for me to accept “ $p$ , but I have no right to believe it so absolutely,” for my believing the second component of this suffices to create some doubt in me about  $p$ . (This is why I am unable—nominally, not logically—to believe “ $p$ , but I don’t know it.”) So I reason about  $p$  not to transmute my base belief in  $p$  into golden knowledge, but to decide whether  $p$  is the case; whereupon, having convinced myself that it is, I rebuff all challenges to my conviction’s epistemic credentials by the argument “ $p$ ; therefore it is reasonable for me to believe that  $p$ .”

What are my criteria for the justification of *your* beliefs? We have already explored the evaluation of your basic convictions, but it remains to see what is needed for your inferred beliefs to be reasonable. Ordinarily, the degree of  $p$ -belief which I consider evidence  $e$  to warrant in you is simply the confidence in  $p$  which I sense is aroused in me by conviction that  $e$ . However, closer analysis shows this not to be definitive. Let  $p$  and  $q$  be two propositions such that  $q$  logically entails  $p$ . If, somehow, I know that you know  $q$ , what will persuade me that you have evidential justification for believing  $p$ ? For myself, merely being cognizant of  $q$  does not in itself convince me of  $p$  (I am, after all, often unsure of consequences of my beliefs when I have not discerned that they are such consequences), so for your  $q$ -awareness to warrant your  $p$ -belief, I would normally require you to know not only that  $q$ , but that  $q$  entails  $p$  as well. But is  $q \ \& \ (q \vdash p)$  then *sufficient* evidence to justify your belief in  $p$ ? If, either thoughtlessly or with good reason, I presume that our minds work alike, I will agree that it is; for belief in the former would cause me to believe the latter as well. But suppose I have learned that you just don’t seem to grasp the significance of logical relationships; specifically, that you often accept propositions of form “ $\alpha$  and  $\alpha$  entails  $\beta$ ,” while simultaneously

doubting or even disbelieving  $\beta$ . Then I would no longer consider your belief in  $q \& (q \vdash p)$  to be evidential justification for your believing  $p$ , for I could not regard the former as the *source* of the latter, nor would I have reason to regard your  $p$ -belief as knowledge inasmuch as your veridicality in this instance may simply be the chance success of irrational thought. Conversely suppose I discover instead that your thinking is superrational in that for any two propositions  $\alpha$  and  $\beta$  such that  $\alpha$  entails  $\beta$ , and you believe  $\alpha$ , your mere thinking of  $\beta$  when you believe  $\alpha$  suffices for you to be convinced of  $\beta$  as well—i.e., you believe all logical consequences of your beliefs, so long as they come to mind at all, whether or not you are also aware of the entailment relations among these propositions. In this case, I must concede that your knowledge of  $q$  is fully adequate in itself to justify, and hence to dignify as knowledge, your belief in  $p$ . For if you accept all logical consequences of your convictions, rather than just a proper subclass of these constrained by your logistical perceptiveness, on what grounds can I hold your belief processes to be epistemically defective?

The preceding arguments show, first impressions to the contrary notwithstanding, that my other-person epistemology has exactly the same justificational standards for inferred beliefs as it does for basic ones. In both cases, the critical determinant is not whether the belief in question is “reasonable” in accord with some impersonal normative ideal, but whether it has arisen in circumstances which guarantee its accuracy. (This applies also to beliefs with derivational status intermediate between basic and inferred, thus bypassing the problems these would generate were the criteria of justification qualitatively different for the two extremes. For example, suppose that for a certain pair of attributes  $P$  and  $Q$ , whenever you perceive that  $P(a)$  for an object  $a$  you find yourself also convinced that  $Q(a)$ . If I know that in our world  $P$  nomically implies  $Q$ , I must count your belief in  $Q(a)$  as knowledge, justified by your awareness of  $P(a)$ , even if you are not consciously aware that  $(\forall X)[P(X) \supset Q(X)]$ .<sup>6</sup> Harmony between first-person and other-person justification, however, is more elusive. At one level, these show a common pattern: Whenever I consider my/your conviction in  $p$  to be justified, I presume there to exist an argument of form “ $S$ ; hence my/your belief in  $p$  is necessarily correct,” where  $S$  is some state of reality.<sup>7</sup> But when it is my belief which is at issue,  $S$  is  $p$  itself; whereas I want the  $S$  which warrants your  $p$ -belief to do so nomically rather than logically. That I should adopt so flagrant an epistemological double standard is not a conclusion which I find esthetically pleasing, but if there is a deeper unity here I have yet to find it.

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<sup>6</sup>I say “not consciously aware” rather than simply “unaware” to suggest the glide from inference episodes of the most paradigmatically rational sort down to believings which are patterned *as though* they were accompanied by additional supportive knowledge which the believer does not, in fact, have in any conceptualized form.

<sup>7</sup>The scope of “necessary” here is of course  $N(S \supset \text{my-or-your } p\text{-belief is correct})$ , not  $S \supset N(\text{my-or-your } p\text{-belief is correct})$ .

## V

However lacking in clarity (and perhaps consistency) the epistemic concept of “justification” may be, it nonetheless appears that knowing  $p$  analytically requires not only that the knower feel completely certain of  $p$ , but also that there be some sense in which, considering the circumstances, it *is* completely certain that  $p$ . But since I reject the argument “ $p$ ; therefore you are justified in feeling sure of  $p$ ,” and also doubt that our *de facto* world contains any nomic regularities perfect enough to vouchsafe any belief beyond all possibility of error, I do not think that you strictly know anything at all. Whereas in my own case, I have too much faith in my own fallibility to feel absolutely sure of anything, even if some of my perceptual beliefs fall short of this only negligibly. My admission (with high but not complete conviction) that probably not all of my beliefs are entirely correct, plus inability to meta-distinguish those which are true from those which are not, causally prevents me from ever entirely achieving an absolute extremity of belief, while my professional skills as scientist and philosopher enable me to find genuine even if minuscule chinks of uncertainty in any proposition I examine, even those which arise perceptually or feel analytically true. So technically speaking, I know nothing either.<sup>8</sup>

In short, my conception of “knowledge”—and presumably yours as well—is so impossibly idealized that no real-life belief episode ever satisfies it. Whenever you or I assert, as we often do, “I am aware that . . .,” “He knows that . . .” etc., we are uttering falsehoods which would come closer to the truth if revised as “I approximate awareness that . . .,” “He almost knows that,” or the like. The paradigm-case rejoinder, that what we mean by “*know*” is defined by these ordinary-life applications, no more shows that this usage is literally correct than the everyday paradigmatic ascriptions of “spherical” to roundish objects of irregular curvature demonstrates that a thing’s surface does not really have to be a constant distance from its center in order for it to be literally a sphere. On matters philosophical as well as scientific, ordinary language teems with simplistic presuppositions and coarse-grained, uncritical categories which do slovenly justice to reality; and intellectual maturity—represented most illustriously by technical science but by no means restricted thereto—consists first of all in learning to relinquish these cognitive crudities for a more sophisticated grasp of complexity and precise detail. It is all very well to recognize that the conceptual fluency of idealized approximations is often more convenient for everyday affairs than is the encumbrance of needless exactitude, but it is folly to construe the success of this practical usage as a sign that what is so asserted is precisely correct, or to begrudge its abandonment when, like outgrown clothing, its inaccuracies begin to chafe. In particular, there

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<sup>8</sup>Hence the title of this paper is something of a misnomer. Although my knowledge criteria are enormously more liberal for me than for you, their extension is in both cases the null class.

is no more reason for us to agonize philosophically over the esoterics of everyday knowledge-talk—e.g., why justified true beliefs at practical levels of assurance should sometimes be called knowledge and sometimes not—than for geometricians to puzzle over why some common-sense spheres have a larger cubed-surface-to-squared-volume ratio than do others.

To conclude, then, I propose that the subject of “knowledge” is no longer of serious philosophical concern for the simple reason that this concept is far too primitive for the needs of technical epistemology. No harm will be done, I suppose, by retaining a special name for true beliefs at the theoretical limit of absolute conviction and perfect infallibility so long as we appreciate that this ideal is never instantiated, but such sentimentality must not be allowed to impede development of conceptual resources for mastering the panorama of partial certainties which are more literally relevant to the real world. So far, however, the normative theory of practical belief has scarcely advanced beyond surmise that the structure of propositional credibilities is isomorphic to the probability calculus, and has not even begun to think technically about such vital subtleties as the ramifications of uncertainty in basic beliefs, reciprocal nondemonstrative supports among partially confirmed propositions, the credibility interplay between beliefs and meta-beliefs, and the like. With problems of “How strongly should  $X$  believe  $p$ ?” lying dark and unfathomed before us, we stand to profit from continued epistemological preoccupation with the nature of “knowledge” to just about the same extent as would psychology from a return to study of the “soul.”

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