IS JUSTIFIED TRUE BELIEF KNOWLEDGE?:
A SELECTIVE, CRITICAL SURVEY OF RECENT WORK

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Abstract:

This monograph is a critical survey and conceptual classification of recent work in the analysis of non-basic knowledge. The survey extends from the 1950's to Harman's Thought and Lehrer's Knowledge. Although the survey is not all-inclusive, I have examined at least twelve of what I believe to be important and interesting analyses. These analyses fall into three groups: Type I analyses, where the authors have concentrated their attention on the relation between the justifying evidence and false statements; Defeasibility-type analyses; and amalgamations of these two types. It is my conclusion that Type I analyses are wrong-headed, and that, while there are no clearly adequate analyses of the other varieties, they represent attempts in the right direction. An extensive bibliography is included.

Is Justified True Belief Knowledge?: A Selective, Critical Survey of Recent Work

In what follows, I have undertaken to present a critical survey and conceptual classification of recent work in the analysis of non-basic knowledge. I have not attempted to make the survey all-inclusive, but rather, I have limited my remarks to those works which I consider to be significant. Furthermore, I have not attempted to deal in any important way with analyses of knowledge which fall outside of the justified-true-belief tradition. The temporal span of my survey runs from the 1950's to 1974. The bibliography is much less selective and includes articles as recent as 1975. I have attempted to present my survey in such a way that even those readers who are unfamiliar with the problems of the analysis can understand and profit from this survey.

PART A

The analysis of knowledge has been of concern, in varying degrees and in varying ways, to philosophers since at least the days of Plato. Plato's Theatetus is a fine example of the negative approach to the problem of specifying the necessary and sufficient conditions for knowledge. Plato's problem in the Theatetus was the problem of finding a third condition to add to those of being true and being believed. What Arthur Danto calls the Standard Analysis of knowledge is one proposed solution to Plato's problem.[2] Various versions of the Standard Analysis have been proposed by C. I.

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[2]Arthur C. Danto, Analytical Philosophy of Knowledge (Cambridge, 1968), p. 73 ff.

Lewis,[3] A. J. Ayer,[4] and Roderick Chisholm,[5] and although their versions are stated differently, they are roughly equivalent to the claim that knowledge is justified true belief. Edmund Gettier has argued, subsequent to the analyses of Ayer and Chisholm, that having a justified true belief is not sufficient for knowing.[6]

This critical survey which I am undertaking is concerned chiefly with attempts to find a fourth condition to supplement the Standard Analysis. These attempts can be classified roughly into four types. Analyses of Type I are analyses where the authors have concentrated on examining the evidence in the Gettier-type cases, claiming that knowledge is absent in those cases because the evidence is related in some way to false statements. As a result, the fourth condition of analyses of this type is a condition designed to rule out knowledge when those relationships to false statements obtain.

The promulgators of analyses of Type II have been concerned, not with the relationship of the evidence to false statements as such, but with the relationship between the evidence and the statement which is claimed to be known. Knowledge is absent in the Gettier-type cases, argue these theorists, not because the evidence is related in certain ways to false statements, but because the relationship between the evidence and the statement to be known lacks certain characteristics. Hence, fourth conditions of analyses of Type II are conditions where these needed characteristics are specified. I have called analyses of Type II "defeasibility-type analyses".

A third type of approach to the problem of how to augment adequately the Standard Analysis is the ad hoc type, where the attempt is made to solve the problem, not in a general way, but by constructing conditions designed to meet the objections of specific types of cases.

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[3]C. I. Lewis, Analysis of Knowledge and Valuation (LaSalle, Ill., 1946), p. 9.

[4]Alfred Jules Ayer, The Problem of Knowledge (London, 1956), p. 34.

[5]Roderick M. Chisholm, Perceiving: A Philosophical Study (Ithaca, 1957), p. 16.

[6]Edmund L. Gettier, "Is Justified True Belief Knowledge?" Analysis, 23 (1963), pp. 121-123.

A fourth approach is the amalgamation of Types I and II, where the authors have attempted to take what is best from both types.

In this part, I show the defects of a number of analyses of Type I and suggest that future attempts of this type are apt to be unsatisfactory. After pointing out some of the problems with the representative of the ad hoc type, I argue that an ad hoc approach is unsatisfactory.

I

A version of the so-called Standard Analysis of knowledge is:

(D. 1) S knows that p if and only if (1) p is true, (2) S believes that p, and (3) S is justified in believing that p (where 'p' is a sentence/statement and 'S' is the name of some person).[7]

A more precise formulation is: For any x and for any y, if x is a sentient being and y is a statement, then x knows that y if and only if y is true, x believes y and x is justified in believing that y. Hereinafter I shall let 'S', in contexts of analyses of knowledge, refer to a particular sentient being.

A. J. Ayer, in The Problem of Knowledge, presents the following version of the Standard Analysis: "I conclude then that the necessary and sufficient conditions for knowing that something is the case are first that what one is said to know be true, secondly, that one be sure of it, and thirdly, that one should have the right to be sure."[8] Translated into a uniform style, Ayer's analysis is:

(D. 2) S knows that p if and only if (1) p is true, (2) S is sure that p, and (3) S has the right to be sure that p.

The first condition, "p is true," is defended by Ayer in the usual fashion; i.e., by appealing to ordinary usage. He says, "For while what is true can be believed, or disbelieved, or doubted, or imagined, or much else besides being known, it is ... a fact of ordinary usage that what is known, in this sense, cannot but be true."[9] The phrase "in this

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[7]Lewis.

[8]Ayer.

[9]Ayer, p. 7.

sense" refers to knowledge in the sense of knowledge that p. Elsewhere, he describes this first condition as a "linguistic fact"[10] and, also, as part of "the meaning of the word 'know'".[11] If S were to have asserted on October 30, 1968: "I know that Humphrey will win the presidential election this fall, " S's listeners of 30 October 1968 might well have said, amidst the football-and-turkey of that '68 Thanksgiving, that S did not really know after all, since what S claimed to know was false. If, in a howling blizzard in the Swiss Alps, your climbing partner says that he knows that the route to the nearest shelter is to the right and if you believe him, then you, too, believe, provided you are rational, that the route is to the right. Even politicians do not know that p when p is false. If some politician were to claim that he knew that p, even though p was false, we might say that he was foolish, stupid, deceptive, etc., but we would not say that he was correct. Thus, I think that Ayer's claim that condition one is part of the meaning of knowledge is quite well-supported. In fact, since the topic of discussion is the knowledge of truths, there really are no grounds for disagreement.

Ayer's second condition, "S is sure that p" is rather sketchily defended. His second condition is introduced in the following passage: "It is indeed true that one is not reasonably said to know a fact unless one is completely sure of it."[12] On the next page, he makes an even stronger claim: "But to say of oneself that one knew that such and such statement was true but that one was not altogether sure of it would be self-contradictory."[13] His defense of this stronger claim is: "... saying 'I know' offers a guarantee which saying 'I may be wrong' withdraws."[14] Ayer's contention here is supported, I believe, by the following scenario: Suppose you are driving your VW through the back woods of California on your way to San Jose. In a little village you ask a police officer, "Do you know the way to San Jose?" He replies, "Yes, go south for ---." Having complete trust in local police officers, you confidently drive south. However, suppose he had said, "Yes, go south for --- but I'm not really sure that that's the way." Would you not suspect some basic confusion existed in the thinking of the police officer? I think you would.

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[10]Ayer, p. 22.

[11]Ayer, p. 15.

[12]Ayer, p. 11.

[13]Ayer, p. 12.

[14]Ayer, p. 22.

Although the evidence adduced from this scenario certainly is not sufficient to justify Ayer's claim, a myriad of cases like it could be constructed which would support his position. I suppose, nonetheless, that I should point out that this second condition is not universally accepted by philosohers. In fact, there is a substantial amount of debate on this issue in the literature.[15] The exploration of this issue is not germane to my task, however.

The third condition arises because, as Ayer says: "...it is possible to be completely sure of something which is in fact true, but yet not to know it."[16] Suppose that after much study of the current fluctuations of the Delaware River I irrationally become fully convinced that my wife is having an affair with the milkman. Suppose, further, that she is having the affair. Surely I cannot be said to know even though I am completely sure of something that is true. Or, suppose that, while combing my cat I suddenly become completely sure that there are rational creatures on the third planet in the solar system around Vega who have written my name in their Book of Heroes. Suppose further that it's true. Do I know? Surely not! But why not? Ayer says that I am not justified;[17] I am not entitled to be sure;[18] my being sure fails to meet the standards required for knowledge;[19] I do not have the right to be sure.[20] It's this last formulation which Ayer selects as his third condition. Knowledge is more than a lucky guess. To have knowledge that p one's attitude about p (one's belief, one's feeling

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[15]See, for example, Carolyn Black, "Knowledge without Belief", Analysis 31 (1971), pp. 153-158. L. Jonathan Cohen, "Claims to Knowledge," Proceedings of the Aristotelian Society, suppl. 36 (1962), pp. 33-50. Jonathan Harrison, "Does Knowing Imply Believing," Philosophical Quarterly 13 (1963), pp. 322-332. Keith Lehrer, "Belief and Knowledge", Philosophical Review (1968), pp. 491-499. Norman Malcolm, "Knowledge and Belief", Mind 61 (1952), pp. 178-189. Colin Radford, "Knowledge--By Examples", Analysis 27 (1966), pp. 1-11. A. D. Woozley, "Knowing and Not Knowing," Proceedings of the Aristotelian Society 53 (1953), pp. 151-172. Keith Lehrer, Knowledge, pp. 49-74.

[16]Ayer, p.29.

[17]Ayer, p. 5.

[18]Ayer, p. 29.

[19]Ayer, p. 29.

[20]Ayer, p. 31 ff.

sure) must conform to certain standards, epistemic standards. This right to be sure may be earned in various ways, according to Ayer.[21] At least, there is no good reason to suppose that there is one and only one set of standards to which one must conform in order to be granted the right to be sure. Thus, "knowledge" for Ayer is both a descriptive and a normative predicate. It is descriptive in that it describes in part the cognitive state of some sentient being. It is normative in so much as it deals with the standards required for having the right to be in such a cognitive state. This normative aspect of knowledge is analogous to the approach commonly used in ethics for determining when someone has the right to perform a particular action: there are certain standards, or criteria, which, when satisfied, enfranchise a person for the performance of the act in question. Furthermore, just as there are disagreements regarding standards in ethics, there also are disagreements regarding standards in this area of epistemology: the skeptic raises questions about the appropriateness of certain standards when dealing with knowledge claims; the pacifist raises questions about the appropriateness of certain standards in ethical behavior.

There is an ambiguity, unfortunately, in Ayer's third condition, an ambiguity relevant to the ethical analogy just briefly discussed. Is Ayer's term 'right' an ethical term where the right to be sure is to be determined by ethical standards? Is it strictly an epistemological term involving epistemological standards? Or is it a mixture of both? Ayer's use of alternative formulations of this third condition, in which he employs the terms "justified," "entitled," "meet the standards," does little to disambiguate 'right' since each one of these terms also is ambiguous in the same way. It is clear, I think, that Ayer does not intend 'right' to have solely an ethical use here. His examples and his discussions of problems involving the standards mentioned are sufficient proof of this contention. There is no reason to assume that only ethical contexts are normative.

The problem here is whether or not 'right' is strictly an epistemological term or is both an ethical and epistemological term. I believe Ayer's intentions were to have it strictly epistemological, but his failure to be explicit on this point has left him potentially vulnerable to rather interesting counter-cases.

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[21]Ayer, p. 34.

Herbert Heidelberger, in his article "On Defining Epistemic Expressions" is of the opinion that in his formulation of the third condition Ayer has replaced an epistemic condition with an ethical one.[22] Heidelberger then points out that a person can have the right to be sure for other than epistemic reasons. "It would not be absurd," he points out, "to maintain that an athlete has the right to be sure--to be confident--that he will win and that a religious man has the right to be sure that there is a God in Heaven, although neither has sufficient evidence for his beliefs."[23] That being the case, then if there is an athlete who is sure he will win and who will win, then on Ayer's account of knowledge the athlete knows even though he has no evidence. Whether or not Heidelberger has a genuine counter-case here against Ayer and whether or not Ayer could avoid Heidelberger's objections by being more explicit about how he intends the word 'right' to be taken are not particularly important to this study. What is important, however, is the ethical analogy which will play an important role throughout most of what follows.

There are those who find in the writings of the late Bertrand Russell suggestions of counter-cases to Ayer's analysis.[24] Russell's actual cases were not formulated as counter-cases against the Standard Analysis or against Ayer's version of that analysis; rather, they were simple cases constructed to show that knowledge was more than just true belief. In The Problems of Philosophy, he argues: "If a man believes that the late Prime Minister's last name began with a B, he believes what is true, since the late Prime Minister was Sir Henry Campbell Bannerman. But if he believes that Mr. Balfour was the last Prime Minister, he will still believe that the late Prime Minister's last name began with a B, yet this belief, though true, would not be thought to constitute knowledge."[25]

The case certainly works against the analysis of knowledge as true belief, but suppose that the man mentioned

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[22]H. Heidelberger, "On Defining Epistemic Expressions," Journal of Philosophy 60, (1963), p. 345.

[23]Heidelberger.

[24]G. Harman, "Lehrer on Knowledge," p. 242; P. Unger, "An Analysis of Factual Knowledge," p. 165; E. Sosa, "Propositional Knowledge," pp. 33-34; I. Scheffler, Conditions of Knowledge, p. 112.

[25]B. Russell, The Problems of Philosophy, (Oxford, 1959), pp. 131-132.

above had the right to be sure that the Prime Minister's last name began with a 'B', then the Russell case does serve as a counter-case to Ayer's analysis. Of course, Russell doesn't make this supposition and it is not clear that such a supposition would be appropriate in this case.

Russell's second example, however, is more plausibly stretched into a counter-case against Ayer. He says: "If a newspaper, by an intelligent anticipation, announces the result of a battle before any telegram giving the result has been received, it may by good fortune announce what afterwards turns out to be the right result, and it may produce belief in some of its less experienced readers. But in spite of the truth of their belief, they cannot be said to have knowledge."[26] If one conjoins this case with the claim made a few pages later by Russell that there are some announcements made by newspapers which we are "fairly well-justified in believing,"[27] and if one supposes that this is one of those announcements, then Russell has been made to have a case against Ayer.

In his Human Knowledge: Its Scope and Limits, Russell gives yet another case against the analysis of knowledge as true belief which has been construed as suggestive of a case against the Standard Analysis.[28] Israel Scheffler sees Russell's example as follows: "Russell's example (though he does not develop it in this way) is as follows: A man 'looks at a clock which is not going, though he thinks it is, and ... happens to look at it the moment when it is right.' He acquires true belief as to the time, which is, moreover, justified, if we assume he has good grounds to suppose the clock is going. Yet it seems wrong to hold that he knows that it is (say) three o'clock."[29] It is safe to say that these reconstructed versions of Russell's cases were not precisely what he had in mind. But in any case, it certainly appears that they present problems for Ayer's analysis.

Another version of the Standard Analysis is presented by Roderick Chisholm in Perceiving: A Philosophical Study.[30]

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[26]Russell, p. 132.

[27]Russell, p. 133.

[28]B. Russell, Human Knowledge: Its Scope and Limits, (New York, 1948), pp. 154-155.

[29]I. Scheffler, Conditions of Knowledge, (Glenview, Ill., 1965), p. 112.

[30]Roderick M. Chisholm, Perceiving.

Maintaining that "knows that" has at least two epistemic senses, Chisholm restricts "know" to the broader sense and uses "certain" for the narrower sense.[31] Within the broader sense he finds three different meanings, the chief one--the one which he prominently displays, of which the other two are derivative, and to which nearly all the attention of his critics is directed--being:

(D. 3) "S knows that h is true" means: (i) S accepts h; (ii) S has adequate evidence for h; and (iii) h is true.[32]

The second of the broad senses of "knows that" which Chisholm finds is (using "knows$_1$" to distinguish it from "knows"):

(D. 4) S knows$_1$ that h if and only if S knows that he has adequate evidence for h.[33]

This analysis is somewhat ambiguous, however, since it is not clear whether Chisholm intends this to be the sole condition for "knows$_1$" or whether he intends it to be merely a replacement for (ii) in (D.3). Since the former interpretation allows S to know$_1$ that h either when he doesn't accept h or when h is false, it is reasonable to assume that what Chisholm wants for "knows$_1$" is:

(D. 4') S knows$_1$ that h if and only if (1) h is true, (2) S accepts h, and (3) S knows that he has adequate evidence for h.

His third sense of the broad meaning of "knows that" is:

(D. 5) S knows$_2$ that h if and only if (1) h is true, (2) S has adequate evidence for h, and (3) S accepts h because he has adequate evidence for h.[34]

The narrow sense of "knows that" for which Chisholm uses the word "certain" is:

(D. 6) S is certain that h if and only if (1) S knows that h and (2) there is no hypothesis i such that i is more worthy of S's belief than h.[35]

The expression "has adequate evidence," which is found in all three of Chisholm's broad senses of "knows that," is not an undefined expression, the meaning of which is derived and

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[31]Chisholm, Perceiving, p. 16.

[32]Chisholm, Perceiving, p. 16.

[33]Chisholm, Perceiving, p. 18.

[34]Chisholm, Perceiving, p. 19.

[35]Chisholm, Perceiving, p. 19.

dependent upon our shared intuitive understanding. Rather, "has adequate evidence" is a technical expression for which Chisholm offers the following definition:

(D. 7) "S has adequate evidence for h" means that it would be unreasonable for S to accept non-h.[36]

Furthermore,

(D. 8) "It would be unreasonable for S to accept h" means that non-h is more worthy of S's belief than h.[37]

Now, by substitution Chisholm's chief analysis of knowing becomes:

(D. 3') S knows that h if and only if (1) h is true, (2) S accepts h and (3) h is more worthy of S's belief than non-h.

The notion "more worthy of belief" is left undefined as is the notion of acceptance. Chisholm does suggest that, however else "more worthy of belief" is understood, it should be taken in a practical, rather than an absolute sense.[38] This distinction between the practical sense and the absolute sense of "more worthy of belief" is elaborated by Chisholm by one of his many analogies drawn between ethical and epistemic notions. He says,

> Using the ethical term "right" in its absolute sense, we may say that no one can ever know what actions are right; for no one can ever know what all of the consequences of any action will be. In this absolute sense of "right", perhaps it would have been right for someone to have killed Hitler and Stalin when they were infants; perhaps their parents acted (absolutely) wrongly in allowing them to live. But in the practical sense of "right" such killings would not have been right. It was not possible, when Hitler and Stalin were infants, for anyone to foresee the harm they would do and, I think we may assume, there is no motive which would have justified putting them to death.[39]

I suppose that what this analogy is intended to show is that no matter what criteria are employed to determine when a statement is more worthy of S's belief than some other statement one will never be in a position to say absolutely that all of the criteria are satisfied with regard to a

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[36]Chisholm, Perceiving, p. 5.

[37]Chisholm, Perceiving, p. 5.

[38]Chisholm, Perceiving, p. 8.

[39]Chisholm, Perceiving, p. 7.

particular statement, but that, practically speaking, the criteria, or rather, some subset of them, can be satisfied. Furthermore, Chisholm urges that all the epistemic terms used by him in Perceiving be taken in the practical, rather than the absolute sense.[40]

With regard to the other undefined expression in his analyses of "knows that," viz., "S accepts h", he states that the expression "S assumes that h" is a replacement for it.[41] There is also a sense of "believe" in which "S believes that h" serves as a substitute for "S accepts h."[42]

If we assume that Ayer is using "believe" in the same sense that Chisholm suggests is appropriate in the analysis of "knows that," then Chisholm's and Ayer's analyses differ only in the third condition. However both of these third conditions have a normative perspective and both contain important undefined locutions. Furthermore, it is these important locutions which cause similar difficulties for each analysis. In Herbert Heidelberger's article which we mentioned earlier, difficulties are found with regard to Ayer's formulation since the right to be sure may be earned for non-epistemic reasons.[43] Heidelberger also examines in that article an earlier formulation of Chisholm's and finds flaws in it, but that work need not detain us here. It is interesting to note, however, that what Heidelberger says about Ayer's third condition can be applied equally well to Chisholm's third condition. That is, it seems reasonable to suppose that some statement, h, may be more worthy of S's belief than non-h for other than epistemic reasons, perhaps for ethical reasons. If this is so, then Chisholm's analysis of "knows that" would lead us to conclude that S knows that h even though all would agree that he does not know it.

Another problem with Chisholm's analysis is that if probability is the measure used to determine whether one statement is more worthy of belief than another statement, the analysis would lead us to conclude that S knows all those true beliefs which just happen to be slightly more

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[40]Chisholm, Perceiving, p. 8.

[41]Chisholm, Perceiving, p. 16.

[42]Chisholm, Perceiving, p. 17.

[43]Heidelberger, pp. 345-346.

probable than their denials, a result which is surely unacceptable, even considering that we are using these epistemic terms in their practical sense.

None of the deficiencies mentioned heretofore are crushing, however. Chisholm need not grant to probability theory the role of measuring the relative worthiness of statements. Although he did in fact grant to probability theory such a role in Perceiving, he has not continued to do so in his subsequent work. Furthermore, it is easy to suppose that whatever criteria are proposed to determine such worthiness would be such as to rule out the type of counter-cases presented by Heidelberger.

II

All is not well with Chisholm's analysis, however. Edmund Gettier in his brief, but oft-cited paper, Is Justified True Belief knowledge?[44] presents two incisive counter-cases to the analyses of Ayer and of Chisholm. Actually, Gettier's arguments are against the Standard Analysis, of which he considers, it appears, Ayer's analysis and Chisholm's analysis to be derivative if not equivalent.

In developing his cases, Gettier makes two assumptions, which, even if not true, are surely reasonable and have a wide acceptance among laborers in this field:

(P. 1) It is possible for a person to be justified in believing a proposition that is in fact false;

(P. 2) For any proposition p, if S is justified in believing p and p entails q and S deduces q from p and accepts q as a result of this deduction, then S is justified in believing q.[45]

In his first example, Gettier asks his readers to suppose that two men, Smith and Jones, have applied for the same job and that Smith has evidence which justifies him in believing the following conjunctive statement: (a) Jones is the man who will get the job and Jones has ten coins in his pocket. Exactly what this justifying evidence is Gettier declines to say. However, he does say that Smith's evidence for (a) might be that the president of the firm assured Smith that Jones would be hired and that Smith had just counted the coins in Jones' pocket. Smith, who is rather talented in deductive logic, sees that (a) entails (b): The man who

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[44]Gettier.

[45]Gettier, p. 121.

will get the job has ten coins in his pocket. Since Smith accepts (b) as a result of its being entailed by (a) and since Smith is justified in believing (a), it follows by (P.2) that Smith is justified in believing (b).

However, in spite of the president's assurances to Smith that Jones will get the job, it is Smith who will get the job, a fact for which Smith has no evidence. Furthermore, Smith also happens to have, unknowingly, ten coins in his pocket. Thus, (b) is true, but (a) is false.

Now, even though Smith's belief in (b) is justified and (b) is true, it is surely the case, argues Gettier, that Smith does not know that the man who will get the job has ten coins in his pocket. Hence, in this case, justified true belief is not knowledge.

In his second example, we are asked to imagine that Smith's evidence justifies him in believing the following statement: (c) Jones owns a Ford. Once again, Gettier does not attempt to present the statements of evidence which justify Smith's belief, but rather he merely indicates what that evidence might be: Smith's remembering that Jones had always owned a Ford, Smith's very recent ride in a Ford being driven by Jones, etc.

Smith, for unknown reasons, formulates the following statement: (d) Either Jones owns a Ford or Brown is in Barcelona. Now Smith has absolutely no idea of Brown's location, but he does see that (c) entails (d). Furthermore, he deduces (d) from (c), accepts (d) as a result of his deduction, and is justified in believing (c). Hence, by (P.2) Gettier concludes that Smith is justified in believing (d). However, Jones uncharacteristically has sold his only Ford and is driving a rented car, but Brown, by the sheerest of coincidences, just happens to be in Barcelona. Thus, (d) is true, even though (c) is false. Nevertheless, Smith has a justified true belief that either Jones owns a Ford or Brown is in Barcelona, but surely Smith does not know that either Jones owns a Ford or Brown is in Barcelona. Here again is another example of a justified true belief which is not knowledge.[46]

Both of the cases have the following structure:

(S.1) (i) The evidence, e, justifies S in believing that q;

(ii) q entails p;

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[46]The two cases are paraphrased from Gettier, pp. 122-123.

(iii) p is true;
(iv) S believes that p;
(v) S is justified in believing that p on the basis of (P.2) and (i) and (ii);
(vi) q is false; and
(vii) even though (iii), (iv) and (v) satisfy the conditions for knowing, S does not know that p.

The casual reader of Gettier's cases might mistakenly assume that the evidence which Smith has is all the evidence there is and that certainly that paltry bit of evidence does not justify Smith's beliefs in question, thus ruling out the case from being a genuine counter-case. But Gettier says precisely that the evidence Smith has "might be...." This move is made to allow the insertion of whatever evidence is deemed necessary to justify, but not entail the belief in question.

Perhaps Gettier's position could be explained more readily by introducing the distinction between background evidence and new evidence.[47] Background evidence is that evidence relevant to the hypothesis in question which the person has formerly acquired. New evidence is that evidence relevant to the hypothesis in question which the person has lately acquired, or at least, acquired subsequent to the acquisition of the background evidence. In Gettier's cases, the background evidence has not been specified, but the new evidence is specified. Gettier is assuming that the conjunction of the background evidence and the new evidence will justify Smith's beliefs in the two cases.

Is the Standard Analysis correct? Is justified true belief knowledge? Gettier has shown clearly that it is not.

III

Although it would be incorrect to claim that the Gettier attack on the Standard Analysis has gone unchallenged, it is fair to say that his attack has generated very little published opposition. One noteworthy attempt to overturn the Gettier cases has been made by Irving Thalberg.[48]

Thalberg argues that the Gettier counter-cases are not

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[47]Issac Levi, Gambling with Truth, (New York, 1967), pp. 30, 59-60.

[48]Thalberg, "In Defense of Justified True Belief," Journal of Philosophy 66 (1969), pp. 794-803.

genuine instances of a justified true belief which is not knowledge. His primary target is what he calls "The principle of deducibility for justification". I labeled this principle (P.2) earlier:[49]

(P.2) For any proposition P, if a person S is justified in believing P and P entails Q and S deduces Q from P and accepts Q as a result of this deduction, then S is justified in believing Q.

Thalberg considers the following to be the situation for the first Gettier case: (in the following 'e_1' and 'e_2' stand for statements of evidence) (a) e_1 justifies (1): Jones will get the job. (b) e_2 justifies (2): Jones has ten coins. Thalberg now claims that Gettier goes from (a) and (b) by means of (P.2) to Smith is justified in believing (3): Jones is the man who will get the job, and Jones has ten coins. And finally, from (3) and (P.2), Gettier deduces that Smith is justified in believing (4): The man who will get the job has ten coins. "What I deny," says Thalberg, "is that Smith's justification for believing carries over from (1) and (2) to (3), and on to (4)."[50]

Thalberg argues against the move from (1) and (2) to (3) by a probability analogy. He argues that you multiply your risks of being wrong when you believe a conjunction.[51] Here, of course, he has in mind the traditional conjunction theorem of elementary probability theory: viz., if p and q are independent, then the probability of $(p \cdot q)$ equals the probability of p times the probability of q. It is an immediate consequence of this conjunction theorem that for any two events, p and q, whose probabilities are less than 1, the probability of their conjunction will be less than the probability of either one. Thalberg suggests that in this situation it could be that Smith is minimally justified in believing (1) and in believing (2) and hence he would not be justified in believing (3).

A number of responses can be made to Thalberg on this score. First, it certainly is doubtful that Gettier is arguing from being justified in believing (1) and being justified in believing (2) to being justified in believing (3). In fact, he says in his article, "...suppose Smith has strong evidence for the following conjunctive proposition..."[52] He then suggests what that evidence might be. Secondly, it

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[49] See above, p. 12.

[50] Thalberg, p. 797.

[51] Thalberg, p. 798.

[52] Gettier, op. cit., p. 122.

is clearly invalid to argue from being justified in believing that (1) and being justified in believing that (2) to being justified in believing that (3) via (P.2). That principle governs cases where one proposition entails another, but what we have here in Thalberg's case is two propositions entailing a third one. Thalberg appears to think that such a method of arguing is legitimate and that Gettier has utilized it. I think that he is mistaken on both counts. Thalberg is attacking the Deduction Principle with arguments more appropriate against the Conjunction Principle, a principle neither stated nor used by Gettier.

Finally, although I do not care to defend at the moment any version of the Conjunction Principle, the force of Thalberg's arguments against it can be weakened considerably by pointing out that there is a widespread belief that justification cannot be modeled effectively by probability theory and consequently, any argument constructed about justifications which is modeled on probability theory will have little force.

Thalberg's second argument against the first Gettier case is leveled against the move from being justified in believing (3) to being justified in believing (4). He argues that Smith has evidence only for the singular propositions about Jones, but not for the general proposition: "There is one and only one person who will be hired and who has ten coins." Thalberg argues: "...he has grounds to expect that Jones will have the attribute of being hired; and he has grounds to believe that Jones presently has the attribute of carrying ten coins. What does this evidence about Jones's attributes have to do with believing that whoever will be hired has the attribute of carrying ten coins?"[53] Thalberg has slipped a bit here, for he is arguing about the relation of (1) and (2) to (4), not about the relation of (3) to (4). Hence, what he should have said in the above quote is: "He has grounds to believe that Jones will have the attribute of being hired and presently has the attribute of carrying ten coins." Given this substitution, his point can still be made, but not as strongly. Thalberg seems to be pointing out that being hired and having ten coins are not concomitantly related, i.e., are not regularly conjoined-- an observation which is surely accurate--and consequently that being justified in believing that someone will be hired has nothing to do with believing that he has ten coins. But, once again, he seems to be working with the relation of (1) and (2) to (4). Gettier did not suggest that a concomitant relation obtained in the case: it is not really relevant

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[53]Thalberg, p. 799.

to his claims. There is a connection in this instance between being hired and having ten coins; the regularity of this connection is not an issue. The question is: Can one transmit the justified belief in (3), where the connection is given, to (4), which is entailed by (3)?

Thalberg does address himself to this question and, as I stated earlier, answers it negatively. He argues: (a) there are many ways to make (4) true, i.e., many possible substitutions of names of people in the expression "There is one and only one person who will be hired and who has ten coins"; (b) there is only one way to make (3) true, i.e., only Jones will do; (c) Smith has no evidence for any of the other ways; therefore, although Smith is justified in believing (3), he is not justified in believing (4).

This is a curious argument. Thalberg seems to be claiming that even though someone is justified in believing a statement about a particular thing, he is not justified in believing the existential generalization of that statement. That is, even though I am completely justified in believing that Betty Lou is in my office, I am not justified in believing, according to Thalberg, that there is at least one person in my office, because I have no evidence about the many other possibilities which might make the existential true, i.e., I do not know where Bill is, or where Gary is, or where Judy is, etc. But surely this position of Thalberg's approaches nonsense. Why should I have evidence about all the other possible instantiations which might make the existential true before I can be justified in believing it? Perhaps Thalberg has confused existential statements with universal ones. I can think of no better evidence for justifying an existential statement than evidence which justifies a claim about the particular from which the existential is deduced. Of course, the transmittal of justification from an existential statement to one of its instantiations is not proper since more evidence is required to go from "someone" to, say, "Jones". You may have evidence that someone is stabbing you without having evidence that it is Brutus. But surely, if you are justified in believing that it is Brutus, then you are justified in believing that it is someone. On the other hand, even though I am justified in believing that Brutus is stabbing me, surely I am not justified in believing that everyone is stabbing me, precisely because I fail to have evidence about the actions of all the other people.

Thalberg's arguments against the second Gettier case proceed along similar lines. In this second case Smith is justified in believing that (6) Jones owns a Ford. Smith arbitrarily disjoins (6) with (7') "Brown is in Barcelona"

to get (8) "Either Jones owns a Ford or Brown is in Barcelona". Smith has no evidence at all about Brown's location. Since Smith is justified in believing that (6) and since (6) entails (8), etc., Gettier deduces via (P.2) that Smith is justified in believing that (8). The first objection Thalberg raises against this move of Gettier's is this: "...no bookmaker would be justified in allowing Smith to wager on (8) whenever he was justified in allowing Smith to wager on (6)."[54] Of course, Thalberg is correct here if we assume that the bookmaker wants to make money and that there are no other interfering conditions. Nonetheless, it is difficult to see how this tells against Gettier. If the bookmaker is in a position to make money on a bet on (6) then he would be foolish to permit a bet on (8) since there are two possible situations which would make (8) true, while only one situation would make (6) true. But what does this have to do with the transmittal of justification? It would seem more reasonable to suppose that if one's evidence justifies him in believing a strong statement, then that same evidence also justifies him in believing the weaker statement which is entailed by the stronger statement.

The second reason given by Thalberg for rejecting Gettier's move in the second case is: "...Smith's own betting policies should be such that, if they justify a wager on (6) together with one disjunct, they should not simultaneously justify a wager on (6) together with some logically incompatible disjunct. Why not? Because the resulting disjunctions will be true in different circumstances, according to what is disjoined with (6)."[55] Well, the resulting disjunctions might be true in different circumstances, just in case (6) turns out to be false. However, if (6) is true and whatever are disjoined with (6) are false, then the disjunctions will be true in the same circumstances. Anyway, it is hard to see that Thalberg has given us a good reason for establishing Smith's betting policies along the aforementioned lines. So what if the resulting disjunctions will be true under different circumstances! That is to be expected. In fact, it would be shocking if it were not true.

The kind of disjunction in which Thalberg believes one would be justified in believing is a disjunction where each disjunct is supported by evidence. Certainly this is proper, but first of all he has not shown what is wrong with believing in a disjunction where only one disjunct is

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[54]Thalberg, p. 801.

[55]Thalberg, pp. 801-802.

supported by the evidence and, secondly, on his account it is difficult to see how to distinguish the method of justifying beliefs in conjunctions from the method of justifying beliefs in disjunctions.

It does appear, then, that all of Thalberg's arguments against the Gettier counter-cases have failed and that we have not in the least "...gained an important insight that the justification for accepting a proposition is not always transmissible to propositions that it entails.[56]

IV

Following the Gettier devastation of the justified-true-belief analysis of knowing, several unsuccessful attempts were made to add a fourth condition to the analysis. Michael Clark's suggested addition that S's belief that p be fully grounded[57] was quickly refuted by John Turk Saunders and Narayan Champawat,[58] and Ernest Sosa's rather complex proposal,[59] which I shall examine later, was shown to be defective by both Keith Lehrer[60] and Brian Skyrms.[61] Lehrer himself offered an analysis. Seeing that the Gettier counter-cases succeeded primarily because S was justified in believing certain false statements which logically entailed the statement about which the knowledge claim was being made, Lehrer proposed the following analysis:

(D. 9) S knows that h if and only if (1) h is true, (2) S believes that h, (3) S is completely justified in believing that h, and (4) if S is completely justified in believing any false statement p which entails (but is not entailed by) h, then S would be completely justified in believing h even if S were

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[56]Thalberg, p. 803.

[57]M. Clark, "Knowledge and Grounds: A Comment on Mr. Gettier's Paper," Analysis 24, (1963), pp. 46-48.

[58]J. T. Saunders and N. Champawat, "Mr. Clark's Definition of 'Knowledge'," Analysis 25, (1964), pp. 8-9.

[59]E. Sosa, "The Analysis of 'Knowledge that P'," Analysis 25, (1964), pp. 1-8.

[60]K. Lehrer, "Knowledge, Truth and Evidence," Analysis 25, (1965), pp. 168-175.

[61]B. Skyrms, "The Explication of 'X knows that P'," Journal of Philosophy, 64 (1967), pp. 373-89.

to suppose that p is false.[62]

In addition to altering the Standard Analysis by the inclusion of a fourth condition, Lehrer also has changed the third condition by inserting the word "completely". Although Gettier used the phrase "completely justified" in the presentation of his second case,[63] his employment of it did not seem to have any significance above and beyond the customary use of just plain "justified." Although Lehrer does not spell out what he means by "completely justified," he does offer three ways by which a statement can fail to justify completely S in believing that h:

1) the evidence given by the statement is inadequate;
2) although the evidence given by the statement is adequate, S fails to base his belief that h on it; and
3) although the evidence given by the statement is adequate, S fails to be able to provide a plausible line of reasoning from his evidence to h.[64]

The expression "S fails to base his belief that h on it [the evidence]," occurring in the second condition, is explained by Lehrer to mean that S "...would not appeal to that evidence to justify his belief."[65] Although Lehrer's inclusion of these three conditions is somewhat helpful in seeing how he understands the expression "completely justified," it is not sufficient to help his readers discern the difference Lehrer apparently sees between "justifies" and "completely justifies". It should also be pointed out here that the second two of these conditions are far from being non-controversial: Lehrer himself repudiates the second condition in a later paper[66] and if the second condition is no longer applicable, it is hard to see why S is required to be able to provide a plausible line of reasoning to h from that evidence which justifies his belief that h, but on which he is no longer required to base his belief that h.

That Lehrer's analysis avoids the Gettier counter-cases is easily seen. In each of the two cases, Smith is justified, and I suppose we may presume that he is completely justified in believing the false proposition from which the statement he claims to know is deductively inferrable. Moreover, it seems clear from the statements of the cases

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[62]Lehrer, p. 174.

[63]Gettier, p. 123.

[64]Lehrer, p. 168.

[65]Lehrer, p. 168.

[66]Lehrer and Paxson, "Knowledge: Undefeated Justified True Belief," Journal of Philosophy 66 (1969), p. 226.

that if Smith were to suppose that (a) is false (in the first case) and that (c) is false (in the second case), then he would no longer be completely justified in believing that statement it is claimed he knows. Consequently, the fourth condition fails to be satisfied and Smith does not know.

Although Lehrer's analysis successfully avoids the Gettier counter-cases, it is not entirely satisfactory. Even if one ignores the logical problems involved with subjunctive conditionals, there are still serious objections to his analysis. Both Gilbert Harman[67] and Brian Skyrms[68] have offered counter-cases to (D.9). Harman interprets Lehrer to be maintaining the following principle:[69]

(P. 3) If S is completely justified in believing that h, then S believes that h.

If Lehrer does maintain (P.3), then Harman believes that the following case shows (D.9) to be inadequate.[70] Suppose that S is both completely justified in believing that f and completely justified in believing that g, where f and g are both false. Suppose also that S is completely justified in believing that f and g, respectively, entail h; that S believes that h, that h is true, and that, solely because of his being justified in believing that f, in believing that g, in believing that f entails h, and in believing that g entails h, S is completely justified in believing that h. Clearly S does not know that h, since f and g, the bases of his belief, are false. However, Harman argues that Lehrer's fourth condition is satisfied by this example and that, consequently, Lehrer's analysis entails that S knows that h even though he does not. Harman's method here is first to present a statement which appears to show that (D.9, (4)) is not satisfied and then to prove that the condition is satisfied nonetheless. The statement Harman suggests is this:

$$(f \vee g) \ \& \ ((f \vee g) \rightarrow h).$$

Let me call this statement "F". F entails h, F is false; if S were to suppose F to be false, then he would no longer be completely justified in believing that h; and it appears that S is completely justified in believing F, since F is entailed by those statements which S is completely justified is believing. Hence, if the words "it appears that" can be

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[67]Gilbert Harman, "Lehrer on Knowledge," Journal of Philosophy 63 (1966), pp. 241-247.

[68]Skyrms, pp. 382-385.

[69]Harman, p. 242.

[70]Harman, p. 242.

removed legitimately from the previous sentence, then Lehrer's fourth condition is not satisfied and his analysis does entail the correct answer: S does not know that h. However, S does not believe F. It really does not matter why he does not believe, just that it is reasonable to construct the case this way. Hence, it follows by (P.3) that S is not completely justified in believing F. But since S must be completely justified in believing F in order for the fourth condition to be falsified with regard to F, the fourth condition is not falsified and it appears that Lehrer's analysis does entail that S knows that h.

What Harman has shown here is that there is at least one obviously damaging statement which does not rule out knowledge on Lehrer's analysis, thus raising questions about the adequacy of Lehrer's account. Along the way, Harman has also shown that, given (P.3), the following is not an adequate epistemic principle:

> If S is completely justified in believing that p and S is completely justified in believing that q and the conjunction of p and q entails r, then S is completely justified in believing that r.

But to return to Harman's case against Lehrer, in order for his case to be an adequate counter-case, it must be the case that there are no damaging statements which will falsify Lehrer's fourth condition. What other possible candidates are there? There is f, g, 'f entails h,' and 'g entails h,' to name those statements which S is completely justified in believing. In order to be a candidate, rather than just a possible candidate, it must be the case that (1) the statement is false, (2) S is completely justified in believing the statement, and (3) it must entail (but not be entailed by) h. Both f and g meet the first two conditions, but it is not clear that they meet the third condition. Certainly S is completely justified in believing that f entails h and that g entails h, but perhaps these beliefs are false. If these beliefs are false, then f and g fail to meet the third condition listed above and Harman need not consider them. Furthermore, if these beliefs are false, i.e., if 'f entails h' is false and 'g entails h' is false, then Harman need not consider them either as candidates to overturn S's justification for believing that h, since neither of them entails h. But on the other hand, suppose that those beliefs are true, i.e., f does entail h and g does entail h. Then, f and g both satisfy the three conditions required of candidates, i.e., they are false, S is completely justified in believing them and they entail (but are not entailed by) h. However, neither one by itself rules out S's justification for believing that h, i.e., if S were to suppose that f is false, he would still be completely justified in believing that h because of g's support for h; and if S were to suppose

that g is false, he would still be completely justified in believing that h because of f's support for h. Consequently, none of the statements which S is completely justified in believing serve to falsify Lehrer's fourth condition. Furthermore, since Harman has shown that, given (P.3), S need not be justified in believing any logical consequence of statements which he is justified in believing, the consequences of S's justified beliefs are not candidates either. For example, f & g is false; it could entail h, provided that at least one of S's other justified beliefs is true, e.g., f does entail h, but S need not be completely justified in believing that f & g since he need not believe it. Hence, it does appear that Harman does have a satisfactory counter-case, since there is no statement which falsifies Lehrer's fourth condition.

Lehrer has two alternatives here if he wants to preserve his approach to the analysis of knowledge: he can either repudiate (P.3) or make alterations in (D.9, (4)). In a subsequent paper he chooses the former.[71]

Brian Skyrms feels that his Barometer Case and Pyromaniac Case are both counter-cases to Lehrer's analysis.[72] Both of his cases have the basic structure (S.2).[73] It is clear from (S.2, (vi), (v) and (iv)) that Lehrer's conditions (1), (2) and (3) are satisfied, translating "is good evidence for" into "completely justifies." Furthermore, there is a statement which entails Ga, which S is completely justified in believing, and which is false, viz., e & Fa & (x)(Fx → Gx). Now, there seems to be several ways in which S can suppose that e & Fa & (x)(Fx → Gx) is false: suppose either that e is false, that Fa is false, that (x)(Fx → Gx) is false, or any combination thereof. There seems to be two ways to interpret Lehrer's analysis in the light of the aforementioned situation: (1) if S were to suppose that e & Fa & (x)(Fx → Gx) is false in at least one of the ways in which it can be false and it turns out that on this supposition he would no longer be completely justified in believing that Ga, then S does not know that Ga; and (2) if S were to suppose that e & Fa & (x)(Fx → Gx) is false in every one of the ways in which it can be false and it turns out that on this supposition he would no longer be

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[71] Lehrer and Paxson, p. 226.

[72] See below, pp. 38-39, for the details of the cases.

[73] See below, pp. 39-40.

completely justified in believing that Ga, then S does not know that Ga. If the first interpretation is correct, then Skyrms does not have a counter-case here since, if S were to suppose that e & Fa & (x)(Fx → Gx) is false because he supposes that (x)(Fx → Gx) is false, then S would no longer be completely justified in believing that Ga. This is due to the fact that "(x)(Fx → Gx)" is S's primary justifying evidence. It does not help for Skyrms to appeal to (S.2, (iv)) here, i.e., S knows that 'e & Fa' is good evidence for 'Ga', since '(x)(Fx → Gx)' is the justifying support for this statement, too. If S were to suppose that (x)(Fx → Gx) is false, he would no longer be justified in believing that 'e & Fa' is good evidence for 'Ga' and hence (S.2, (iv)) would be false.

Although the first interpretation seems to be the correct one, suppose that it is not. Skyrms still does not have a counter-case. There are seven ways S can suppose e & Fa & (x)(Fx → Gx) to be false. Of those seven ways, four involve supposing (x)(Fx → Gx) to be false. None of these four ways will work, a fact demonstrated in the previous paragraph. Suppose that S were to suppose that e & Fa & (x)(Fx → Gx) is false by supposing that e is false. Then surely S would no longer be completely justified in believing that Ga, since it is this background evidence which permits any justification at all. Hence, that way will not work either. Finally, if S were to suppose e & Fa & (x)(Fx → Gx) to be false by supposing that Fa is false, then, once again, I think that it is quite clear that S would no longer be completely justified in believing that Ga, for without Fa, what reason is there for believing that Ga? Hence, on both readings of Lehrer's fourth condition, Skyrms fails to have a counter-case.

Another attempt to get at the problems raised by apparent devastating effect of false statements on analysis of knowledge is made by Roderick Chisholm in Theory of Knowledge.[74] Although Chisholm is concerned with a broader problem in epistemology than just the analysis of knowledge, viz., the problem of how to go from statements about a person's psychological states to statements about the so-called "external world" or physical objects, he does need an adequate analysis of knowledge in order for his project to be successful. Chapter One (in particular, the long footnote at the conclusion of the chapter) represents his efforts to

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[74]R. M. Chisholm, Theory of Knowledge (Englewood Cliffs, 1966).

avoid the Gettier counter-cases.[75] "Know" along with "evident," "reasonable," et als. is a term of epistemic appraisal,[76] a position which he maintained earlier in his Perceiving.[77] Likewise, as he did in Perceiving, Chisholm takes the expression "more reasonable than" as a primitive and proceeds to present a series of definitions needed in the explication of "knows":

(D.10) A proposition, p, is reasonable for S at t if and only if S's believing at t that p is more reasonable than S's withholding at t his belief that p;

(D.11) A proposition, h, is evident for S at t if and only if (a) h is reasonable for S at t and (b) there is no proposition i such that it is more reasonable for S to believe i at t than it is for him to believe h at t;

(D.12) A proposition, e, justifies at t a proposition, h if and only if e is evident to S at t only if h is evident to S at t.

(D.13) A proposition, p, is a basic proposition at t if and only if (a) p is evident at t and (b) for any proposition, i, if i is evident at t and i justifies p at t then i entails p.[78]

These definitions just given are all that he needs to construct his analysis of "knowing," but there is one more term which is used frequently in his presentation of epistemic rules found in subsequent chapters. That term is "acceptable" and Chisholm defines it as follows:

(D.14) A proposition, p, is acceptable for S at t if and only if S's withholding his belief of p at t is not more reasonable than S's believing that p at t.[79]

Chisholm's initial formulation of his analysis of "knows" is:

(D.15) S knows at t that h is true, provided: (1) S believes h at t; (2) h is true; and (3) h is evident at t for S.[80]

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[75]Chisholm, T. of K., pp. 5-23, especially pp. 18-23.

[76]Chisholm, T. of K., p. 18.

[77]See Chisholm, Perceiving, Chapter 1. Also see above, p. 11.

[78]Chisholm, T. of K., pp. 22-23. My phrasing throughout.

[79]Chisholm, T. of K., p. 22. (My phrasing)

[80]Chisholm, T. of K., p. 23.

However, in the footnote to this analysis, he suggests that perhaps this definition does not avoid the Gettier counter-cases and presents there a fourth condition which he thinks will both take care of the Gettier problem and also make his definition of "know" recursive. The fourth condition is:

> Either (a) h is a basic proposition for S at t, or (b) h is entailed by a set of propositions that are known by S at t; or (c) a proposition that is known by S at t and that does not justify any false proposition justifies h.[81]

In terms of Skyrms' definitions, any knowledge claim satisfying (a) is basic knowledge, satisfying (b) is non-basic derivative knowledge, or satisfying (c) is non-basic non-derivative knowledge. Translating Chisholm's analysis into the standard form, we get (omitting the temporal references):

(D.15') S knows that p if and only if (1) p is true, (2) S believes that p, (3) p is evident for S and; (4) either (a) p is a basic proposition for S, or (b) p is entailed by a set of propositions that are known by S, or (c) there is a proposition, q, such that (i) q is known by S (ii) q does not justify any false propositions, and (iii) q justifies p.

That Chisholm's analysis avoids the Gettier-type cases is readily shown. (i) and (vi) of the Gettier-type case structure,[82] (S.1), entails that there is a proposition, e, which is known by S but which also justifies a false proposition, viz., q. Since p in the Gettier-type cases is neither a basic proposition nor entailed by a set of propositions known by S, Chisholm's fourth condition fails to be satisfied, and the Gettier-type cases are avoided. Chisholm's analysis also avoids those cases having the same structure as Skyrms' causal cases (and hence the Performative Case and the Testimonial Case). According to (i), (ii) and (vii) of (S.2),[83] there is a proposition, viz., "e & Fa" which is known by S but which does justify (is good evidence for) a false proposition. Hence, since neither (a), (b) nor (c) of Chisholm's fourth condition is satisfied, S does not know in these types of cases either.

Chisholm's attempt is not without its difficulties.

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[81]Chisholm, T. of K., p. 23 (substituting "a", "b" and "c" for "1", "2", and "3").

[82]See above, pp. 13-14.

[83]See below, pp. 39-40.

First of all, the definition of "evident" seems much too strong. Although Chisholm did not say so, it seems reasonable to claim that at least some tautologies and perhaps some other propositions which are certain are more reasonable for S to believe than any contingent proposition. If this is so, then the only propositions which will be evident for S are some tautologies and some propositions which are certainties, which means, of course, that these aforementioned propositions are the only kinds of propositions that S can know. Secondly, Lehrer and Paxson argue that the inclusion of (4, c) makes the analysis too strong. They argue that in cases of non-derivative knowledge "...it seems reasonable to suppose that every statement, whatever epistemic virtues it might have, completely justifies at least one false statement."[84] If this is so, then, of course, no one can possess non-basic, non-derivative knowledge, according to Chisholm's analysis. As an example of this deficiency, consider the following example. Suppose Willard is bird-watching along a stretch of rocky coastline one cloudless morning in June. While scanning the sky with his high-powered binoculars, he chances to see a tiny object fall from an airplane passing very high overhead. He follows the descent of this object and as it approaches, Willard is horrified to discover that it is a man. The body slams into the rocks just in front of Willard. Willard concludes, "The man is dead" and I think we would agree that Willard knows that the man is dead. Unfortunately, Willard's evidence also justifies him in believing that the man died from the fall, a false belief, since the man was murdered on board the airplane. Since this is an instance of non-basic, non-derivative knowledge, it is presumed, the statement "The man is dead" is neither a basic proposition nor entailed by other statements known by Willard. Hence, according to Chisholm's analysis, for Willard to know that the man is dead, it must be the case that the conjunctive statement of evidence which is known by Willard and which justifies his belief that the man is dead does not justify any false proposition. Although in other versions of this case it might be possible for there to be other conjunctive statements of evidence which do allow it to be concluded that, on Chisholm's analysis, Willard knows that the man is dead, nevertheless, it is just as reasonable to construct this case such that there is no other conjunctive statement of evidence which justifies Willard's belief that the man is dead. Hence, the only statement of evidence which is known to Willard and which justifies his belief that the man is dead also justifies a false proposition. Consequently, according to Chisholm's analysis, Willard does not

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[84]Lehrer and Paxson, p. 234.

know.[85]

In a later article,[86] Chisholm attempts to correct and to improve, among other things, his analysis from Theory of Knowledge, (D.15'). The first thing that readers of both accounts will note is that Chisholm has redefined his basic terms.[87] Whereas in Theory of Knowledge "more reasonable than" was the primitive expression, now it is "epistemically preferable". "Evident" in Theory of Knowledge becomes "certain" and "beyond reasonable doubt" becomes "evident". This series of redefinitions gets Chisholm out of some of the trouble that plagues (D.15'), but it certainly causes a bit of confusion for the reader of both accounts. Some of Chisholm's new definitions are:[88]

(D.16) h is evident for S if and only if believing h is epistemically preferable to withholding h for S.

(D.17) h is self-presenting for S at t if and only if (i) h is true at t and (ii) necessarily if h is true at t then h is evident for S at t.

(D.18) h is axiomatic for S if and only if (i) S accepts h, (ii) necessarily h is true, and (iii) necessarily if S accepts h then h is evident for S.

(D.19) h is a priori for S if and only if there is an e such that (i) e is axiomatic for S and (ii) the proposition that e entails h is also axiomatic for S.

(D.20) h is basic for S if and only if either h is self-presenting for S or h is a priori for S.

Although I have chosen not to include them, Chisholm also defines "there is some presumption in favor of h for S", "h is unacceptable for S", "h is beyond reasonable doubt for S", "h is counterbalanced for S", and "h is certain for S".[89] Chisholm defines these terms in such a way that "For our subject S, at any given time t, every proposition falls into one and only one of seven categories: (1) h is evident; (2) h is beyond reasonable doubt but not evident; (3) h has some presumption in its favor but is not beyond reasonable doubt; (4) h is counterbalanced; (5) not-h has some presumption in its favor but it is not beyond reason-

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[85]The example bears certain similarities to what might be titled "The Severed Head Case" in Skyrms, pp. 385-386.

[86]Chisholm, "On the Nature of Empirical Evidence" in Chisholm and Swartz, Empirical Knowledge: Readings from Contemporary Sources (Englewood Cliffs, 1973), pp. 224-249.

[87]Chisholm, "On the Nature...", pp. 225, 227, note 5.

[88]Chisholm, "On the Nature...", pp. 230, 231.

[89]Chisholm, "On the Nature...", p. 230.

able doubt; (6) not-h is beyond reasonable doubt but is not evident; and (7) not-h is evident."[90]

Having presented some of Chisholm's definitions that pertain to the status of a particular proposition to someone, I shall now present a series of definitions involving relationships among particular propositions for someone. These definitions involve an analysis of the justification relationships. I might note in passing that in Theory of Knowledge, Second Edition, Chisholm suggests that "justifies", suitably restricted, could be used for "makes evident".[91]

(D.21) e tends to confer evidence upon h for S if and only if (i) e is basic for S, (ii) necessarily, if e is basic for S, and if everything basic for S is entailed by e, then h is evident for S, and (iii) it is possible that everything basic for S is entailed by e.[92]

Chisholm says that this definition of "tends to confer evidence upon" is roughly equivalent to: (i) e is basic for S and (ii) if e were the only proposition that is basic for S, then h would be evident for S.[93]

(D.22) e confers evidence upon h if and only if necessarily, for every i and every S, if i tends to confer evidence upon e for S, then i entails something that tends to confer evidence upon h for S.[94]

(D.23) e makes h evident for S if and only if (i) e is evident for S and (ii) for every i, if i is evident for S, then the conjunction, e and i, confers evidence upon h.[95]

It is the inclusion of clause (ii) in (D.23) that might lead one to classify this account of Chisholm's as a Type II account. Chisholm says that this second clause has been included to assure "...us that the evidence e provides has not been defeated or overridden by any other proposition that is evident for S."[96] The idea, of course, is to rule out knowledge in those cases where damaging, or defeating, evidence is evident for S, but which S omits, either intentionally or

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[90]Chisholm, "On the Nature...", p. 229.

[91]Chisholm, Theory of Knowledge, Second Edition (Englewood Cliffs, 1977), p. 102.

[92]Chisholm, "On the Nature...", p. 236.

[93]Chisholm, "On the Nature...", p. 235.

[94]Chisholm, "On the Nature...", p. 236.

[95]Chisholm, "On the Nature...", p. 236.

[96]Chisholm, "On the Nature...", p. 234.

unintentionally, from the set of otherwise justifying, evident propositions. However, it is more of a total evidence requirement than it is a non-defeasibility requirement. What it does is simply to require that S appeal to all of the relevant evidence in his possession, rather than to a selected subset of that evidence. Defeasibility analyses, as will be shown later on, differ in at least two respects from Chisholm's account here: first, the defeating statement must be true, whereas Chisholm requires only that it be evident; and secondly, defeasibility accounts do not require that the defeating statement be evident, or justified for S, whereas Chisholm's account does. Hence, although it might appear to some readers that Chisholm's account here is really an amalgamation of Types I and II, I do not believe that it is. That it is a Type I account will be shown shortly.

Chisholm's account of knowledge is:

(D.24) S knows that h is true if and only if (i) S accepts h, (ii) h is true, and (iii) h is equivalent to a conjunction of propositions each of which is evident and nondefective for S.[97]

The key to the analysis, of course, is clause (iii) with its notion of a nondefective proposition. Chisholm defines "defective" rather than "non-defective", but since that definition is long and involved, I will present only what it is to be a non-defective proposition for S.[98]

(D.25) h is non-defective for S if and only if either (i) h is basic for S or (ii) there is some basic proposition for S which makes h evident for S and which is such that all false propositions made evident for S by it are also made evident for S by all other evident propositions for S.

Here is the part of the analysis that leads me to classify it as a Type I account: knowledge is lacking in those cases where the evidence justifies a false proposition which is not justified by all of the rest of what S knows or what is evident for him.

Chisholm's account easily avoids the Gettier cases.[99] In those cases the evidence, e, justified a false belief, q, which in turn entailed a true belief, p, the knowledge claim. No matter how one interprets those complex conditions of Chisholm's definitions (D.21, 22, 23), if e is a basic proposition which makes p evident, then e will also

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[97]Chisholm, "On the Nature...", p. 240.

[98]Chisholm, "On the Nature...", p. 240.

[99]See above, pp. 13-14.

make q evident in these Gettier cases. But as Chisholm points out, p is also evident and it does not make q evident. Hence, Chisholm's third condition of (D.24) is not satisfied and there is no knowledge for S in these cases.

Bryan Skyrms' Barometer and Pyromaniac Cases appear to be counter-cases to D.24).[100] In those cases, S accepts Ga and Ga is true. The evidence, q, is equivalent to e & Fa, where q is basic and makes Ga evident for S. Furthermore, q makes evident a false proposition, (e & Fa & (x)(Fx ⊃ Gx)), but S is not aware of this false proposition. Hence, if one were to suppose that q makes evident no other false proposition, it might be said that (D.25, (ii)) is satisfied because S is not aware of the false proposition and hence, S knows Ga on Chisholm's account when S should not be said to know Ga. This move against Chisholm will not work, however, because Chisholm does not require that S be aware of, or believe, or accept, what is evident for him. Just as Lehrer and others are willing to allow that a statement may be justified for S without S's believing that statement, so too is Chisholm willing to accept that some propositions may be evident for S without S's being aware of that proposition. Hence, since q makes evident a false proposition for S which Ga does not make evident, S does not know and Skyrms' cases will not work against (D.24) and, for that matter, neither will Swain's cases for similar reasons.[101]

The alleged counter-cases which I have discussed above were all attempts to show that Chisholm's analysis was too broad, admitting as knowledge true beliefs which in fact should not have been admitted. In a case which I discussed earlier with regard to Chisholm's (D.15'), Willard and the Falling Body, I argued that (D.15') was too narrow, denying knowledge when it should not have been denied.[102] That case appears to work here on (D.24) as well. Let q be Willard's evidence, viz., watching with binoculars a body falling freely from a high-flying airplane, seeing the body slam into the rocks at Willard's feet, etc. Willard surely knows that h, the man is dead. q, which includes other statements covered by the "etc." surely makes h evident for Willard. But q also makes evident a false proposition, r, that the man died from the fall. Unfortunately, h alone does not make r evident for Willard and hence, on (D.24), Willard does not know that the man is dead, a clearly counter-intuitive, and unacceptable result.

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[100] See below, pp. 38-39.

[101] See below, pp. 41-42.

[102] See above, p. 27.

Chisholm, however, argues against such alleged counter-cases in his Theory of Knowledge, Second Edition.[103] Chisholm, in dealing with another case having a similar structure, says that although q may make r reasonable for Willard, it surely does not make r evident for him. It would seem to be quite appropriate, suggests Chisholm, for someone to ask Willard why he thought that the fall killed the man rather than the man dying from some other cause (e.g., his neck was broken on the plane). Chisholm is quite right about this case and the particular r which I have suggested. The account has not been shown to be too narrow. However, there may be other justified false beliefs which cannot be so easily ruled out and which will not be justified by all other evident propositions for Willard. To quote Lehrer and Paxson again:[104] "...it seems reasonable to suppose that every statement, whatever epistemic virtues it might have, completely justifies at least one false statement." Of course, the burden of proof in this situation, it seems to me, is on me to produce such a false proposition, which I cannot do at the moment.

There is a problem, though, with (D.24) which I do not believe Chisholm can avoid as easily as he has avoided these earlier ones. The case of Mrs. Grabit and her boys will be discussed in much more detail later on[105], but permit me to construct briefly a version of the case which was inspired by what Sosa has to say regarding it.[106] I have just seen a student of mine, Tom Grabit, well-known to me, remove a book improperly from the library. Let e be the set of statements evident for me about Tom's removing the book, the adequacy and accuracy of my vision at the time, my state of mind, etc. Since Tom indeed removed the book improperly from the library, I believe that e could be appropriately constructed so that on Chisholm's account e makes it evident for me that h, Tom removed the book. But suppose that Tom has an identical twin brother about which I know nothing. In the many years during which I have known Tom nothing has ever come up to lead me to suspect that he has a twin. But suppose, further, that Heknowsit knows all of what I know about Tom, plus the fact that Tom has a twin. Given this bit of evidence, Mr. Heknowsit would not know that Tom re-

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[103]R. M. Chisholm, Theory of Knowledge, Second Edition (Englewood Cliffs, 1977), p. 111-113.

[104]Lehrer and Paxson, p. 234.

[105]See below, pp. 90-99.

[106]Sosa, "Two Conceptions...", p. 62. Also, see below p. 95.

moved the book, while I, in my ignorance, would know. If I can suppose, and I see no reason why I cannot, that all of the other statements which are evident for me are irrelevant to h, then it would seem that e does make h evident for me. He knowsit does not know that h, since the statement that Tom has an identical twin defeats the justification for Heknowsit. That statements does not defeat my justification on Chisholm's account, however, because it is not evident for me.

It might be argued that e makes evident for me the false proposition that Tom has no identical twin and since this false proposition is not made evident for me by h, that therefore I do not know after all. However, I do not believe that this kind of move works here because the proposition that Tom has no identical twin is not evident for me, rather, it is one which has "some presumption in its favor" or is "counterbalanced".

The problem of how to deal with the defeating effects of evidence that one does not possess is one with which later Type II analyses have grappled, with not too much success, as will be shown later on. Chisholm himself acknowledges in Theory of Knowledge, Second Edition that evidence that one does not possess must somehow be considered,[107] but it appears to me that his account does not provide adequate mechanisms for dealing with this type of problem.

Ernest Sosa, in what can best be described as work in progress, presents another kind of analysis of knowledge in which he explores yet another kind of epistemic connection between S's evidence and false statements. Sosa's analysis is:

(D.26) S knows that p if and only if (1) p is true, (2) S believes that p, (3) p is evident to S, and (4) there is a set of statements that (a) fully renders p evident to S, and (b) includes no subset that is epistemically defective with respect to S and p.[108]

(D.27) A non-empty set, A, of statements satisfying the Strong Principle of Deductive Closure[109] fully renders p evident to S if and only if (1) Â renders p evident to S and (2) for every statement, q, if the statement "q is evident to S" is a member of Â, then there is a subset of Â which renders q evident to S.[110]

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[107] Chisholm, T. of K., 2nd Ed., pp. 115-116.

[108] Sosa, "Propositional Knowledge," p. 36; "Two Conceptions of Knowledge," p. 63.

[109] See below, p. 82.

[110] Sosa, "Prop. Knowledge", p. 35; "Two Conceptions...", p. 63.

(D.28) A non-empty set, Â, of statements satisfying the Strong Principle of Deductive Closure renders p evident to S if and only if (1) the members of Â in conjunction with the relevant epistemic rules entail that p is evident to S and (2) the members of Â alone do not entail that p is evident to S.[111]

(D.29) A set, Â, of statements is epistemically defective with respect to S and p if and only if for some falsehood, f, either (1) the statement "f is evident to S" is a member of Â or (2) Â renders f evident to S but the set ["p is evident to S"] does not render f evident to S.[112]

That this complicated analysis of "knows" avoids the Gettier cases is shown by remarking that included in the set of statements which fully rendered "Either Jones owns a Ford or Brown is in Barcelona" evident to Smith was the statement "'Jones owns a Ford' is evident to me [Smith]." Since "Jones owns a Ford" is false, the set is epistemically defective and thus, according to (D.26), Smith does not know after all. Those cases having the causal case structure fail to be instances of knowing on Sosa's analysis since there is a subset of the set which fully renders p evident to S which is defective in the second of the two ways.

Since I will examine this analysis in more detail in Part B, suffice it to say that there are problems with it, some of which Sosa himself points out. Although the details are a bit more intricate and the analysis is, hence, a bit more complicated, all-in-all Sosa's work here is still representative of the kind of approach taken by both Lehrer and Chisholm, whose chief concern was the existence and relationship of false statements to the justifying evidence. Sosa disguises this slightly by talking about epistemically defective sets, but even a casual reading of his unpacking of that concept reveals that it is the false statement and its relationship to the rest of the evidence that is Sosa's chief concern.

The analyses I have examined in this section have all been concerned with what their authors have considered to be defects in the set of justifying evidence statements. These defects are discovered by finding certain relationships between the evidence and some false statement. Lehrer is concerned with whether or not the evidence, in addition to justifying S's belief in the statement which S is claimed

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[111] Sosa, "Prop. Knowledge," p. 36; "Two Conceptions...," p. 64.

[112] Sosa, "Prop. Knowledge," p. 33; "Two Conceptions...," pp. 63-64.

to know, also justifies S in believing some false statement. If the evidence does justify S's belief in some false statement and if S needs to believe this statement in order to be justified in believing the statement of the knowledge claim, or, if this false statement is needed to justify S's believing the statement of the knowledge claim, then S does not know because, presumably, his evidence has this effect. Chisholm rules out any knowledge claim where the justifying evidence entails any false statement. And finally, Sosa rules out knowledge where the evidence renders some falsehood evident to S. Whether the kind of approach exemplified by these authors is the correct one is certainly unclear, and, perhaps, even unlikely in the light of both the failure of the projects to date and the innumerable ways innumerable false statements can be related to sets of evidence statements.

V

Another attempt was made to circumvent Gettier's cases by Brian Skyrms.[113] Although Skyrms' way of avoiding the Gettier cases and those cases like them is not to be recommended for its ingenuity, the article in which his analysis is presented is quite valuable, in that Skyrms makes quite explicit certain distinctions which were either assumed to be clear or ignored by earlier contributors to the literature pertaining to the analysis of knowledge. To begin with, he distinguishes between basic and non-basic knowledge. Basic knowledge that p is knowledge which satisfies the following three conditions:

(1) 'p' R X
(2) X believes that p, and his belief is not based on evidence.
(3) 'p' is true.[114]

Put into the uniform style Skyrms' analysis of basic knowledge becomes:

(D.30) S basically knows that p if and only if (1) p stands in relation R to S; (2) S believes that p, and his belief is not based on evidence; and (3) p is true.

What the relation R is, whether there is some relation R (and hence any basic knowledge), whether or not R is unique are questions which he does not attempt to answer. About these questions, and others pertaining to basic knowledge he says, "The issue of basic knowledge is the Pandora's Box of epistemology."[115] Skyrms decided to keep the box closed in his article, and I shall do the same in this survey. Suffice it to say that, loosely speaking, basic knowledge is

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[113] Skyrms.

[114] Skyrms, p. 374.

[115] Skyrms, p. 375.

knowledge for which the knower needs no evidence to justify his knowledge claim, to put it as Skyrms presumably intended.

Non-basic knowledge, then, is knowledge based on evidence. For Skyrms there are two kinds of non-basic knowledge: derivative and non-derivative.[116] Derivative knowledge is characterized as follows:

(D.31) S[117] has derivative knowledge that p if and only if there is a statement[118] 'e' such that: (i) S knows that e (ii) S knows that 'e' entails 'p' (iii) S believes that p on the basis of the knowledge referred to in (i) and (ii).[119]

There does not appear to be any conceptual or technical difficulties with this analysis. Derivative knowledge is, obviously, knowledge derived from other knowledge.

While Lehrer viewed the problem that Gettier exposed as stemming from S's being completely justified in believing a false statement, Skyrms seems to think that the trouble comes from the particular entailment which holds between p--what S is claiming to know--and q--one of the statements that S is completely justified in believing. Consequently, he formulates his analysis of non-derivative knowledge in such a way as to rule out as instances of knowing those cases where a Gettier-type of entailment relation holds. It is important to note that "non-derivative" is not meant to suggest that the knowledge statement is not derived from evidence. What is intended here is that the known statement is not entailed by the evidence e. Skyrms' analysis is:

(D.32) S has non-derivative knowledge that p if and only if there is a statement 'e' such that: (i) S knows that e (ii) S knows that 'e' is good evidence for 'p' (iii) S believes that p on the basis of the knowledge referred to in (i) and (ii) (iv) 'p' is true (v) There is no statement 'q' (other than 'p') such that (a) S knows that 'e' is good evidence for 'q' (b) S knows that 'q' entails 'p' (c) S believes that 'p' on the basis of the knowledge referred to in (a) and (b).[120]

Since the Gettier cases were cases where (a), (b), and (c)

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[116] Skyrms, pp. 381-2.

[117] Skyrms used 'X' where I have used 'S'.

[118] It should also be noted that Skyrms considers 'e' to be a conjunctive statement of evidence claims (statements).

[119] Skyrms, p. 381.

[120] Skyrms, p. 381.

were satisfied by some 'q', (v) fails to be satisfied by those cases, and consequently, the Gettier cases fail to be counter-cases to Skyrms' analysis of knowledge.

There appears to be a problem with the analysis, however. At first glance, it looks as if any statement satisfying (i), (ii), (iii) and (iv) will also satisfy (v), making its inclusion logically superfluous and, consequently, admitting back in those nasty Gettier counter-cases. This trouble stems from (iii) and (v, (c)) and is cue primarily to our intuitive understanding (or misunderstanding) of the expression "on the basis of." One might suppose that if S believes that p on the basis of the knowledge referred to in (i) and (ii), then S does not believe that p on the basis of the knowledge referred to in (v, a)) and (v, (b)). If this is so, then any time (iii) is satisfied, there will never be a q satisfying (v, (c)). Thus, (v) is redundant. Skyrms repudiates this interpretation of "on the basis of." He uses the phrase "on the basis of" in such a way that the three statements (1) "X believes that p on the basis of 'q'", (2) "X believes that p on the basis of 'r'", and (3) "X believes that p on the basis of 'q and r'" are jointly compatible. The basic premise Skyrms uses here is this: "For X to believe 'p'on the basis of 'q' it is not necessary that 'q' be his sole ground for believing 'p', but it is necessary that 'q' alone would be sufficient for his belief."[121] From this assumption he then argues:

> Thus, if X believes 'p' on the basis of 'q & r' but even if he had had no beliefs regarding 'r' and retained his belief in 'q', he would still have believed 'p', then X also believes 'p' on the basis of 'q'. On the other hand, it does not follow that, if X believes 'p' on the basis of 'q' and X believes 'r', then X believes 'p' on the basis of 'q & r'. X believes 'p' on the basis of 'q & r' only if both 'q' and 'r' are relevant to his belief that p.[122]

Thus, on Skyrms' interpretation of "on the basis of" (v) no longer is redundant.

Skyrms also offers his reader some aid in understanding the expression "'e' is good evidence for 'p'".[123] He sug-

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[121]Skyrms, p. 379, footnote 13.

[122]Skyrms, p. 379.

[123]Skyrms, pp. 387-388.

gests that if "good evidence" is to be interpreted in terms of high conditional probabilities, then the analysis of knowing must contain some specification of total evidence. That is, 'e' must be more than just a selective set of evidence claims, but, rather, 'e' must somehow reflect the total relevant evidence. However, Skyrms goes on to point out that there does not seem to be any way of formulating such a requirement which does not either" ... build a vicious circularity into the rules,"[124] or lead to the falsity of the principle that if S knows that p and S knows that q, then S knows that both p and q. Whether any of this is helpful for an understanding of the meaning of the expression "'e' is good evidence for 'p'" is doubtful. It appears that all Skyrms has done is point out some of the problems of applying conditional probabilities to the question of knowledge. Not that this effort is to be belittled, for it does point out some troubles that arise from one interpretation of the expression. However, Skyrms is not alone in his failure or refusal to come to grips with "good evidence," "justifies," "completely justifies." Most of those people working on various versions of the Standard Analysis feel that an adequate analysis can be produced without having to solve the problem of justification.[125]

Is Skyrms' analysis, (D.32), of non-basic, non-derivative knowledge adequate? Skyrms himself thinks that it is not and, in fact, demonstrates its inadequacy by presenting a new type of counter-case, the Causal Counter-case, the distinctive feature of which is that S is justified in believing that a causal relationship obtains when in fact it does not. Skyrms' cases follow.[126]

His first hypothetical example concerns a society where the people know how to build barometers, but where the people are totally ignorant about the meteorological theories which are used to explain the operation of the barometer. However, some keen observer had discovered what he took to be a connection between a falling barometer and rain. Furthermore, he related his discovery to others, who, in turn, also observed this regular connection. It finally became

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[124]Skyrms, p. 387.

[125]For an affirmative stance, see Lehrer and Paxson, "Knowledge: Undefeated Justified True Belief," Journal of Philosophy 66 (1969), p. 237. For a differing view, see G. Harman, "Knowledge, Reasons and Causes," Journal of Philosophy 67 (1970), pp. 841-855.

[126]Skyrms, pp. 382-383.

accepted within the society that a falling barometer is a perfectly reliable augury of impending rain.

Now, suppose that S, a member of the society, observes a falling barometer and, consequently, believes that it will rain. Furthermore, it will rain. Thus, S's belief is true, and it is also justified. But in this particular case, the internal mechanism of the barometer broke in such a manner that it appeared to be falling because of changes in atmospheric pressure. Hence, there was no causal connection in this instance, although in all previous observations within the society the causal connection did obtain between the falling barometer and the decreasing air pressure. Surely, S did not know, in this case, that it was going to rain.

The second causal counter-case which Skyrms presents deals with a pyromaniac who uses Sure-Fire matches. The pyromaniac has used these matches many times before and they have always lit when struck unless they were wet. He knows enough chemistry to be aware that oxygen is needed for the match to burn. Furthermore, he has observed the match striking-match lighting correlation with such regularity as to recognize the correlation as being more than coincidental. Certainly the pyromaniac is justified in believing that a causal relationship obtains between his striking the match and its lighting.

In this present case, the pyromaniac strikes one of his Sure-Fire matches after first checking to be sure that the match was not wet and that sufficient oxygen was present to support combustion. He believes that the match will light and is justified in his belief by the observed causal connection. Furthermore, the match does light. Hence, the pyromaniac has a justified true belief. Nevertheless, in this particular case, the match just happened to contain impurities which prevented it from attaining the combustion temperature when it was struck. It ignited when struck, but not because it was struck. At the moment of striking an extremely rare burst of Q-radiation occurred right at the place of the striking, which ignited the match. In this case, too, surely the pyromaniac did not know that the match would light, although his belief that it would was both true and justified.

The basic structure of causal counter-cases is:

(S. 2) (i) S knows that both $\underline{e}$ and $\underline{Fa}$, where $\underline{a}$ is a particular event and $\underline{F}$ is the property which is specified as the antecedent of the statement of some universal conditional. (ii) 'e & Fa' is good evidence for 'e & Fa & (x) (Fx → Gx)', where '(x)(Fx → Gx)' is the

universal conditional referred to in (i). (iii) 'e & Fa & (x)(Fx → Gx)' entails Ga. (iv) S knows that 'e & Fa' is good evidence for 'Ga' [but not in virtue of any knowledge of (ii) and (iii)]. (v) S believes that Ga on the basis of the knowledge referred to in (i) and (iv). (vi) 'Ga' is true. (vii) 'e & Fa & (x)(Fx → Gx)' is false.[127]

In the Barometer case, '(x)(Fx Gx)' is something like this: For any x, if x is a falling barometer, then x is a preindicator of impending rain. In the pyromaniac case, '(x)(Fx Gx)' is: For any x, if x is a dry Sure-Fire match which is struck in the presence of oxygen, then x will ignite.

That these two cases, and any others having the same structure, are genuine counter-cases to Skyrms' analysis and are not just Gettier-type cases in disguise is readily shown:

1) (S.2, i) satisfies (i) of Skyrms' analysis of non-derivative knowledge;
2) (S.2, iv) satisfies (ii) of the analysis;
3) (S.2, v) satisfies (iii);
4) (S.2, vi) satisfies (iv);
5) (v) of the analysis is satisfied since (a) 'e & Fa' is good evidence for 'e & Fa & (x)(Fx → Gx)' but S doesn't know this; furthermore, (b) 'e & Fa & (x)(Fx → Gx)' does entail 'Ga' but S doesn't know this either; and finally (c) S believes that Ga, but not in virtue of anything claimed in (ii) and (iii) of the basic structure.

Hence, the analysis is satisfied, even though S does not know.

Skyrms really has overstated his case with regard to (v) of his analysis. S could very well know that 'e & Fa' is good evidence for 'e & Fa & (x)(Fx → Gx)' and that 'e & Fa & (x)(Fx → Gx)' entails 'Ga'. So long as S does not base his belief on this knowledge, there still remains an unblocked counter-case.[128]

Skyrms has a proposal, however, which rules out these causal cases as cases of knowing. What he says can be stated as follows: We should add to our analysis of non-derivative knowledge, the following clause:

(D.32) (vi) If the situation is a causal one then the state of affairs referred to by 'e & Fa' is causally sufficient, in the context at hand, for the occurrence of the state of affairs

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[127]Skyrms, p. 384.

[128]Skyrms' causal cases are also counter-cases to the analyses of Lehrer and Sosa.

referred to by p.[129]
This effectively blocks the two causal cases since, in the Barometer case, the state of affairs referred to by 'e & S's barometer is falling' is not causally sufficient for the occurrence of the state of affairs referred to by "it will rain", and likewise, mutatis mutandi, in the pyromaniac case.

Skyrms' addition does, indeed, block the causal cases, but there are other cases having the same structure, yet are not causal cases, which (vi) does not rule out. Marshall Swain points out two such cases.[130] In the first case, which is described as a performative example, Swain asks his readers to imagine that Green has received an invitation to attend the marriage ceremony of his two friends, Bob and Sally. Green goes to the wedding which is held in the church where many weddings which Green has attended were held. The ceremony was conducted by the Bishop, an old established member of that church community. Everything went perfectly and nothing was omitted. Green had witnessed many such ceremonies in this church conducted by other old established members of the church community. In all those cases, the wedding couple always emerged married. However, the Bishop is a fraud, a fact which invalidates the ceremony, but, nonetheless, unknown to Green, Bob and Sally were secretly married a few weeks prior to the church service in a perfectly legal and proper civil ceremony. The church business was just for show. Green's belief that Bob and Sally are married is true and he has good evidence for his belief, but Green does not know that they are married, since the ceremony was a fraud.

Case two is a testimonial example. The highly distinguished logician, Abernathy, has just told Brown, "I have derived p from the set, A, of contingent axioms." Now Brown knows that the axioms in A are true, and furthermore, he knows that Abernathy has never in the past been wrong about logical derivations. Hence, it seems clear that Brown

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[129]Skyrms, pp. 382-287. The phrasing is due primarily to M. Swain, "Skyrms on Non-Derivative Knowledge" Nous 3 (1969), p. 228. Where I have 'e & Fa', Swain, following Skyrms, has 'e'. But surely, Skyrms intended 'e' to be 'E'--his abbreviation for 'e & Fa' in the statement of the structure of the causal counter-cases--and the occurrence of 'e' in Skyrms' article is simply a mistake. Also, it should be noted that the state of affairs referred to by 'p' is in causal cases, identical to the state of affairs referred to by 'Ga'.

[130]Swain, pp. 229-230.

has excellent evidence for the truth of p. But does Brown know that p? No, for even though Brown believes that p and p is in fact true, Abernathy has made a mistake this time. He thought he had derived p from A, but A was not the set of axioms with which he was working, rather, it was B, another set of true contingent axioms. Furthermore, P is not derivable from B. Clearly Brown does not know that p.

In Case 1 if we let 'e' be the conjunction of all those statements regarding Green's past experiences with weddings as well as this one, 'Fa' be the statement that Bob and Sally are the chief participants in a perfectly executed wedding ceremony officiated by an established member of the church community and '(x)(Fx → Gx)' be the statement that for any x and y, if x and y are the chief participants in a perfectly executed wedding ceremony officiated by an established member of the church community then x and y are duly married; then it is clear that this Performative case has exactly the same structure as the causal cases, yet since it would be extremely odd to call this a causal situation, Skyrms' analysis does not rule it out and hence his analysis is inadequate. Swain argues that " ... participation in an appropriate ceremony constitutes being married, but does not cause you to be married."[131]

Likewise, if, in Case 2, we let 'e' be the conjunction of statements regarding Brown's knowledge of Abernathy's past performances and the statement that Brown knows axioms A to be true, 'Fa' be the statement that Abernathy says that p is derivable from the set of true statements, A, and let (x)(Fx → Gx) be the statement that, for any x, if Abernathy says that x is derivable from a set of true statements, then x is true; then Swain's Testimonial Case is readily seen to have the same structure as Skyrms' causal cases. Although there may be some reason to claim that the Performative Case is really a causal case, surely that is not true regarding the Testimonial Case. Only in cases of a rather peculiar nature would it be admitted that by stretching the meaning of 'cause' a bit, what someone said caused some statement to be true; e.g., Jones yelling "Fire" in a crowded room caused the statement "The crowd panicked" to be true. Admittedly, this use of 'cause' is a bit strained, but no harm is done to Swain's case by allowing its legitimacy. We can simply claim that the statement 'p' and axiom A are not statements of this peculiar kind. Consequently, the Testimonial Case is not a causal case, nor is it an instance of knowing. But Skyrms' analysis does not rule it out; in fact, his analysis entails that it is an instance of knowing.

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[131]Swain, pp. 229-230.

It would appear that Skyrms' attempt to avoid the causal cases is misguided. The causal cases are not cases of knowing not because of the causal insufficiency of S's evidence, but because of the presence, so it would seem, of false statements, a situation paralleled by the Gettier-type cases. If this observation is correct, then it would seem that Skyrms' attempt to avoid the Gettier-type cases was also misguided, even though it worked. Skyrms' approach appears to be entirely ad hoc: the Gettier cases are troublesome, so a condition is formulated to rule out the Gettier cases; the causal cases are troublesome, so a condition is formulated to rule out the causal cases. Presumably, Skyrms could construct conditions to rule out different kinds of troublesome cases as they arose, but surely such an approach is unsatisfactory. What is needed is not an analysis which is designed to rule out particular types of cases, but an analysis with a set of general conditions to rule out all troublesome cases. It would appear that Skyrms did not look beyond the particular type of case with which he was working. The question should be: "What is it about both the Gettier cases and causal cases which is troublesome?", not "How can I avoid the Gettier cases?" and "How can I avoid the causal cases?" The trouble presented by the Gettier-type cases arose, not as Skyrms thought because of the inferences made, but because of the presence of false statements. Lehrer's original attempt to avoid the Gettier cases, then, seems closer to the right track, although the causal cases and Swain's two cases serve to point out that the problems can arise even when there is no immediately apparent epistemic connection between what S believes and the false statements.

VI

Thus, in this part Two different approaches to the problem of how to modify the Standard Analysis so as to avoid the Gettier-type counter-cases have been presented. Skyrms' ad hoc approach to the problem is surely inadequate because what is needed is a set of general conditions to rule out all of the troublesome cases, not just a set of rather limited conditions designed to rule out a rather limited set of troublesome cases. The concern with the epistemic relation of false statements to the evidence represents another approach which has been fraught with difficulties. The third approach is the defeasibility-of-the-justification approach, which is examined in parts B and C.

PART B

DEFEASIBILITY-TYPE ANALYSES

This part is devoted both to an examination of the use of the notion of defeasibility as a technical term in ethics and epistemology and to a critical evaluation of those analyses of knowledge which are either defeasibility-type accounts or which bear certain affinities to defeasibility-type accounts.

I

"To defeat" means "to render null and void", "to nullify or frustrate", "to win victory over", inter alia, according to Webster's Third International Dictionary. The technical employment of the term "defeat" and its companion term "defeasible" has its most frequent and historically earliest expression in law, where it is used primarily in contexts of property rights and interests. The use of "defeat" as a technical term in philosophy was initiated, as far as I can tell, by H. L. A. Hart in his article The Ascription of Responsibility and Rights.[132] Regarding its technical expression in law, Hart says that the word "defeasible" is used " ... of a legal interest in property which is subject to termination or 'defeat' in a number of different contingencies but remains intact if no such contingencies mature."[133] But Hart wants to extend the scope of the word to include concepts, as well as legal interest in property. He argues that there are some concepts for which the specification of the set of necessary and sufficient conditions for its application is impossible, because no one set of conditions may be adequate in every situation. Such concepts, Hart claims, " ... can only be explained with the aid of a list of exceptions or negative examples showing where the concept may not be applied or may only be applied in a weakened form."[134] A concept is defeasible, then, just in case it is

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[132]H. L. A. Hart, "The Ascription of Responsibility and Rights," Proceedings of the Aristotelian Society XLIX (1949), pp. 171-194. Reprinted in Freedom and Responsibility, edited by Herbert Morris (Stanford, 1961), pp. 143-148. Also in Logic and Language, First and Second Series, edited by Anthony Flew (Garden City, 1965), pp. 151-175. All page references hereinafter are references to this last-mentioned source.

[133]Hart, p. 155.

[134]Hart, p. 154.

possible that the concept will not apply in a situation even though the normally adequate set of necessary and sufficient conditions for applying the concept is satisfied. Another way of stating it is to say that a concept is defeasible just in case it is possible to defeat it; and a concept is defeated just in case there is a defense (an exception) which is presented such that, in spite of the fact that the conditions which are normally necessary and sufficient for applying the concept are met, the claim that the concept applies is either "altogether destroyed" or considerably weakened.

Not all of this, however, is altogether clear. How does one destroy or nullify a concept? Can concepts be rendered null and void? Surely such talk is a distortion of the language. Perhaps Hart can be reinterpreted in such a way as to avoid this deviant use of words. I suggest that Hart's position can be made intelligible by maintaining that what is destroyed, nullified, or weakened in some situation is not the concept, rather, it is the justification for the application of the concept. It is reasonable to suppose that by showing that the set of normally necessary and sufficient conditions for the application of a concept has been satisfied, one has thereby justified the application of that concept. That is, I justify my application of the term "murder" to a given situation by pointing out that the set of normally necessary and sufficient conditions for applying that term is satisfied. With this in mind, Hart can be interpreted as saying that the justification for the application of a concept is defeated just in case the set of normally necessary and sufficient conditions for the application of the concept is satisfied but yet the concept does not apply. Perry Mason, for example, is justified in applying the term "rape" to a particular action because those conditions which are normally necessary and sufficient for applying that term are satisfied. But the term does not apply in this specific case because a mitigating circumstance has been presented which defeats Mr. Mason's justification.

Perhaps I can make my interpretation of Hart more clear by means of the following formalization. Let $\underline{c}$ be the set of normally necessary and sufficient conditions for applying concept $\underline{A}$; let $\underline{e}$ be the statement of the mitigating circumstances; and let $\underline{a}$ be the statement "Concept $\underline{A}$ applies." Hart's claim can now be represented as follows:

(1) $\underline{c}$ justifies $\underline{a}$;
(2) $\underline{e}$ is true;
(3) $\underline{c}$ & $\underline{e}$ does not justify $\underline{a}$; and hence
(4) $\underline{e}$ defeats the justification of $\underline{a}$ by $\underline{c}$.

It should be noted, however, that the reasonability of this interpretation depends on a distinction between a set of normally necessary and sufficient conditions and a set of

necessary and sufficient conditions. That is, if c is a set of necessary and sufficient conditions for a, then c entails a; but if c is merely a set of normally necessary and sufficient conditions, that is, a set of what people believe to be the necessary and sufficient conditions for a, then c does not entail a. This distinction is crucial, for if c entails a, then no exception or mitigating circumstance will destroy this justifying relationship, since it is an entailment relationship.

Perhaps it could be argued that the above interpretation of Hart is inadequate because in situations when the set of normally necessary and sufficient conditions is satisfied yet the concept does not apply, it is more appropriate to say that the set is not necessary and sufficient after all, rather than saying that the justification is defeated. This objection might carry some weight if some set, c, were claimed to be necessary and sufficient for a, rather than claimed to be just normally necessary and sufficient. For in this situation, if c were found to be satisfied yet a was not satisfied, then the appropriate thing to say would be that c was not, after all, necessary and sufficient. But surely where c is merely a set of normally and sufficient conditions for a, it would be inappropriate to claim that c is not normally necessary and sufficient in situations where c is satisfied and a is not. It remains a set of normally adequate conditions; the trouble is that it is not always an adequate set--c does not entail a. Hence, it is quite appropriate to describe the situation as one of defeat.

I think that it is clear that defeasibility is not a property of concepts, but rather it is a property of certain relationships which obtain between concepts. If Hart had intended to talk about concepts, then his choice of "defeasible" was inappropriate. On the other hand, if he had intended to talk about certain relationships, then his focusing on "concept" was misleading.

Although I believe that the above discussion clarifies the issue regarding what is defeated for Hart, still more mileage can be gotten out of Hart's account. There are some justifications about the application of some concepts which can be defeated in spite of the fact that the set of normally necessary and sufficient conditions is satisfied. The question is: What is it about those concepts which permits this? Freidrich Waismann coined a German expression, Porosität der Begriffe, which he later translated "open-texture", to characterize this peculiar property of concepts. According to Waismann, a concept is open-textured just in case it is not possible to specify every condition under which the concept

will apply.[135] As I mentioned earlier,[136] Hart himself argues that there are some legal concepts for which it is impossible to specify every condition under which the concept will apply; and it is these concepts which he inappropriately labeled "defeasible". But clearly Hart's description and Waismann's description are the same: what Hart calls "defeasible" Waismann calls "open-textured". Given the correctness of these observations, it seems, then, that what Hart is trying to show is that certain legal and ethical concepts are open-textured, and because they are open-textured, any justification of their application is defeasible.[137]

Although I believe that I have been able to give an intelligible account of Hart's use of the term "defeasible", his own account was rather unclear. As a consequence, perhaps, his use of "defeasible" had little effect on the subsequent philosophical employment of the notion, at least in epistemology. On the other hand, it was R. M. Chisholm's use of the notion of defeasibility in his article "The Ethics of Requirement"[138] which gave rise to the current use of the term in epistemic contexts. Chisholm's article represents an attempt to define the fundamental concepts of ethics in terms of one primitive expression, viz., "p requires q," thereby exposing relations among those concepts and throwing some light on a number of difficult questions of moral philosophy, as well as questions in whatever other areas the notion of requirement is applicable.

Using lower-case letters to stand for events or states of affairs and "R" to stand for the relation "requires," Chisholm's first definition is:
(1) "There is a requirement for q" for: $(\exists p)(p \ \& \ pRq)$.[139]

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[135]Freidrich Waismann, "Verifiability," Proceedings of the Aristotelian Society, Supplementary Volumes, XV (1936). Reprinted (with slight changes) in Logic and Language, pp. 125-126.

[136]See above, p. 44.

[137]Further discussion of Hart's paper would lead me too far afield. For a criticism of Hart's thesis that human action concepts are defeasible, see George Pitcher. "Hart on Action and Responsibility", Philosophical Review (1960), pp. 226-235, especially pp. 231-236.

[138]Chisholm, "The Ethics of Requirement," American Philosophical Quarterly I (1964), pp. 147-153.

[139]Chisholm, "The Ethics...", p. 147.

He suggests that the definiens be read as: "There is a possible state of affairs p such that p occurs and p requires q." Perhaps the expression "There is a requirement for q" might be understood better if it were expressed as follows: "There is a requirement which q fulfills." Since promise-making requires promise-keeping, to say that there is a requirement for an instance of promise-keeping is to say, according to Chisholm, that there is (has occurred) an instance of promise-making and it requires an instance of promise-keeping. Chisholm points out that there may well be conflicting requirements, i.e., two different states of affairs may have contradictory requirements (p may require q, while r requires -q), but no single state of affairs can have contradictory requirements. Chisholm claims that although a person may be subject to contradictory requirements, it does not follow that he is subject to contradictory obligations. What happens when a person is subject to contradictory requirements? One of those requirements is overridden, or defeated. Hence, his second definition is:

(2) "There is a requirement for q which has been overridden" for:

$(\exists p)(\exists s)[(p \ \& \ pRq) \ \& \ (s \ \& \ -((p \ \& \ s)Rq))]$.[140]

That is, there are two possible states of affairs, p and s, such that p occurs and requires q but s also occurs and the joint occurrence of p and s does not require q. Thus, the requirement for q has been defeated or overridden by s. To illustrate this point, Chisholm takes an example from W. D. Ross:[141] "If I have promised to meet a friend at a particular time for some trivial purpose, I should certainly think myself justified in breaking my engagement if by doing so I prevent a serious accident or bring relief to the victims of one."[142] The requirement to meet his friend here is defeated or overridden by the occurrence of some new, and more important, event. Countless examples of a like nature could easily be constructed to illustrate this definition further, but I think that the idea is clear enough.

Presumably, Chisholm is relying on W. D. Ross for more than just examples: what Chisholm calls "a requirement", Ross calls "a prima facie duty". For Ross, a prima facie duty is a conditional duty which becomes an actual duty either when no contrary or contradictory prima facie duties obtain at the same time, or when, in the face of contrary prima facie du-

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[140] Chisholm, "The Ethics...", p. 148.

[141] Chisholm, "The Ethics...", p. 148.

[142] W. D. Ross, The Right and the Good, (Oxford, 1930), p. 18.

ties, it is the more "stringent" duty.[143] One's prima facie duties are determined relative to some situation, or, as Chisholm puts it, one's requirements are determined relative to some state of affairs. For example, when in circumstance c one has a prima facie duty to do A; when state of affairs p obtains, there is a requirement for doing A. Neither Ross nor Chisholm speak of there being requirements or prima facie duties to perform some action which are determined independently of all circumstances or events.

An overriding occurs when the evidence (state of affairs or circumstances), p, indicates that one has a requirement to do A, but the evidence, p, augmented by new evidence, q, indicates that one does not have a requirement to do A. Or to put it differently, relative to p there is a requirement to do A, but relative to p & q there is not a requirement to do A. Some people may feel that when a requirement is overridden, it is no longer a requirement. Such a view is erroneous, however, not only because it is formally inconsistent within Chisholm's system, but also because it supposes that there can be requirements which are determined independently from the evidence. In the scheme above, the requirement for doing A was indeed overridden, but it was not eliminated. A defeat does not eliminate a requirement, but rather, it eliminates that particular requirement as an obligation, to put the matter in Chisholm's terminology. Put in Ross' terminology, it becomes: a defeat does not eliminate a prima facie duty, but rather it eliminates the prima facie duty as an actual duty. Care must be taken to distinguish between a requirement which is relative to certain evidence and an obligation. A particular requirement becomes an obligation, as Chisholm says below, provided that the requirement is not defeated. In a defeat the requirement remains, but the requirement can no longer be warranted as an obligation. Hence, perhaps both Chisholm and I were speaking too loosely up to this point: it is not the requirement itself which is defeated, but rather it is the justification for transforming that requirement into an obligation which is defeated. Let me illustrate these points in terms of Ross' example which was quoted above. Based on the evidence (my promising to meet a friend) I have a prima facie duty to fulfill that promise. But in the face of additional evidence (this serious accident in front of me) my prima facie duty to meet my friend is defeated. That is, I would be unjustified in the face of the evidence to transform my prima facie duty into an actual obligation. Nonetheless, I still have a prima facie duty to meet my friend, but what I fail to have in this case is an obligation to meet my friend.

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[143] W. D. Ross, p. 41.

(Let me point out at this juncture the obvious analogies between the ethical use of "defeat" and the epistemic use of "defeat": instead of speaking of obligations, one speaks of knowledge and, instead of speaking of requirements or prima facie duties, one speaks of beliefs.)

Not only may requirements be overridden, in the sense I have just clarified, but an overriding itself may be overridden. As Chisholm puts it in terms of the Ross example: "If, as I go to assist the man in distress, I learn that an even greater disaster will result should I fail to keep my appointment with the friend, then this new and more inclusive situation may require me once again to keep my appointment with the friend."[144] Chisholm imagines a possible series of events such that (1) p requires q, (2) p & r does not require q, (3) p & r & s does require q, (4)....Here Chisholm is suggesting that a mere defeat is not enough to prevent a requirement from becoming an obligation, for there may be yet additional evidence which counteracts the effects of the earlier evidence. For example, based on the evidence of my promising and of my being in a position to aid the victims of a serious accident, I would be unjustified in treating my prima facie duty to meet my friend as an obligation. Yet if there should be additional evidence indicating that my failure to meet my friend would produce greater harm (speaking from a utilitarian point of view for ease of exposition) than aiding the accident victims would produce good, then I still have a prima facie duty to meet my friend which could well serve as my obligation. And, as Chisholm says below, if there is no further counter-indicating evidence, then my prima facie duty becomes my obligation.

In all of this discussion I have been speaking as if the evidence relative to the requirements must be possessed by the actor: it need not be. If, in the above example, I do not meet my friend because I am not aware of the disasterous consequences of my failing to do so, it could well be argued from an objective utilitarian point of view, for example, that it was my obligation to meet my friend nonetheless, barring any other counter-indicating evidence, and that my failure to do so was a failure on my part to fulfill my obligations.

Having made clear the notion of defeat, Chisholm then turns to "obligation": "...'it ought to be that q' means that there is a requirement for q which has not been overridden."[145] In symbolic notation:

(3) "Oq" for:

$$(\exists p) - (\exists s)[(p \ \& \ pRq) \ \& \ (s \ \& \ -((p \ \& \ s)Rq))].$$

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[144] Chisholm, "The Ethics...", p. 148.

[145] Chisholm, "The Ethics...", p. 149.

Although it is not germane to my work here, since I included (3) simply to illustrate how Chisholm uses the notion of defeat, permit me to point out a logical oddity in the formulation of (3). By performing certain valid logical transformations on (3), one gets:

(3') "Oq" for:

$$(\exists p)[(p \ \& \ pRq) \supset -(\exists s)(s \ \& \ -((p \ \& \ s)Rq))].$$

Hence, on (3') it turns out that it ought to be that q whenever there occurs some event which does not require q (this is one of the difficulties with existential conditional sentences). This untoward situation is easily remedied by the following modification of (3):

(3'') "Oq" for:

$$(\exists p)[(p \ \& \ pRq) \ \& \ -(\exists s)(s \ \& \ ((s \ \& \ p)Rq))],$$

which is in fact what Chisholm said in words, but not what he wrote in symbols.

Although Chisholm, in his article, continues to present definitions of "ought to do", "is committed to doing", "is permitted", "is supererogatory", "is offensive", "is optional", and "is indifferent"; the exposition and exploration of these notions is not germane to the purpose of my work here and hence I shall not proceed further. I think that it is clear how Chisholm uses the notion of defeasibility. Defeasibility is a property of justifications and when it is said that a justification is defeated what is meant is that the justification has been overridden or annulled.

II

The first of what I have chosen to call the defeasibility-type analyses of non-basic knowledge was presented by Ernest Sosa in his article, "The Analysis of 'Knowledge that P'".[146] Utilizing the following abbreviations and symbols,

(1) "Se_i" means "the set of e_i's," where i presumably runs from 1 to n; e being a statement;

(2) "Sf_i" means "the set of f_i's," where i presumably runs from 1 to n, f being a statement; and

(3) "$\rightarrow$" means "provides strong enough evidence for";

Sosa's analysis of non-basic knowledge is:

(D.33) S knows (non-basically) that p if and only if (i) p is true, (ii) S believes that p; (iii) S is objectively justified in believing that p.[147]

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[146] Sosa, "The Analysis of 'Knowledge that P'", Analysis 25 (1964), pp. 1-8.

[147] Sosa, "The Analysis...", p. 7.

Sosa has four criteria for determining when S is objectively justified in believing that p. His first criterion is:

(D.33, (iii, (1))) There is an Se_i such that: S knows that the members of Se_i are true, and that $Se_i \rightarrow p$; where none of the e_i's is superfluous or supports $\sim p$ in the context of the others, and S does not believe otherwise, being in fact justified in believing each e_i to have positive evidential force for p, in the context of the others, unless his belief requires no justification; and S would regard any weaker Se_i as not strong enough in the context of the disconfirming evidence he might reasonably be expected to have.[148]

Sosa has offered a rather strong condition here. Besides requiring that S know that all the members of his evidence set are true, Sosa requires that none of the e_i's be superfluous and that S would regard any weaker set as not strong enough to provide the requisite support for p. Since Sosa does not explain the genesis of (iii, (1)), it is a little difficult to understand why superfluous statements are harmful. One can easily imagine situations where S's set of justifying evidence, Se_i, contains one unnecessary, superfluous statement which S thinks is needed to justify his claim. Perhaps the statement is unnecessary because it is entailed in a complex way by other statements in the set, or perhaps it is just irrelevant. To deny S knowledge because he has a mistaken belief about a logical relation obtaining among his set of evidence statements, because he has a mistaken belief pertaining to theories of evidential support, or because he is over-cautious seems to me to be counter-intuitive.

The second criterion is Sosa's defeasibility clause:

(D.33, (iii, (2))) There is no Sf_i (a) which is true and discredits p to such an extent that "$Se_i \rightarrow p$", while true in a neutral context is not true in the context of Sf_i; and (b) the truth of which S could reasonably have been expected to find out, or otherwise know, together with the truth of (a).[149]

Although he describes it as "discrediting", it appears that "discredit" and "defeat" have the same meaning here. What Sosa proposes here is that if there is some true statement or set of true statements which, when conjoined with the statements providing the original evidential support, make it such that the evidence no longer provides strong enough support for p, then S does not know that p, because his justification for believing that p has been discredited, or defeated. Un-

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[148] Sosa, "The Analysis...", p. 7.

[149] Sosa, "The Analysis...", p. 7.

fortunately, what I have just discussed is only the first half of (iii, (2)). There is a second proviso which has the effect of destroying (iii, (2)) as a useful condition. It is not enough to overthrow a knowledge claim to establish that there are true, discrediting statements. It must also be the case that S could have reasonably been expected to find out both that they were true and that they discredited his evidential support. Although I shall present later several counter-cases to Sosa's analysis which hinge on (iii, (2)), permit me to make a few critical remarks here. Surely there are many statements discrediting some pre-socratic's justification for believing statements about the physical world which he could not reasonably have found to be true. Furthermore, where adequate theories of evidential support are lacking, it does indeed seem unreasonable to expect S to discover that some discrediting statement does in fact discredit his support. However, to admit knowledge in situations like these seems wrong. Suppose a person is mentally deficient; it appears that Sosa will grant him knowledge in the face of discrediting evidence simply because it would be unreasonable to expect him to find out both the truth and the discrediting effect of subtle, discrediting evidence, provided, of course, that the dullard was lucky in formulating an adequate, non-superfluous set of supporting evidence. Hence, in such cases where all the other conditions for knowledge have been satisfied, Sosa is willing to allow that S knows that p in spite of evidence which is both true and seriously damaging, simply because either it is unreasonable to expect S to have found out about the damaging evidence or it is unreasonable to expect S to find out that the damaging evidence is in fact damaging.

Some of these objections might appear to be taken care of by Sosa's third criterion:

(D.33, (iii, (3))) S does not believe there is any Sf_i which fulfills (2, (a)) and is justified in not so believing unless his not believing requires no justification.[150]

This criterion requires that S not believe that there are any true, discrediting statements and that this non-belief is justified. This clause serves primarily as a non-selective evidence requirement, prohibiting S from selecting supporting evidence from what he knows and ignoring the damaging evidence. There is, however, a problem with its application. The problem is this: How one justifies a non-belief is unclear. Sosa says that the notion is left vague on purpose.[151] He does claim, however, that there is no conceptual connection between the notion of justifying a non-belief and justi-

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[150]Sosa, "The Analysis...", p. 8.

[151]Sosa, "The Analysis...", p. 5.

fying a belief.[152] But whether or not this criterion allows Sosa to avoid the objections against (iii, (2)) which were raised in the previous paragraph is problematical. It is easy to suppose that both the presocratic and the dullard fail to believe that there is any discrediting evidence even though there may be a great deal of it. However, in order to satisfy (iii, (3)), the presocratic (and the dullard) must be justified in not believing that there is any discrediting evidence. In the objection raised against (iii, (2)) in the previous paragraph I maintained that (iii, (2)) was satisfied in the case of both the pre-socratic and the dullard because it is unreasonable to have expected them to discover the discrediting evidence. The question concerning these cases with regard to (iii, (3)) now is: Was the pre-socratic (and the dullard) justified in not believing that there was discrediting evidence? Sosa gives us no clues as to the conditions sufficient for justifying a non-belief. However, it seems reasonable to assume that if it is unreasonable to expect S to discover the damaging evidence, then it is unreasonable to expect him to believe that there is some damaging evidence. Furthermore, it also seems reasonable to suppose that if it is unreasonable to expect S to believe that there is some damaging evidence, then S's not believing that there is some damaging evidence is justified. Given these two assumptions, the pre-socratic (and the dullard) is justified in his non-belief and (iii, (3)) is also satisfied. Hence, any attempt to appeal to (iii, (3)) as a way of avoiding my objections to (iii, (2)) is likely to fail. I realize that this kind of objection is not crushing since I have made a couple of assumptions regarding the justification of a non-belief which Sosa may not accept. Nonetheless, since Sosa offers his readers no directions in this matter, at least my attempt to supply a condition for justifying a non-belief is reasonable.

(D.33, (iii, (4))) If S's belief that $\underline{p}$ is based substantially on the report that $\underline{p}$, or that e_i, then the reporter knows that $\underline{p}$, or that e_i.[153]

This last part of (iii) was constructed specifically to avoid Michael Clark's counter-case to the Standard Analysis, a counter-example dealing with knowledge via testimony.[154] Although the condition seems perfectly reasonable, one suspects that the problems with which it is designed to deal could better be handled in a more general way than Sosa has handled them. That is, whether or not one's beliefs are

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[152]Sosa, "The Analysis...", p. 6.

[153]Sosa, "The Analysis...", p. 8.

[154]Clark.

justified depends on the nature of the evidence, of which testimonial evidence is a part. Consequently, the necessity to treat testimonial evidence in this seemingly ad hoc fashion seems to indicate a weakness in the entire analysis.

Furthermore, it seems that (iii, (4)) does not even do the job for which it was intended. Keith Lehrer, in a lengthy footnote to his article, "Knowledge, Truth and Evidence", offers two counter-cases to Sosa's analysis of non-basic knowledge.[155] The first case goes something like this. Suppose that Mr. Nogot, Mr. Havit and I are the only people in my office. Mr. Nogot tells me that he owns a Ford. Nogot does indeed own a Ford, but he does not know it. In fact, he believes that he does not own a Ford. Mr. Havit also tells me that Nogot owns a Ford. Furthermore, Havit knows that Nogot owns a Ford. From all of this I come to believe that someone in my office owns a Ford. It seems clear, argues Lehrer, that I know that someone in my office owns a Ford even though my belief is based substantially on Nogot's report, a report which he does not know to be true. But since Sosa's (D.33, (iii, (4))) fails to be satisfied, I do not know, according to Sosa's account, that someone in my office owns a Ford. Consequently, Sosa's analysis is too strong, since it rules out my knowing, even though I do know in this instance.[156]

In addition to failing to satisfy (iii, (4)), it would appear that Lehrer's first case also fails to satisfy (iii, (2)). There is a true statement which appears to discredit my evidential support and which I can reasonably be expected to find out, viz., "Nogot does not know what he is talking about." Lehrer could argue here that the appearance is deceptive in this instance, however. For even though the apparently discrediting statement does discredit the evidential support for part of my belief, it does not discredit my support for the other part of my belief and since either part is sufficient justification for my belief, one cannot argue soundly that the evidential support for my belief has been discredited. I will admit, however, that the occurrence of discrediting evidence does raise some doubts as to the adequacy of Lehrer's case. Presumably, however, Lehrer wants the case to be stated so that all of Sosa's conditions are satisfied except (iii, (4)), and I shall presume that it can be so stated. Hence, Lehrer's original objection still stands: (iii, (4)) is too strong.

Lehrer's second case purports to show that, in addition

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[155]Lehrer, "K. T. and E.", p. 171, footnote 1.

[156]Lehrer, "K. T. and E.", p. 171.

to being too strong, (iii, (4)) is also too weak. His second case is this. Lehrer asks his readers to suppose that certain non-reportive evidence justifies him in believing that Nogot, one of three men in Lehrer's office, owns a Ford and that on the basis of this belief Lehrer formulates another belief, to wit, "Someone in my office owns a Ford." His evidence might be Nogot's always having owned a Ford in the past, a wallet containing an owner's certificate which attests to Nogot's Ford ownership, Nogot's arriving at his office just now in a Ford, etc. However, it turns out that Nogot does not own a Ford, but Havit, the other man in Lehrer's office, does--a fact for which Lehrer has no evidence. Lehrer claims that in this case he does not know that someone in his office owns a Ford, even though all of Sosa's conditions might well be met.[157]

I think that it is clear that Lehrer does not show in this example that (iii, (4)) is too weak, rather, he shows that the entire analysis, (D.33), is too weak. Since reportive evidence does not even play any part in Lehrer's second case, it is rather odd to pin the failure of the analysis on (iii, (4)). Surely, if there is an inadequacy here, it lies elsewhere. I think that it is clear, in Lehrer's second case, that (i), (ii), and (iii, (4)) of (D.33) are satisfied. Furthermore, it is reasonable to suppose that (iii, (1)) is also satisfied. But what about (iii, (2)) and (iii, (3))? There surely is an Sf_1 which is both true and which discredits Lehrer's evidential support, viz., Sf_1 = "Nogot does not own a Ford." In addition, it is reasonable to expect that Lehrer could have found out that Sf_1 discredited his evidential support. The remaining question, then, is this: Is it reasonable to expect that Lehrer could have found out that Sf_1 was true? The answer here is a little difficult to ascertain, but I think that the following remarks have some merit. Since Lehrer is completely justified in believing that Sf_1 is false--Sf_1 being the negation of what Lehrer is completely justified in believing to be true--it would seem completely unreasonable to expect someone to find out the truth of what he is completely justified in believing to false. Thus, Sf_1 fails to satisfy both (a) and (b) of (iii, (2)). But, perhaps, there is another statement which will do the trick, e.g., Sf_2 = "The certificate was invalid." Sf_2 is both true and discredits Lehrer's evidential support, but again it seems unreasonable to expect that Lehrer could have discovered the truth of this statement, not being a legal expert. Thus, although there may be other candidates for Sf_1 which satisfy (a), one can easily imagine that there are good arguments to show that those statements fail to satisfy (b); and hence, (iii, (2)) is satisfied.

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[157]Lehrer, "K. T. and E.", p. 171.

With regard to (iii, (3)), Lehrer is surely justified in not believing that "Nogot does not own a Ford" satisfies (iii, (2, (a))), since he is completely justified in believing that Nogot does own a Ford, regardless of how one is to interpret "is justified in not believing". One cannot as readily brush off Sf_2 in this regard, but one could modify the case a bit so that Lehrer is justified in believing that the certificate is valid.

Thus, although there is some difficulty in showing that (iii, (2)) and (iii, (3)) are satisfied in this case, it does appear that Lehrer has a genuine counter-case to Sosa's analysis. As I pointed out earlier, this case does not show that (iii, (4)) is too weak, but it does show that either (iii, (2)) or (iii, (3)) is too weak. As I suggested earlier, it is the inclusion of (b) in (iii, (2)) which rules out all of the discrediting evidence and clearly, if (b) were eliminated, Lehrer's case would no longer be a counter-case.

Brian Skyrms also has constructed two cases which purport to show that Sosa's analysis is too weak. Those cases are the Barometer Case and the Pyromaniac Case.[158] Both of those cases have the following basic structure:[159]

(S. 2) (i) S knows that both e and Fa, where a is a particular event and F is the property which is specified as the antecedent of the statement of some universal conditional.

(ii) 'e & Fa' is good evidence for 'e & Fa & (x)(Fx → Gx)' where '(x)(Fx → Gx)' is the universal conditional referred to in (i).

(iii) 'e & Fa & (x)(Fx → Gx)' entails Ga.

(iv) S knows that 'e & Fa' is good evidence for 'Ga' [but not in virtue of any knowledge of (ii) and (iii)].

(v) S believes that Ga on the basis of the knowledge referred to in (i) and (iv).

(vi) 'Ga' is true.

(vii) 'e & Fa & (x)(Fx → Gx)' is false.

From the basic structure, it is clear that (D.33, (i) and (ii)) is satisfied by (S. 2, (v) and (vi)), where p = Ga. Furthermore, it would appear that (S.2, (i), (ii), and (iv)) satisfy (D.33, (iii, (1))). (D.33, (iii, (4))) is satisfied since these cases do not involve beliefs based on the testimony of others. There seems to be an Sf_i, however, which at least satisfies (iii, (2, (a))) in each case. The statement that the internal mechanism of the barometer was malfunction-

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[158]Skyrms, pp. 382-384.

[159]For details of the cases, see above, pp. 38-39.

ing is not only true in the Barometer Case, but it also discredits S's evidential support for p, i.e., Ga. Let us call this discrediting statement "Sf_1". Could it reasonably have been expected of S to have found out that Sf_1 was true? Surely that Sf_1 is true is something that S can know, but that is not the point of issue. Since these cases were not constructed with Sosa specifically in mind, Skyrms does not go into any detail in showing why he thinks that he has two good counter-cases to Sosa's analysis. Nonetheless, Skyrms can claim with a good deal of justification that it is unreasonable to expect a primitive tribesman to understand the defeating effect of the statement that the internal mechanism of the barometer was malfunctioning, especially when neither he nor any of his tribesmen had ever seen a defective barometer. Hence, although there is a discrediting statement which S could reasonably have been expected to discover, it is unreasonable to expect him to see the defeating effect of that statement, and, consequently, it appears that (iii, (2)) is also satisfied. However, if there is still a bit of uneasiness about Skyrms' case, consider the following modification of it. Suppose that the society in question knows nothing about the internal workings of the barometers, that they just happen to find millions of barometers already constructed. Then suppose the rest of the case remains the same. Now, it does seem unreasonable to expect S to have found out the truth of Sf_1 and even more unreasonable to expect S to know that Sf_1 discredits his evidential support. Hence, given this modified statement of the case, it appears that (D.33, (iii, (2))) is satisfied in the Barometer Case, assuming that there are no other reasonable candidates for Sf_1.

(D.33, (iii, (3))) is also problematic with regard to the Barometer Case. Although S does not believe that there are any Sf_i's, is this non-belief justified? I suppose that since it is not reasonable to have expected S to have found out the truth of Sf_1, then it is reasonable to suppose that his failure to believe that Sf_1 is true is justified. Hence (iii, (3)) is also satisfied, and Skyrms does indeed have a counter-case to Sosa's analysis.

As I noted with regard to Lehrer's case against Sosa, the application of Sosa's (iii, (2, (b))) and (iii, (3)) is rather difficult. Furthermore, it is just these two conditions which permit Skyrms' cases to succeed as counter-cases. Clearly, if these two conditions were dropped, then since there is an Sf_i which is both true and discrediting (D.33, (iii, (2))) would not be satisfied. It is highly likely that such an analysis would be too strong, however, since it

resembles an unpublished analysis by Marshall Swain[160] which Lehrer and Paxson have shown to be too strong.[161]

III

Earlier I argued that Lehrer's analysis (D.9) was not satisfactory and that he could avoid Harman's objections either by repudiating (P.3) or by altering (D.9, (4)).[162] Lehrer, in a subsequent paper, attempts to avoid Harman's objections by repudiating (P.3),[163] but suppose that he, or anyone else, were to take the alternative course of action, viz., the alteration of (D.9, (4))? Would such an analysis be satisfactory? Of course, I have no intention of examining the innumerable possible alterations of (D.9, (4)), but there is one which is quite similar to Lehrer's account which, I believe, deserves some examination if for no other reason than to keep others from attempting to fix up Lehrer's account by taking this route.

Let me first adopt the following modifications: (1) transform the phrase "S is completely justified in believing that p" into the phrase "e (some statement of evidence) completely justifies S in believing that p" and (2) use the following principle:

(P.4) If e completely justifies S in believing that p, p entails h, and S believes that h, then e completely justifies S in believing that h.

Given these two modifications, along with an understanding of "defeat" which Lehrer has explicitly rejected, viz., to determine whether or not -p defeats S's justification for believing that h one adds -p to the evidence and then determines whether the justification is still there,[164] (D.9) can be altered to the following:

(D.9') S knows non-basically that h if and only if

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[160]Swain's proposal is: (D.34): S has non-derivative knowledge that p if and only if there is a statement 'e' such that: (i) S knows that e; (ii) S knows that 'e' is good evidence for 'p'; (iii) S believes that p on the basis of the knowledge referred to in (i) and (ii); (iv) 'p' is true; (v) there is no true statement 'h' such that 'e and h' fails to be good evidence for 'p'.

[161]Lehrer and Paxson, pp. 228-229.

[162]See above, p. 23.

[163]Lehrer and Paxson, p.226.

[164]Lehrer, "K. T. and E.", p. 175.

(1) h is true,
(2) S believes that h,
(3) e completely justifies S in believing that h, and
(4) if e completely justifies S in believing any false statement p which entails (but is not entailed by) h, then the conjunction of e and -p completely justifies S in believing that h.

It is necessary to add the adverb "non-basically" to the analysis, since (D.9', (3)) requires that there be evidence for one's justification. It should be noted that (D.9') is not a full-fledged defeasibility-type account such as Swain's[165] or Sosa's,[166] since defeat only comes into play when the antecedent of (4) is satisfied. Thus, S's justification for believing that h might be defeated by many statements, yet on this account, S still knows just in case S is not justified in believing the negations of those defeating statements.

Nonetheless, (D.9') is not adequate either, as the following case will show. But before presenting the case let me point out again that testimonial evidence can affect the justification of a particular belief, as in the case of Abernathy the logician, a case which I discussed earlier in Part A in conjunction with Skyrms' analysis[167] and as in the case of Mrs. Grabit's Boys, a case which Lehrer himself presents in an article subsequent to the one I am discussing here and which I have discussed in detail in Part C.[168] Suppose that some statement of evidence, e, completely justifies me in believing that Einstein's theory T solves problem #137. Suppose also that it is true and that I believe that it is true. Yet, there is another statement, f, not included in e, which is true but which I am not completely justified in believing, to wit, "Professor Einstein said that his theory T does not solve problem #137". Surely the statement of the conjunction of e and f does not completely justify me in believing that Einstein's theory T solves problem #137. And furthermore, I do not know that it does. Nonetheless, (D.9' (4)) is satisfied in this case, as are the other three conditions, and hence, according to (D.9'), I do know that Einstein's theory T solves problem #137. Thus, this case shows (D.9') to be too weak, but, where Harman's case required Lehrer to accept (P.3) in order for Harman's case to work, this case requires no such commitment. This means, of course, that repudiating (P.3) as well as modifying (D.9) in the manner which I have suggested will not produce a satisfactory analysis.

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[165] See above, p. 59, footnote 160.

[166] See above, pp. 51-54.

[167] See above, pp. 41-42.

[168] See below, pp. 90-91.

IV

Although it would not be correct to characterize Sosa's second analysis[169] of non-basic knowledge as a defeasibility-type account, his analysis does bear certain affinities to the defeasibility approach and can be looked upon as being a partial defeasibility account. His latest proposal is not a revised version of the account which was examined in detail here at the beginning of this part,[170] but rather, it is an entirely different account. His proposal is, on his own admission, inadequate. However, I believe that a careful examination of it will be useful if for no other reason than seeing where it fails.

The pivotal term in Sosa's account is "evident", whereas for Lehrer, and Lehrer and Paxson, it is "completely justifies". Sosa does not spell out what he means by "evident" but he does offer what he describes as a rough characterization: "...when I say that a proposition is evident to someone what I mean is roughly this, that if he accepts that proposition he is then quite justified or reasonable in doing so."[171] In other words, p is evident to S if and only if S accepts p only if S is justified in his accepting p. This characterization is, indeed, very rough, for on this definition the only propositions which are not evident to S are propositions which S is not justified in accepting. Hence, among those propositions which are evident to S are all those propositions which S does not accept! But perhaps what Sosa meant to say was this: "p is evident to S" means "If S were to accept p, then S would be justified in his accepting p". Of course, Sosa says that this is only a rough approximation of what he means by "p is evident to S". He avoids a more detailed analysis and instead, refers his readers to Roderick Chisholm's Theory of Knowledge, especially Chapter One.[172] However, Sosa's additional definitions, which follow below do add much toward the elimination of some of the vagueness connected with his rough approximation:

(D.28) A non-empty set, A, of statements satisfying the Strong Principle of Deductive Closure renders p evident to S if and only if

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[169]Sosa, "Propositional Knowledge," and "Two Conceptions of Knowledge."

[170]See above, pp. 51-59.

[171]Sosa, "Propositional Knowledge," p. 36; "Two Conceptions," p. 64.

[172]See above, pp. 26-27 for my discussion of Chisholm's definition of "evident".

(1) the members of $\hat{A}$ in conjunction with the relevant epistemic rules entail that p is evident to S and
(2) the members of $\hat{A}$ alone do not entail that p is evident to S.[173]

Sosa does not enumerate the set of epistemic rules he has in mind, but he does give an example, viz., "If a proposition is evident and it is evident that its truth entails the truth of a second proposition, then the second proposition is evident."[174] Furthermore, he employs the following two epistemic rules in his discussion:

(1) If someone knows himself to be sure that he sees something to be of a certain color and it is evident to him that the conditions of perception are normal, then it is evident to him that the thing is of that color;[175]
(2) If S remembers at t_1 that p was evident to him at t_0, where t_1 is later than t_0, and S knows that no new disconfirming evidence has been discovered between t_0 and t_1, then p is evident to S at t_1.[176]

Of course, determining exactly what our relevant epistemic rules are to be is indeed a very crucial problem before Sosa's analysis can be put to work. However, Sosa did not make an attempt in either of his papers, and I shall not make an attempt here either. I trust, though, that the above examples are of some help in coming to an understanding of what an epistemic rule is.

Since it is not enough for a set merely to render evident a statement to S, we need some concept spelling out a degree of completeness in that rendering.

(D.27) A non-empty set, $\hat{A}$, of statements satisfying the Strong Principle of Deductive Closure fully renders p evident to S if and only if
(1) $\hat{A}$ renders p evident to S and
(2) for every statement, q, if the statement "q is evident to S" is a member of $\hat{A}$, then there is a subset of $\hat{A}$ which renders q evident to S.[177]

The import of (D.27) is that one never need to look beyond

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[173]Sosa, "Propositional Knowledge," p. 36; "Two Conceptions...", p. 64.

[174]Sosa, "Two Conceptions...," p. 64.

[175]Sosa, "Propositional Knowledge," p. 37.

[176]Sosa, "Two Conceptions...," p. 64.

[177]Sosa, "Propositional Knowledge," p. 35; "Two Conceptions...", p. 63.

his evidence set for justifying statements. That is, if Â renders p evident to S because Â is ["The conjunction of p and q is evident to S"] and the relevant epistemic rule is: For any two statements, if the statement of their conjunction is evident to S, then each one is evident to S, then, if one wishes to see what evidence is offered in support of p, looking at Â will be of little help. Thus, in this situation, Â does not fully render p evident to S. But if Â contains more than just the statement "The conjunction of p and q is evident to S", but also contains a subset of statements which render p & q evident to S, then one can say that Â fully renders p evident to S. Whatever needs justifying with regard to p is justified by statements in Â.

Although it might be supposed that (D.27) is some sort of total evidence requirement, i.e., a condition requiring that the set Â include all of the relevant evidence, it clearly is not. Set Â may, in fact, include only a very small number of relevant evidence statements known to, or believed by, S. (D.27) requires that the evidence for p be sufficient, but it does not require that Â be the complete set of statements of evidence which are relevant to p.

These last two definitions appear to offer an improvement over the undefined expression "completely justifies", "justifies", "is adequate evidence for" used by other analysts by making use of the notion of an epistemic rule. The improvement, however, is more apparent than real since it merely pushes back the problem from specifying what it is to be completely justified to specifying the appropriate epistemic rules, but I am not condemning Sosa here.

With these preliminaries out of the way, I can now exhibit Sosa's analysis of non-basic knowledge:

(D.26) S knows that p if and only if
- (1) p is true,
- (2) S believes that p,
- (3) p is evident to S; and
- (4) there is a set of statements that
  - (a) fully render p evident to S and
  - (b) includes no subset that is epistemically defective with respect to S and p.[178]

(D.29) A set, Â, of statements is epistemically defective with respect to S and p if and only if for some falsehood, f, either
- (1) the statement "f is evident to S" is a member of Â or

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[178] Sosa, "Propositional Knowledge," p. 36; "Two Conceptions...," p. 63.

(2) $\hat{A}$ renders f evident to S but the set ["p is evident to S"] does not render f evident to S.[179]

It seems, then, according to these definitions, that S can have an evident true belief which is not knowledge for a variety of reasons. Although I will not spell out all of the logically possible ways Sosa's definitions can be used to show that although S has a true evident belief, yet he still lacks knowledge, I am interested in two of those ways: the first, since it illustrates Sosa's disguised defeasibility analysis, and the second, since it is a source of serious difficulty for his account. S can fail to know that p even though he has a true evident belief because the set which fully renders p evident to S contains at least one epistemically defective subset. This subset can be epistemically defective in two ways: either (a) when for some falsehood, f, "f is evident to S" is a member of that subset, or (b) when for some falsehood, f, that subset renders f evident to S while the set ["p is evident to S"] does not render f evident to S.

Or, expressing the way involving (a) a bit differently: S can have an evident true belief, but lack knowledge when the evidence set used to render p fully evident to S contains a statement to the effect that some falsehood is evident to S. (Throughout the rest of this section, instead of talking about a subset of the evidence set, I will talk about the whole set since, if some statement, r, is a member of a subset of $\hat{B}$, then r is also a member of $\hat{B}$.) It is initially unclear, in the case mentioned above, why S should be denied knowledge. Why should we deny knowledge to S just because the set which fully renders S's belief evident to him contains a statement saying, "(some falsehood) is evident to S?" Well, first, recall that according to (D.26), there needs to be only one epistemically non-defective set of statements which fully renders p evident to S. Consequently, if the statement "(some falsehood) is evident to S" were not necessary in the set's fully rendering p evident to S, then we could simply consider the set, less the offending statement, to be the set which fully renders p evident to S. So it must be that when S fails to know that p, even though his evident true belief has been fully rendered evident by a set of statements, the statement "(some falsehood) is evident to S" is necessary for that set's fully rendering p evident to S. Furthermore, since the set fully renders p evident to S, it must also contain a subset which renders the falsehood evident to S. Thus, in this case, S presumes to know only because he has relied on false information and when this

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[179]Sosa, "Propositional Knowledge," p. 35; "Two Conceptions...," p. 64.

falsehood is removed, or exposed, S's knowledge claim is destroyed. What we have here is a disguised partial defeasibility-type analysis. S does not know because there is a true statement--the denial of the falsehood--which defeats his justification, or reasons for believing.

The way involving (b) in which S can lack knowledge that p even though he has an evident true belief that p is when the set which fully renders p evident to S, although not containing a statement to the effect that some falsehood is evident to S, nevertheless renders some falsehood evident to S while the set ["p is evident to S"] does not render that falsehood evident to S. It is not immediately apparent why rendering some falsehood evident makes a set epistemically defective, but it is clear that Sosa needs this clause to avoid those Gettier-type cases where, for example, the evidence renders evident to Smith both the statement that Nogot owns a Ford, Fn, and the statement that someone owns a Ford, $(\exists x)Fx$; where Fn is false and $(\exists x)Fx$ is true, and where Smith does not infer $(\exists x)Fx$ from Fn. In cases such as this, although the evidence set contains no false statements, what happens is that, since the epistemic rules are not truth-guaranteeing, a falsehood is sometimes reached by means of the rules. There are occasions when reaching a falsehood is an indication of trouble, as in the Gettier-type cases, and there are occasions when it really does not matter, as Sosa himself shows.[180] It is those occasions when it really does not matter that are a source of serious difficulty for Sosa's analysis.

Before looking at the adequacy of (D.26), I would like briefly to raise a question about (D.29), in particular, about the second disjunct which reads: "... or Â renders f evident to S but the set ["p is evident to S"] does not render f evident to S". My question is: What role does the phrase "but the set..." play in the determination of epistemically defective sets? Since Sosa does not explain why it is included here, its function is unclear. Let us look at a couple of situations where that conjunct might come into play. First, suppose S has a true belief that p which is rendered evident to him by the set Â, but also suppose that Â is epistemically defective because there is a falsehood f such that Â renders f evident to S while ["p is evident to S"] does not render f evident to S. Under what conditions can the statement "p is evident to S" in conjunction with epistemic rules entail that some falsehood is evident to S? It seems to me that only in conjunction with the most grossly inadequate rules can this occur. As an example of those bad rules, consider the following:

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[180]See below, p. 72.

(1) If p is evident to S then $-p$ is evident to S;
(2) If p is evident to S, then for every r, p & r is evident to S; and
(3) If p is Fx_1 & Fx_2 & Fx_3 &...& Fx_n, where n is less than the totality of individuals, and p is evident to S, then (x)Fx is evident to S.

If one supposes that the epistemic rules are adequate, then it seems to me that there are no conditions under which the first conjunct of (D.29, (2)) is true but the second conjunct is false. Consequently, the phrase "but the set ["p is evident to S"] does not render f evident to S" appears to be redundant under the aforementioned conditions and (D.29) might well be modified to read:

(D.29') A set, $\hat{A}$, of statements is epistemically defective with respect to S and p if and only if for some falsehood, f, either
(1) the statement "f is evident to S" is a member of $\hat{A}$ or
(2) $\hat{A}$ renders f evident to S.

However, it has been argued that the elimination of that phrase would result in no false statement being able to be rendered evident to S by any non-defective set, that is, if some statement, p, is rendered evident by any non-defective set, then p is true. Such a result would be unacceptable, it is argued, since there seems to be no good reason why one cannot adequately justify a false statement. This argument misses the mark, however, not because the elimination of the phrase would not have the stated effect--it clearly would--and not because such a result would be unacceptable--it does seem to be unacceptable. This argument misses the mark because it is already a consequence of Sosa's original analysis that no false statement can be rendered evident to S by any non-defective set, a fact which I shall now prove.

Suppose that $\hat{A}$ renders p evident to S and also suppose that p is false. Can $\hat{A}$ be epistemically non-defective? To save mental labor, the following is a logically equivalent version of (D.29), the definition of "epistemically defective":

> $\hat{A}$ is epistemically non-defective with respect to S and p if and only if for every falsehood, f,
> (1) "f is evident to S" is not a member of $\hat{A}$, and
> (2) $\hat{A}$ renders f evident to S only if ["p is evident to S"] also renders f evident to S.

Since p is false, both (1) and (2) must be satisfied with respect to p. It is certainly possible that "p is evident

to S" is not a member of Â, i.e., there seems to be no problem in satisfying the first condition. But is it possible to satisfy the second? To satisfy (D.29, (2)) it must be that if Â renders p evident to S then ["p is evident to S"] also renders p evident to S. Since Â does render p evident to S, it must be that ["p is evident to S"] renders p evident to S. But on Sosa's definition (D.28,) ["p is evident to S"] does not render p evident to S because the members of ["p is evident to S"] alone do entail that p is evident to S. Hence (2) is not satisfied by p, hence, Â cannot be epistemically non-defective. Hence, no false statement can be rendered evident by any epistemically non-defective set.

If p is a true statement rendered evident to S by Â, then the phrase "but the set..." appears to be redundant in (D.29). If p is a false statement rendered evident to S by Â, then, since it has been established that Â must be defective and since both (D.29) and (D.29') entail that Â is defective when p is false, the phrase "but the set..." is redundant in (D.29). Hence, the phrase appears to be redundant and (D.29'), it seems will suffice. (It should be noted that throughout the discussion I have been taking the opening phrase of (D.29), "A set, Â, is epistemically defective with respect to S and p..." to be elliptical for "If a non-empty set, Â, of statements satisfying the Strong Principle of Deductive Closure renders p evident to S, then Â is epistemically defective with respect to S and p..." But surely such an assumption is reasonable, for in what other contexts is it intelligible to speak of epistemically defective sets other than justifying or rendering evident contexts.)

Although Sosa's analysis of knowledge (D.26) does take care of both the Gettier-type counter-cases and the counter-cases having the causal-type structures,[181] "serious difficulties yet remain." In his article, "Propositional Knowledge", he presents the following counter-case to (D.26), employing the following epistemic rules:[182]

(1) If someone knows himself to be sure that he sees something to be of a certain color and it is evident to him that the conditions of perception are normal, then it is evident to him that the thing is of that color.

(2) If (a) someone knows himself to have been sure at some earlier time t, either that he saw something

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[181]For proof, see above, p. 34.

[182]Sosa, "Propositional Knowledge," p. 37.

to be of a certain color C or that he saw something to be of another color C', and (b) if he remembers that it was evident to him at t that the conditions were normal, and (c) he knows that all the evidence he has gathered since t favors there having been something of color C or color C' at t, then it is evident to him that at t something was of color C or of color C'.

His counter-case, then, is:

Suppose now that at time t' it is true of Jones that

(i) he remembers that at an earlier time t he was sure he saw something black or he was sure he saw something brown,

(ii) he remembers that it was evident to him at t that the conditions were normal, and

(iii) he knows that all evidence he has gathered since t favor there having been something black or brown at t, but

(iv) he does not remember which he was sure he saw, a black thing or a brown thing.[183]

Now, by means of rule (2) and (i), (ii) and (iii) above, it follows that it is evident to Jones that at t something was black or brown. Suppose further that there was something brown there at t but that there was nothing black there. Hence, there was something brown or black present at t. But what Jones was sure of at t is that there was something black present. Surely, argues Sosa, Jones does not know at t' that at t there was something brown or black present, yet that he does know at t' seems to be a consequence of the current set of conditions.

Let us take a closer look at this case. As I see it, the supposed epistemically non-defective set which fully renders the statement that at t there was something black or brown present evident to Jones is the set, A, containing the following members:

(a) "Jones remembers that at t either he was sure he saw something black or he was sure he saw something brown";

(b) "Jones remembers that it was evident to him at t that conditions were normal"; and

(c) "Jones knows that all the evidence he has gathered since t favor there having been something black or brown at t".

These three statements, in conjunction with the aforementioned rules, entail that it is evident to Jones that at t something black or brown was present.

Sosa, however, in his later paper, "Two Conceptions of Knowledge", rejects the above case as a counter-case,

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[183] Sosa, "Propositional Knowledge", pp. 37-38.

following suggestions by Roderick Chisholm and Gilber Harman.[184] Their suggestion apparently was that there is a falsehood which the above set Â renders evident, but which the set ["It is evident to Jones that something was then black or brown."] does not render evident. That falsehood, according to Sosa, is the statement that Jones "...then saw that something was black or saw that something was brown."[185] Since Â renders a falsehood evident to Jones, Â is epistemically defective and either Jones does not know that at $\underline{t}$ there was something black or brown present or there is some other set which is not epistemically defective and which fully renders $\underline{p}$ evident to Jones. Since it is reasonable to assume that Sosa's case is constructed so as to rule out the latter alternative, it is reasonable to assume, on the basis of what we have here, that Jones does not know. Consequently, Sosa did not originally have a counter-case to (D.26) after all, or so it would appear.

I am puzzled by this apparent refutation of Sosa's proposed counter-case, for, unless there is an equivocation on the phrase "saw that", I fail to see that the statement "Jones then saw that something was black or saw that something was brown" is false. To say "I saw something black" is to say something ambiguously. It may mean "I saw something that was black" or it may mean "I saw that something was black". Thus in statement (a) of Â, it is unclear as to what Jones saw. However, the wording of the second epistemic rule used here, "...saw something to be of a certain color...", forces us to read (a) along the lines of the latter interpretation. Thus, (a) reads:

> Jones remembers that at $\underline{t}$ either he was sure he saw that something was black or he was sure he saw that something was brown.

Furthermore, the story reveals that Jones was sure at $\underline{t}$ that he saw that something was black. Given all this, I cannot see any way to show that the statement "Jones then saw that something was black or saw that something was brown" is false. Nonetheless, there is another statement which clearly is false and which is rendered evident to Jones by Â, to wit,

> At $\underline{t}$ either Jones saw something to be black and was sure he saw it to be black or Jones saw something to be brown and was sure he saw it to be brown.

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[184] Sosa, "Two Conceptions...," p. 64.

[185] Sosa, "Two Conceptions...," p. 64.

This statement is false, since, although he saw something brown, he was sure it was black and although he was sure he saw something black, what he saw was brown. Hence, Sosa's purported counter-case has been ruled out, even though his way of ruling it out appears to be unsatisfactory.

Since Sosa believes that his counter-case has been destroyed, he provides us with another case, which is quite similar to the first. In this case, Â consists of the following:

(a) "Jones remembers that at an earlier time it was evident to him that something was black or brown" and
(b) "Jones knows that there has been no disconfirming evidence gathered in the meantime."

These facts, together with the epistemic rule that if $\underline{x}$ is remembered to have been evident to S at $\underline{t}_0$, then for an $\underline{t}_1$ later than $\underline{t}_0$, if S knows that no disconfirming evidence has appeared on the scene between $\underline{t}_0$ and $\underline{t}_1$ inclusive, then $\underline{x}$ is evident to S at $\underline{t}_1$; entail that it is now evident to Jones that there was something black or brown at $\underline{t}_0$. The set, Â, consisting of (a) and (b) fully renders this evident to Jones and since the set is not epistemically defective, Jones knows that there was something black or brown at $\underline{t}_0$, since he has this true belief, even though what was evident to Jones at $\underline{t}_0$ was that there was something black present when in fact what was present was something brown.[186]

It is not at all clear, however, that Sosa really has a counter-case here. It is not clear because Sosa does not reveal--probably because he does not know--the list of relevant epistemic rules. Suppose the reasonable claim that if S remembers that $\underline{p}$ then $\underline{p}$ is true is one of Sosa's epistemic rules. In this situation, Â, in conjunction with this remembering rule, entails that it was evident to Jones at $\underline{t}_0$ that something was black or brown at $\underline{t}_0$. The set of statements which rendered it evident to Jones at $\underline{t}_0$ that something was black or brown at $\underline{t}_0$ must surely be defective since what Jones took to be black was in fact brown. However, since Sosa does not suggest that there are epistemic rules governing the relations among different evidence sets, one could assume that there are no such rules and hence Sosa's analysis would be defective because it does not take situations of this kind into account. On the other hand, Sosa does not suggest that there are no such rules and hence the damning of his analysis would appear premature. If only we knew what those epistemic rules were!

However, if remembering that $\underline{p}$ entails that $\underline{p}$, then the

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[186]Sosa, "Two Conceptions...," pp. 64-65.

following argument demonstrates that Sosa has not constructed a counter-case to his own analysis of knowledge:

(1) If remembering that p entails that p, then "it is evident to Jones at t_0 that something is black or brown at t_0" is a member of Â, since Â is closed under the Strong Principle of Deductive Closure.

(2) If "it is evident to Jones at t_0 that something is black or brown at t_0" is a member of Â, then there is a subset of Â which renders it evident, by (D.27).

(3) If there is a subset of Â which renders "it is evident to Jones at t_0 that something is black or brown at t_0" evident, then the aforementioned subset contains "It is evident to Jones at t_0 that something is black at t_0" but it does not contain "It is evident to Jones at t_0 that something is brown at t_0", because the statement, "It is evident to Jones at t_0 that something is black or brown at t_0" became evident to Jones "...only because it was evident to [Jones] that there was something black present..."[187]

(4) If the subset of Â and, hence, Â itself contains "It is evident to Jones at t_0 that something is black at t_0", then Â is defective, since "Something is black at t_0" is false.

(5) Consequently, if remembering that p entails that p, then Â is epistemically defective after all and Sosa's case is not a counter-case to (D.26).

However, Sosa finds more trouble for his own analysis than just this apparent failure to meet a subtle counter-case. Indeed, he finds two further difficulties with his own account. The next bit of trouble which he finds arises due to an inadequacy in his account of "fully renders evident", (D.27), although he does not acknowledge that (D.27) is the source of his trouble here. The objection runs as follows: suppose for some a and for some b, the statements "a is evident to S" renders b evident to S and the statement "b is evident to S" renders a evident to Â. It then follows that for any c, if c is rendered evident to S by the statement "a is evident to S", then c is fully rendered evident to S by the set, Â = ["a is evident to S", "b is evident to S"], since for every member of Â which is of the form "x is evident to S", x is rendered evident to S by some subset of Â. If we suppose that a, b, and c are evident, but not self-evident, then the set Â fails to explain completely how it is that c is evident to S. Consequently, if S has an evident true belief that c, then according to (D.26), S knows that c even though there may be no epistemically non-defective set which fully renders c evident to him.[188]

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[187] Sosa, "Two Conceptions...," p. 65.

[188] Sosa, "Two Conceptions...," p. 65.

A third difficulty which Sosa finds in his own account of knowledge arises because of epistemically irrelevant falsehoods.[189] He says,

> Thus, consider a case where someone I know to be honest and reliable, etc., tells me that she is looking in a mirror and sees herself to be incredibly beautiful. I, a blind man, make two inferences: first, that someone honest and reliable must indeed be incredibly beautiful, and, secondly, that someone honest and reliable is being very vain. I am right the second time, but wrong the first. Would this deny me knowledge in both cases? Presumably not, despite the present account.
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> The problem here is that any set that at the moment renders it evident to me that someone honest and reliable is being very vain will also render it evident to me that someone honest and reliable is incredibly beautiful, which is false...[190]

Of course, the problem of epistemically irrelevant falsehoods has long been troubling to people working on analyses of knowledge. One of Chisholm's accounts runs afoul of the problem,[191] as does one of Swain's.[192] Whether Sosa can repair his analysis to meet the objection remains to be seen. However, Lehrer and Paxson are successfully able to deal with the problem by means of their full-fledged defeasibility-type account.[193]

Finally, I am concerned about the problem of evidence selection. Without actually being able to examine the epistemic rules Sosa would like to use, I am at somewhat of a loss to construct an actual counter-case. However, it seems to me that by either a careful or accidental selection of evidence statements, a person could construct an epistemically non-defective set which rendered fully evident to him some evident true belief, while at the same time ignorning, intentionally or otherwise, certain bits of

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[189] See above, p. 65.

[190] Sosa, "Two Conceptions...," pp. 65-66.

[191] See above, p. 27.

[192] See above, p. 59.

[193] Lehrer and Paxson, p. 230.

relevant evidence which would make his claim to knowledge highly suspect. Of course, this is another problem which the Lehrer and Paxson account of non-basic knowledge attempts to handle by means of their full-fledged defeasibility-type account.

Both Risto Hilpinen[194] and Peter Klein[195] have recently and independently proposed defeasibility-type analyses of knowledge both of which suffer from the same flaw. In addition to accepting the Standard Analysis, they add the following fourth condition:

(iv) For any true proposition q, S would be completely justified in believing h even if he were completely justified in believing $\bar{q}$.

Marshall Swain, in his paper which was read at the Eastern Division meetings of the American Philosophical Association in December 1972,[196] presented the following counter-case to these analyses. Swain asks us to suppose that S has just thrown a rock at a window. S can see that the rock will hit the window and this, plus his other evidence--it is a large rock, it is an ordinary glass window, it is not protected by an invisible barrier, his previous experience with rocks and windows, etc.--surely justifies his belief that the window will break. Furthermore, the window will break as a result of its being struck by the rock. It seems clear that S knows that the window will break. Nonetheless, by using Hilpinen's or Klein's fourth condition, it can be shown that, contrary to fact, S does not know. For poor S has contracted a nervous disease heretofore unknown to the human race. Furthermore, S has never had any symptoms of the disease before, but just at the instant that the rock strikes the window, S is struck with two of the disease's symptoms, viz., total visual and auditory paralysis. Hence, it is true that S will never see nor hear the window break--call this sentence q. Surely, q defeats S's justification for believing that the window will break, i.e., it is not the case that S would be completely justified in believing that the window will break even if he were completely justified in believing that $\bar{q}$. Hence, both Klein's and Hilpinen's accounts entail that S does not know, even though S does know.

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[194]Risto Hilpinen, "Knowledge and Justification," Ajatus 33 (1971), pp. 7-39.

[195]Peter Klein, "A Proposed Definition of Propositional Knowledge," Journal of Philosophy 68 (1971) pp. 471-482.

[196]Marshall Swain, Epistemic Defeasibility (mimeographed for distribution at the Eastern Division meetings of the A.P.A.), 1972.

I concur with Swain's assessment: "The proposals of Hilpinen and Klein fail because they allow for the possibility that a man's justification might be defeated by acquisition of some arbitrary limited portion of the evidence that he does not already possess."[197]

V

In this part I have tried to illustrate the use to which the notion of defeasibility is put in both ethical and epistemic contexts. For Hart, defeasibility is a property of the justification for the application of certain ethical concepts. For Chisholm, too, defeasibility is a property of justifications, not of the application of concepts, but of justifications for the transforming of certain requirements into obligations. But in both cases "defeated" and "defeasible" are words applicable not to concepts or requirements, but to justifications. Furthermore, both Hart and Chisholm agree on the conditions necessary for a defeat to occur: if some statement of evidence (state of affairs), e, justifies S in applying some concept (in transforming some requirement into an obligation), p, then this justification is defeated by some statement of evidence (state of affairs), e', provided that (1) e' is true (occurred) and (2) the conjunction of e and e' does not justify S in applying (transforming) p.

In examining those analyses of knowledge which either are defeasibility-type analyses or bear certain affinities to defeasibility-type analyses, I have shown that none is wholly adequate. Nonetheless, each one of them made use of, or could reasonably be interpreted as making use of, the notion of defeat in the same way that Chisholm and Hart used it--q defeats just in case q is true and in conjunction with the original justifying evidence does not justify. Of course, in each of the three analyses the defeasibility portion was qualified in a manner which, on occasion, rendered it ineffectual: in Sosa's first analysis, (D.33), the defeating statement ruled out knowledge only when S could reasonably have been expected to find out both that the statement was true and that it was defeating; in the Lehrer-like analysis, (D.9), the defeasibility requirement was hedged by the requirement that the negation of the defeating statement entail the statement which S claims to know and that S be completely justified in believing the negation of the defeating statement; and in Sosa's later analysis, (D.26), the defeasibility portion was embedded within a set of conditions too complicated to spell out here briefly. Hence, although none of these analyses were the

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[197]Swain, "Epistemic Defeasibility," p. 16.

result of attempting to develop an analysis of knowledge in terms of "defeat" and "justified true belief", each one, along with Hart and Chisholm, shared a common understanding of the notion of defeasibility. In the next part I shall examine an attempt to analyze non-basic knowledge as undefeated justified true belief.

PART C

THE LEHRER-PAXSON ANALYSIS

The attempt to present an adequate analysis of non-basic knowledge in connection with an analysis of defeasibility has received its clearest and, perhaps, most ingenious exposition in an article by Keith Lehrer and Thomas Paxson entitled, "Knowledge: Undefeated Justified True Belief."[198]

Knowledge, according to Lehrer and Paxson, is of two kinds: basic knowledge, where the knower that h is completely justified in his true belief that h even though there is no evidence to justify that belief; and non-basic knowledge, where the knower that h has evidence that completely justifies his true belief that h and where that justification is not defeated by any other statement. Non-basic knowledge can be defined, then, as follows:

(D. 35) S has non-basic knowledge that h if and only if
- (i) h is true,
- (ii) S believes that h,
- (iii) there is some statement p that completely justifies S in believing that h and no other statement defeats this justification.[199]

As I pointed out earlier, some addition needed to be made to the standard third condition of non-basic knowledge since simply to say that S has non-basic knowledge that h is and only if S has a justified true belief that h is to open oneself to a host of counter-cases such as those constructed by Edmund Gettier, Keith Lehrer, and many others. Although the defeasibility clause, in different forms, is found in several other quite recent analyses of non-basic knowledge, which I have already examined, Lehrer and Paxson make explicit use of the concept of defeat in their work on the problem of knowledge.

Their first proposed definition of defeasibility is

(D.36) If p completely justifies S in believing that h, then this justification is defeated by q if and only if
- (i) q is true, and
- (ii) the conjunction of p and q does not completely justify S in believing that h.[200]

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[198]Lehrer and Paxson, pp. 225-237.

[199]Lehrer and Paxson, p. 227.

[200]Lehrer and Paxson, pp. 227-228.

However, they produced a counter-case to this definition, a case which I shall examine in detail later in this chapter. By means of an ingenious but faulty bit of reasoning, which I shall also examine later, they derived what they take to be a more satisfactory definition

(D.38) If p completely justifies S in believing that h, then this justification is defeated by q if and only if

(i) q is true,

(ii) S is completely justified in believing q to be false, and

(iii) the conjunction of p and q=does not completely justify S in believing that h.[201]

Although it was generally satisfactory to Lehrer and Paxson, (D.38) was found to contain a technical flaw which they pointed out by means of the following argument.

> Suppose there is a true statement q such that, for any p that completely justifies S [me] in believing h, the conjunction of p and q does not completely justify me in believing that h. Moreover, suppose that I am not completely justified in believing q to be false, so that, given our current definition of defeasibility, q does not count as defeating. Nevertheless, if there is any true statement r, irrelevant to both p and q, which I am completely justified in believing to be false, then we can indirectly use q to defeat my justification for believing h. For I shall be completely justified in believing the conjunction of r and q to be false, though in fact is is true, because I am completely justified in believing r to be false. If the conjunction of q and p does not completely justify me in believing that h, then, given the irrelevance of r, neither would the conjunction of r, q and p justify me in believing that h. Hence, my justifications for believing h would be defeated by the conjunction r and q on the current definition of defeasibility as surely as they were by q alone on the preceeding definition.[202]

This argument is quite satisfactory and demonstrates the technical inadequacy of (D.38). Lehrer and Paxson take it

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[201] Lehrer and Paxson, p. 230.

[202] Lehrer and Paxson, p. 230-231.

that "the defect is not difficult to repair" and subsequently formulate what they take to be an adequate definition:

(D.37) If p completely justifies S in believing that h, then this justification is defeated by q if and only if

(i) q is true,

(ii) the conjunction of p and q does not completely justify S in believing that h,

(iii) S is completely justified in believing q to be false, and

(iv) if c is a logical consequence of q such that the conjunction of c and p does not completely justify S in believing that h, then S is completely justified in believing c to be false.

In the rest of this part I shall examine their analyses in detail, looking first at (D.37) and then at their arguments leading up to (D.38). I shall argue that (D.37) is inadequate and that (D.38) is not only inadequate, but wrong-headed. Although (D.37) and (D.38) are both inadequate, it should be pointed out that the failure of (D.37) does not imply the failure of (D.38). I shall propose revisions of these definitions and show that they, too, are inadequate. In addition to my own criticisms, I have included, where appropriate, those of Ernest Sosa, whose work appeared in an article "Two Conceptions of Knowledge," published after the bulk of my work had been completed.[203]

I

In order to demonstrate the inadequacy of the Lehrer and Paxson analysis of non-basic knowledge, I have constructed below a counter-case which seems clearly not to be a case of non-basic knowledge, yet, on the Lehrer-Paxson analysis, turns out to be admitted as an instance of non-basic knowledge.

The Case

> Imagine the following. I see two men enter my office whom I firmly believe to be Mr. Nogot and Mr. Havit. I have just seen Mr. Nogot depart from a Ford, and he tells me that he has just purchased the car. Indeed, he shows me a certificate that states that he owns the Ford. Moreover, Mr. Nogot is a friend of mine whom I know to be honest and reliable. On the basis

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[203] Sosa, "Two Conceptions...."

> of this evidence, I would be completely justified in believing that, h, someone in my office owns a Ford.
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> However, imagine that, contrary to my evidence, Mr. Nogot has deceived me and that he does not own a Ford. Moreover, imagine that Mr. Havit, the only other man I see in my office, does own a Ford, although I have no evidence that he (or I) owns a Ford. In this case, though h is true and I am completely justified in my belief that it is true, I do not know that it is true. For, the reason that h is true is that Mr. Havit owns a Ford, and I have no evidence that this is so.[204]

Now, if there are any likely candidates to defeat my justification for believing that someone in my office owns a Ford, it is quite obviously the true statement that Mr. Nogot does not own a Ford. However, I will show below that this statement fails to be defeating, according to the Lehrer and Paxson analysis. This failure to certify the statement that Mr. Nogot does not own a Ford as a defeating statement is utterly crushing to the Lehrer and Paxson analysis of defeasibility, which should be then either discarded or repaired.

A quick examination of the situation reveals that the candidate statement, q, 'Mr. Nogot does not own a Ford', satisfies the first three conditions of defeasibility as spelled out by Lehrer and Paxson:

(i): q is true (according to the story);
(ii): the conjunction of e and q does not completely justify me in believing that h (also from the story);
(iii): I am completely justified in believing q to be false (since my evidence, according to the story, completely justifies me in believing -q to be true).

But, does q meet condition, (iv), i.e., am I completely justified in believing to be false all those logical consequences of q which, when conjoined with e, do not completely justify me in believing that h? I shall argue that I am not so justified. To show this let me return to the story.

While Mr. Nogot, Mr. Havit and I are in my office, unbeknownst to me, my secretary says to one of the other girls in the office that, r, the man in my office whom I think to be Mr. H. Nogot is not Mr. H. Nogot at all, but rather, it is his identical twin brother, Mr. D. Nogot, who never owned

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[204]Adapted from Lehrer, "Knowledge, Truth and Evidence," pp. 169-170.

a Ford in his life. Now, I know that Honest Nogot has a twin brother, but I had never met him and furthermore, the last I had heard of D. Nogot, he was on the island of Tristan da Cunha, having forsaken the "modern" world, but that was years ago. In any case, I am neither completely justified in believing that r is true nor am I completely justified in believing that r is false. However, I think that it is quite clear that the conjunction of e and e does not completely justify me in believing that h is true.

Since q v r is a logical consequence of q, let us examine it in the light of the fourth condition. Ideally, I would like to have q and r be mutually exclusive, in order to avoid certain complications arising from the application of the probability calculus to the case. E.g., a set of extreme cases is given by Carnap in The Logical Foundations of Probability where the disjunction of two negatively relevant statements is itself positively relevant to the hypothesis in question, due to an overlapping of evidence.[205] In this case, however, mutual exclusivity is impossible to achieve. In fact, I could, but I will not, prove a theorem to the effect that if x is negatively relevant to some hypothesis, h, then there is no statement mutually exclusive with respect to x that is also negatively relevant to h. So, unfortunately, I will have to live with the complications. However, since I lack a specific method for measuring the degree of justification or lack of it, the influence of these complications on my example will remain undetermined until such techniques have been adequately developed.

Here, as in the first example, in order to show that q fails to meet the fourth condition and thereby fails to be a statement which defeats my justification for believing that h, I must show (1) that the conjunction of e and q v r does not completely justify me in believing that h and (2) that I am not completely justified in believing q v r to be false.

The following general argument,[206] when instantiated to our case here, will take care of (2):

i. S is completely justified in believing A v B to be false if and only if S is completely justified in believing -(A v B) to be true.

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[205] Carnap, Logical Foundations of Probability, 2nd edition. Chicago, 1962, p. 384.

[206] (i), (ii), (iii), (iv), and (vi) are universally quantified.

ii. S is completely justified in believing -(A v B) to be true if and only if S is completely justified in believing -A · -B to be true.
iii. S is completely justified in believing -A · -B to be true only if S is completely justified in believing -A to be true and S is completely justified in believing -B to be true.

Therefore,

iv. S is completely justified in believing A v B to be false only if S is completely justified in believing -A to be true and S is completely justified in believing -B to be true.
v. I am not completely justified in believing r to be false.
vi. S is completely justified in believing A to be true if and only if S is completely justified in believing -A to be false.

Therefore,

vii. I am not completely justified in believing -r to be true.

Therefore,

viii. I am not completely justified in believing q v r to be false.

The derivations of (iv) and (vii) are both trivial and obvious. The derivation of (viii) is:

(a) Disjoin to (vii) the statement 'I am not completely justified in believing -q to be true' so that we have "Either I am not completely justified in believing -r to be true or I am not completely justified in believing -q to be true."
(b) Use DeMorgan's Rule and Commutation on the above so that we have "It is not the case that both I am completely justified in believing -q to be true and I am completely justified in believing -r to be true."
(c) Instantiate (iv) and use Modus Tollens to reach the conclusion (viii).

The soundness of this argument, now, depends on the truth of (i), (ii), (iii), and (vi). Premise (v) is taken from the story. Since (i) is a substitution instance of (vi), if (vi) is true, then so is (i).

The proof of premise (ii) relies on the following principle, the Weak Principle of Deductive Closure: If $\hat{A}$ is a set of statements which S is completely justified in believing to be true, then for every $a \in \hat{A}$ and for every b, if a entails b, then $b \in \hat{A}$. This principle, I believe, is universally accepted, a belief supported by H. E. Kyburg, Jr.[207]

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[207] Henry E. Kyburg, Jr., "Conjunctivitis" in M. Swain (ed.) Induction, Acceptance, and Rational Belief (Dordrecht, 1970), p. 55.

Of course, the Strong Principle of Deductive Closure would be equally useful here:

> If $\hat{A}$ is a set of statements which S is completely justified in believing to be true, then for every a, b ε $\hat{A}$ and for every c, if a entails c or b entails c or a · b entails c, then c ε $\hat{A}$.

It is easy to see that the Strong Principle entails the Weak Principle. However, the Weak Principle does not entail the Strong Principle. That is, there are sets of statements which satisfy the Weak Principle but fail to satisfy the Strong one. As an example, consider the following:
(I). $\hat{A}$ = ['-P', 'P v Q', 'R ⊃ S', '-Q ⊃ P', ...]
(II). $\hat{A} \cap$ ['Q'] = $\emptyset$; that is, 'Q' is not a member of $\hat{A}$, 'Q' $\notin$ $\hat{A}$.
$\hat{A}$ can be spelled out more completely, infinitely if necessary, in order to satisfy the Weak Principle. However, since A does not contain 'Q', it will not satisfy the Strong Principle because '-P', 'P v Q' entails 'Q'.

There are objections raised, however, against certain versions of the Strong Principle, particularly when the antecedent reads: "If A is a set of statements which S believes (accepts) ...", i.e., when the members of A not only have some epistemic value but also have epistemic status.[208] The objections raised against those versions of the Strong Principle when it refers to sets of statements having epistemic status do not seem to me to be telling against versions of the principle which refer to sets of statements having only epistemic value, as is the case here with my version. However, even though I am perfectly content to employ the Strong Principle here, since there could be objections to it, and

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[208](a) A statement, p, has epistemic value for S just in case it is reasonable or unreasonable, justifiable or unjustifiable, etc. for S to believe, accept, doubt, etc. that p.

(b) S is in an epistemic state with regard to a statement p just in case S knows that p, or S believes that p, or S accepts p, or ....

(c) A statement, p, has epistemic status for S just in case S is in an epistemic state with regard to p.

See Swain, "The Consistency of Rational Belief" in Swain (ed.) Induction, Acceptance, and Rational Belief, pp. 27-28.

since I do not need it, I will rely here only on the weak version.

Back to the proof, which is trivial. Recall that we are attempting to prove that: S is completely justified in believing -(A v B) to be true if and only if S is completely justified in believing -A · -B to be true. Since -(A v B) entails -A · -B, if S is completely justified in believing -(A v B), then by the Weak Principle he is also completely justified in believing -A · -B. And, since -A · -B entails -(A v B), if S is completely justified in believing -A · -B, then by the Weak Principle he is also completely justified in believing -(A v B), all of which completes the proof of (ii).

Likewise, premise (iii) is easily established by the employment of the Weak Principle of Deductive Closure Premise (iii) is:

(iii): S is completely justified in believing -A · -B to be true only if S is completely justified in believing -A to be true and S is completely justified in believing -B to be true.

Since -A · -B entails -A, by the Weak Principle if S is completely justified in believing -A · -B to be true, then S is completely justified in believing -A to be true. And since -A · -B entails -B, S is also completely justified in believing -B to be true. Here the difference between the weak and strong versions of the principle may be seen. The weak version allows us to establish only the 'only if' and not the strong 'if and only if' which we could have used in premise (iii). We did not use it, since we did not need it.

Premise (vi) and hence, premise (i) are trivially true and need no supporting argument.

Having now established that the premises of my argument in support of claim (2) are true, it follows that I am not completely justified in believing q v r to be false, since my argument for that claim is valid.

Now I must prove claim (1), that the conjunction of e and q v r does not completely justify me in believing that h. The argument is this:

1. The conjunction of e and q does not completely justify me in believing that h.
2. The conjunction of e and r does not completely justify me in believing that h.
3. The conjunction of e and q and r does not completely justify me in believing that h.
4. The conjunction of e and -q and r does not completely

justify me in believing that h.

5. The conjunction of e and q and -r does not completely justify me in believing that h.
6. If (1) and (2) and (3) and (4) and (5), then the conjunction of e and q v r does not completely justify me in believing that h.

Therefore,

7. The conjunction of e and q v r does not completely justify me in believing that h.

All of the premises, except premise 6, are easy to establish. Premise 1 is a condition of defeasibility already accepted as true. The statement of my evidence plus the statement that the man in my office is not Mr. H. Nogot, but it's his twin brother who never owned a Ford certainly does not completely justify me in believing that h--Premise 2. The statement of my evidence plus both the statements that Mr. H. Nogot does not own a Ford and that the man in my office is not Mr. H. Nogot, but it's his twin brother who never owned a Ford in no way completely justifies me in believing that h--Premise 3. However, even with the statement that Mr. H, Nogot does own a Ford, the statement of my evidence plus the statement that the man in my office is not Mr. H. Nogot, but it's his twin brother who never owned a Ford does not completely justify me in believing that h--Premise 4. And finally, even with the statement that the man in my office is Mr. H. Nogot, the statement of my evidence plus the statement that Mr. H. Nogot does not own a Ford does not completely justify me in believing that h--Premise 5.

Premise 6 I assert as an accepted principle. I cannot prove that it is true without relying on some adequately developed theory of justification and none seems to be currently available.[209] However, it does appear to be obviously true, since the antecedent exhausts the logical possibilities.

Thus, it appears that my argument to show that the conjunction of e and q v r does not completely justify me in believing that h is a sound one. This result, in conjunction with an earlier established conclusion, viz., that I am not completely justified in believing q v r to be false, shows that q does not meet the fourth condition for defeasibility as formulated by Lehrer and Paxson and consequently is not a defeating statement. I take it that the preceeding example, therefore, constitutes a counter-case to the Lehrer and Paxson analysis of defeasibility, since it has been shown that the most obvious candidate for defeating my justification for believing that h fails to do so, according

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[209] See Carnap, pp. 346-428, for a proof in his system.

to the criteria spelled out by Lehrer and Paxson. Of course, it could be argued that our intuitions are misleading here and that, consequently, q is not defeating after all. But this tack does not really appear plausible especially in view of the fact that the proponents of this view of defeasibility consider q to be defeating.[210]

Of course, this result alone does not constitute a counter-case to their analysis of non-basic knowledge, but is merely a counter-case to their analysis of defeasibility, which is all I need to prove. For my case to constitute a counter-case to their analysis of non-basic knowledge I must show that there are no defeating statements to my justification for believing that h. This is what I shall now attempt to do:

i. Let s be any statement satisfying (i), (ii), and (iii) of (D.37); i.e., s is a candidate for being a defeating statement.

Therefore,

ii. s is true, (by (D.37, (i))).

Therefore,

iii. The conjunction of e and s does not completely justify me in believing that h, (by (D.37, (ii))).

Therefore,

iv. I am completely justified in believing s to be false, (by (D.37, (iii))).

v. Let r' be the r in the above example such that
   (a) the conjunction of e and r' does not completely justify me in believing that h and
   (b) I am not completely justified in believing r' to be true and I am not completely justified in believing r' to be false.

Therefore,

vi. I am not completely justified in believing s v r' to be false, (by argument on pp. and (iv) and (v) above).

Therefore,

vii. The conjunction of s v r' and e does not completely justify me in believing that h, (by the appropriately modified version of the argument on pp. and lines (iii) and (v, (a)) above.

Therefore,

viii. Any s satisfying (i), (ii) and (iii) of (D.37) fails to satisfy (D.37, (iv)).

ix. If a statement fails to satisfy any of the four conditions of (D.37) then that statement fails to be a defeating one.

Therefore,

x. There is no statement which defeats my justification for believing that h.

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[210] See Lehrer and Paxson, p. 229.

Therefore,

xi. I know that someone in my office owns a Ford, (from line (x) above and the Lehrer and Paxson analysis of non-basic knowledge).

But,

xii. I clearly do not know this.

Therefore,

xiii. The Lehrer and Paxson analysis of non-basic knowledge is inadequate.

Of course, the argument has a weak premise, viz., line (vii). My claim depends on my earlier argument, which was sound. But, unfortunately, there just is no way, given the present state of the art with regard to theories of justification, to establish that every s will satisfy the first five premises of that argument. If we suppose that there is some s which does not satisfy all of the first five premises, all is not lost, however, since there are equally good, but different principles analogous to the principle there enunciated as premise 6. However, whereas premise 6 appears to be obviously true, its analogues do not so appear, even though I am convinced that they are true. This consequence is, of course, most infelicitious and perhaps is of sufficient warrant to justify the removal of the argument. However, perhaps its inclusion will generate an interesting counter-case.

It is interesting to note that E. Sosa in his article, Two Conceptions of Knowledge, makes a similar objection to Lehrer and Paxson's fourth condition of defeasibility.[211] He does not show that their analysis is defective by giving a specific counter-case, as I did, but rather, he attempts to show that no statement can be defeating, which is the same universal claim that I have just made in the above argument. Unfortunately, his rather sketchy proof hinges on the same intuitive belief that mine does and, consequently, is no more satisfactory than mine is.

The results of all the labor which has surrounded the development and construction of the counter-case have indeed fallen short of one goal, viz., the refutation of the Lehrer and Paxson analysis of non-basic knowledge. This case promises to be a clear counter-case to their analysis of non-basic knowledge if only I were able to find an acceptable theory of justification with which to work. The net effect of this bit of work does, however, cast a shadow of suspicion on the Lehrer and Paxson analysis of non-basic knowledge when it is employed with any acceptable theory of justification. However, even though I have not provided a

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[211] Sosa, "Two Conceptions...."

clear and definitive counter-case to their analysis of non-basic knowledge, I have established the inadequacy of their analysis of defeasibility, on which their analysis of non-basic knowledge depends.

Perhaps the objections raised by Sosa in his article and by me in the previous pages here can be avoided by the following modification of the Lehrer and Paxson analysis of defeasibility: (the modifying addition is underlined below)

> If p completely justifies S in believing that h, then this justification is defeated by q if and only if
>
> (i) q is true,
>
> (ii) the conjunction of p and q does not completely justify S in believing that h,
>
> (iii) S is completely justified in believing q to be false, and
>
> (iv) if c is a logical consequence of q such that the conjunction of c and p does not completely justify S in believing that h and for every a, if a is an atomic component of c, then the conjunction of a and p does not completely justify S in believing that h; then S is completely justified in believing c to be false.

The modification is at least prima facie reasonable since the earlier counter-cases were generated by the disjunctive component of the logical consequences of q. Unfortunately, this proposed modification fails to meet both the objections which I raised earlier and also Sosa's first objection. In these two cases, the disjunct added to the supposed defeating statement was such that the above new condition was met, yet the consequent of (iv) above fails to be satisfied. That makes this proposal unsatisfactory since it is agreed that the two statements in question are in fact defeating, even though they fail to meet the criteria.

It also does no good to rewrite the underlined material as follows: and for every a, if a is an atomic component of c, then a is negatively relevant to h. Since, on any reasonable definition of 'negatively relevant', the same situation holds here, mutatis mutandi, as held in the previous paratraph. Other objections can be made against these modifications, but why bother since the modifications fail to do the job for which they were designed anyway.

The objections raised both by me and by Sosa to the Lehrer

and Paxson analysis can be avoided, however, by means of the following modification: (the amendment is underlined)

(iv) if c is a logical consequence of q such that the conjunction of c and p does not completely justify S in believing that h and such that S is completely justified in believing to be false every statement entailing c, then S is completely justified in believing c to be false.

The reader will recall that the preceeding counter-cases to the Lehrer and Paxson analysis of defeasibility arose because I was able to generate logical consequences of the proposed defeating statement which failed to satisfy the fourth condition, the condition stated above minus the underlined material. The logical form of these consequences was disjunctive, one disjunct being the prospective defeating statement, the other disjunct being a statement which was such that either it was irrelevant to the hypothesis in question (the proposed knowledge claim) and I was completely justified in believing it to be false. Since both disjuncts entail the disjunction and since the infelicitous type of disjunct fails to satisfy the new fourth condition, it is easily seen that we can eliminate such prospective counter-cases to the Lehrer and Paxson analysis by this amendment.

The original version of (iv) was inadequate because it was too narrow, i.e., obviously defeating statements were ruled out. It appears that this revised statement of (iv) is too broad, i.e., it does not rule out any statement as a defeating statement. As it is presently worded, any statement satisfying (i), (ii), (iii) also satisfies (iv). This is due to the fact that (iv) is now logically true. Since every statement trivially entails itself, if S is completely justified in believing to be false every statement which entails c, he therefore is completely justified in believing c to be false, thus making (iv) logically true. If we revised the underlined material to read: "and such that S is completely justified in believing to be false every statement no identical to c which entails c" then (iv) is no longer obviously analytically true. However, even with this modification, (iv) remains analytically true, since this latest modification is simply another way of stating our Weak Principle of Deductive Closure.

Since an analytic criterion is no criterion, this attempt to revise (iv) in the face of severe criticisms is not adequate. Although the failure to find a successful modification of (iv) does not preclude there being one, I cannot think of a direction in which to turn to remedy the situation.

Either there must be a radical revision of (iv) or it must be replaced or done away with. At any rate, we are left either with an inadequate criterion or an analytic one. Both of these alternatives are unacceptable if we are trying to salvage the Lehrer and Paxson analysis of defeasibility.

II

Having shown earlier the inadequacy of the Lehrer and Paxson account of defeasibility by demonstrating the deficiency of part (iv) of their analysis, and having attempted and failed to remedy that inadequacy by modifying (iv), perhaps it would be reasonable to terminate my examination of the Lehrer and Paxson account at this point. However, I will not end the discussion here, since I have more objections to their analysis, as does Sosa. If, perchance, (iv) is modified to meet the objections, are we then to say that the analysis of defeasibility is satisfactory? I think not. I have grave doubts about the necessity of

(iii) S is completely justified in believing q to be false.

At face value, it seems highly implausible that a necessary condition of q's being a defeating statement be that S is completely justified in believing q to be false. This particular Lehrer and Paxson claim is, at the least, counter-intuitive and, at the most, it is false. It would be constructive to examine the cases and reasonings employed by Lehrer and Paxson in support of their claim that (iii) is a necessary condition of defeasibility.

Lehrer and Paxson inaugurate their section about the definition of defeasibility by following up a suggestion made by Roderick Chisholm in his article The Ethics of Requirement.[212] There Chisholm says:

> ..."require" is like "confirm"...To say that a requirement is defeasible is to say that it may be overridden. Our second definition, then, is a definition of "overrides."
>
> (2) "There is a requirement for q which has been overridden" for
> $(Ep)(Es)((p \ \& \ pRq) \ \& \ (s \ \& \ -((p \ \& \ s)Rq)))$.
>
> The definiens may be read as: ....(or, alternatively "There are true propositions p and s which are such that (i) p requires q and (ii) the conjunction of p and s does not require q.")

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[212]Chisholm, "The Ethics of Requirement," American Philosophical Quarterly, I (1964), pp. 147-153.

This suggestion led to their tentative adoption of the following:

(D.36) If p completely justifies S in believing that h, then this justification is defeated by q if and only if
(i) q is true, and
(ii) the conjunction of p and q does not completely justify S in believing that h.[213]

To show that (D.36) is too broad, making their analysis of non-basic knowledge too restrictive, Lehrer and Paxson point out that there can be true statements which are misleading and offer the following type of counter-case: Suppose I am completely justified in believing that Tom Grabit removed a book from the library yesterday, the evidence being overwhelming. E.g., yesterday I saw Tom, one of my former students, walk over to the reference shelf, put a book under his bulky coat, and casually walk out of the library; the conditions for my sensory perceptions were normal; etc. Unbeknownst to me, however, this morning Tom's mother, Mrs. Grabit, told her neighbor that Tom was out of town all day yesterday, and that he did not go to the library at all, but that his identical twin brother, John, was in the library yesterday. Hence, Lehrer and Paxson claim that, given this much of the story, I do not know that Tom removed a book from the library yesterday because there is a statement which defeats my justification for believing it, viz., "Mrs. Grabit said that Tom Grabit was not in the library yesterday."

But the story is incomplete. Lehrer and Paxson continue:

> The preceding might seem acceptable until we finish the story by adding that Mrs. Grabit is a compulsive and pathological liar, that John Grabit is a fiction of her demented mind, and that Tom Grabit took the book as I believed. Once this is added, it should be apparent that I did know that Tom Grabit removed the book, and since the knowledge must be non-basic, I must have non-basic knowledge of that fact. Consequently, the definition of defeasibility must be amended. The fact that Mrs. Grabit said what she did should not be allowed to defeat my justification that I have for believing that Tom Grabit removed the book, because I neither entertained any beliefs concerning Mrs. Grabit nor would I have been justified in doing so. More specifically, my justification does not depend on my being completely justified in believ-

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[213] Lehrer and Paxson, pp. 227-228.

ing that Mrs. Grabit did not say the things in question.[214]

Although this bit of reasoning is ingenious, it is not trivially seen to be a counter-case to (D.36). Furthermore, the conclusion which Lehrer and Paxson draw from this example certainly does not follow as immediately and obviously as they would have us believ, if it follows at all.

The first claim which seems to require a bit more arguing is the claim that the statement "Mrs. Grabit said that Tom Grabit was not in the library yesterday" defeats my justification for believing that Tom removed a book from the library yesterday. Since we are dealing with a rather loose, intuitive use of "completely justifies" here, it is surely debatable whether or not this is so. If my father were to announce that the earth was flat, would the statement "My father said that the earth is flat" defeat my justification for believing that the earth is sphere-like? I hardly think so. On the other hand, if my father were to say that my sister lives in New York, it might be more forcefully claimed that the statement of his saying this would defeat someone's justification for believing that I had no sisters. One of the differences between these two situations is surely that my father is an authority, to some extent, regarding his children, whereas he is not an authority on geomorphology (or whatever). But it seems inappropriate to make these distinctions here. The problem of what counts as evidence for justifying a conclusion is the province of various theories of justification. Although Lehrer and Paxson maintain that they are not presupposing any one theory of justification in their paper, by allowing that Mrs. Grabit's statement has an influence on their conclusions, they surely are presupposing at least a class of theories, each member of which has the characteristic of admitting as admissible evidence statements of indirect and direct discourse without apparent qualification. But surely not all theories of justification will admit so readily statements of evidence of this kind, and if this is so, then we are not compelled to do so either. Hence it does not appear that we are compelled to accept Lehrer's and Paxson's conclusion that the statement about Mrs. Grabit defeats the given justification. It then follows that we are not compelled to accept their conclusion that this case constitutes a counter-case to (D.36).

Unfortunately for the Lehrer and Paxson proposal, even if we were to agree that the statement about Mrs. Grabit is defeating, there are other reasons for rejecting their case as a counter-case to (D.36). As I read their argument,

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[214]Lehrer and Paxson, pp. 228-229.

Lehrer and Paxson claim that since, with additional evidence, the statement about Mrs. Grabit is no longer defeating, we should distinguish between defeating statements and statements which are merely misleading, the statement about Mrs. Grabit merely being misleading, and thus revise (D.36) to take this into account. However, an alternative course remains open for us here. Relying on Chisholm again, in this earlier quoted article, The Ethics of Requirement, he suggests that defeating statements can, themselves, be defeated.[215] Surely that is what occurs in the case given above. Although the statement about Mrs. Grabit does defeat, we may assume, the justification for believing that Tom removed a book from the library yesterday, all is not lost, for there are other statements which defeat the one about Mrs. Grabit, Thus, rather than forcing the definition of defeasibility to conform to a particular analysis of non-basic knowledge, we must rewrite our analysis of non-basic knowledge in the light of a satisfactory definition of defeasibility. Hence, whether or not we admit that the statement about Mrs. Grabit is defeating, we need not accept this Lehrer and Paxson case to be a counter-case to (D.36). It may be a counter-case to that analysis of non-basic knowledge which employs (D.36), but that does not imply that it is a counter-case to (D.36).

Before we leave the Case of Mrs. Grabit's Boys, I should like to examine the argument which Lehrer and Paxson draw from their purported counter-case in conjunction with a standard Gettier-type counter-case. The conclusion which they draw is that not only must a defeating statement be true and be such that it, in conjunction with the evidence, does not completely justify one's believing that some statement is true, but also that one must be completely justified in believing it to be false. Since Lehrer and Paxson do not attempt or hint at attempting a deductive argument for their conclusion, an attempted deductive reconstruction of the argument would not be germane, so it would seem. As I view their argument, it is an induction from a case of one type and a whole collection of cases of another type to the conclusion. I trust that the following is a fair reconstruction of that argument:

1. The Case of Mrs. Grabit's Boys is a counter-case to (D.36) showing that the two conditions given there are not jointly sufficient to define the concept of defeasibility.
2. The Case of Mrs. Grabit's Boys is a case of knowing.
3. The Gettier-type cases are not cases of knowing.
4. The difference which concerns us here between the Gettier-type cases and Mrs. Grabit's Boys case is that there is a statement which defeats one's

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[215]Chisholm, "The Ethics...," p. 148.

justification for belief in the former case and not in the latter case.

5. The difference which concerns us here between the defeating statement in the Gettier-type cases and the purportedly defeating statement in Mrs. Grab-it's Boys case is that we are completely justified in believing the former statement to be false, whereas we are not completely justified in believing the latter statement to be false.

Therefore,

6. (D.36) must be amended by adding
(iii): S is completely justified in believing q to be false.

This amended version of (D.36) has been labeled '(D.38)' earlier.

It should be obvious, however, that even if these five premises were true, this fact would shed little light on the reasonableness of the inference to the conclusion above. Either this inference is a leap of faith or Lehrer and Paxson have additional, unrevealed evidence for their claim. That the defeating statements in the Gettier-type cases are such that S is completely justified in believing them to be false may not reveal any necessary characteristics of defeating statements, but may only reveal some accidental qualities of the Gettier-type cases.

The Gettier-type cases have the following structure:

(S.1)
(i) evidence, e, completely justifies S in believing that q;
(ii) q entails p;
(iii) p is true;
(iv) S believes that p;
(v) S is completely justified in believing that p; and
(vi) q is false.

Now, according to premise (4) of the above argument, there is a statement which defeats S's justification for believing that p, viz., '-q'. Since S is completely justified in believing that q, according to (i) above, it follows that S is completely justified in believing that -q is false.

From the above, then, we can see that two of the three conditions of defeasibility as spelled out by Lehrer and Paxson in (D.38) follow deductively from the statement of the Gettier-type cases; those two conditions being (D.38, (i)) and (D.38, (iii)). Thus, S's being completely justified in believing q to be false is a logical consequence of one of the characteristics of the Gettier-type cases. It seems unreasonable, with no further justification, to require as a necessary condition of defeasibility, a peculiar characteristic of an unusual type of counter-case to analyses of

non-basic knowledge. Furthermore, there is a way of taking Mrs. Grabit's Boys Case, which I discussed earlier in this section, so that both premise (1) and premise (4) are false. Premise (5) may be true, but if it is, then it is true only because Lehrer and Paxson have presupposed again--contrary to their stated position--a particular class of theories of justification.

The scheme for Mrs. Grabit's Boys Case is:
(a) the evidence, e, completely justifies S in believing that p;
(b) S believes that p;
(c) p is true;
(d) Mrs. Grabit said that -p (call this statement 'q');
(e) Mrs. Grabit is a chronic liar, etc.

Now, Lehrer and Paxson claim that S is not completely justified in believing q to be false, i.e., in believing that Mrs. Grabit did not say that -p, because S "...neither entertained any beliefs concerning Mrs. Grabit nor would (h) have been justified in doing so".[216]

There is nothing wrong with constructing the case so that S is totally unacquainted with Mrs. Grabit's speech and character, even her existence, from which it follows that he would not have been justified in maintaining any beliefs about her or about what she said. Surely no one is justified in reaching conclusions for which he has no evidence, so long as there is or could be evidence.[217] However, to claim without argument that this constructed feature of the case is precisely the important difference between the Gettier-type cases and Mrs. Grabit's Boys Case which enables us to differentiate cases of knowing from cases of non-knowing is just an unsatisfactory way of proceeding. Geometry teachers always counsel the students against "deducing" theorems from the physical features of their constructions rather than from the logical properties of those constructions. Unfortunately, this is what Lehrer and Paxson appear to have done.

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[216]Lehrer and Paxson, pp. 228-229.

[217]Of course, if some of one's conclusions are those for which there is (can be) neither positive nor negative evidence, then I suppose that there are at least four positions which we can hold with regard to the justification for accepting those conclusions: (1) accept it if you want, (2) be agnostic about it, (3) agnosticism is the reasonable stance but it is not unreasonable to accept it if you want, and (4) the choice is arational. See Lehrer, et al. "Reason and Evidence: An Unsolved Problem," Ratio IX (1967), pp. 38-48.

Why is it that we do not regard the statement about Mrs. Grabit to be ultimately defeating? Is it because, as Lehrer and Paxson would have us believe, S is totally unaware of everything about Mrs. Grabit? Or is it because Mrs. Grabit is a habitual liar? Ernest Sosa, in his earlier mentioned article, argues against this aspect of the Lehrer and Paxson proposal as follows:

> For suppose that Mrs. Grabit is not insane after all, that Tom does have an identical twin John, that Mrs. Grabit honestly believes that John and not Tom was in the library at the time and testifies to that effect, and that everyone else concerned has heard of Mrs. Grabit's testimony, and has consequently changed his mind about Tom. Surely it would not do to grant S entitlement for knowledge that Tom took the book while denying it to everyone else concerned, when they are supposed to have all the data that S has plus the additional data concerning Mrs. Grabit's testimony. And yet this would be a consequence of the account of knowledge under discussion. For, by the authors' hypothesis, S is not completely justified in believing it false that Mrs. Grabit said the things in question (and I presume we may add "to the people in question," etc.). And this rules out her testimony to the others as a defeater of S's complete justification for blaming Tom.[218]

Sosa is quite right: it is indeed odd to grant knowledge to S while denying knowledge to T, or to twist an old cliché; ignorance is knowledge. Sosa's case is problematical, however, even though it does show a weakness in the Lehrer and Paxson account. It is problematical because in any situation where S is entitled to know according to any of the variations of the Standard Analysis, T can fail to be entitled to know even though he possesses the same or more evidence than S simply because T refuses to believe for whatever reason. This is true whether or not T would have been justified in believing if he had so chosen. In addition, Sosa's case is also problematical because there is some reason to think that S is entitled to knowledge in spite of Mrs. Grabit's honest belief, what she says is false and hence, r is not really defeating after all, but is only misleading, as Lehrer and Paxson might say. What she says must be false, for if it is not, then p is false and no one knows that p, including S. Furthermore, had T chosen to believe in spite of what Mrs. Grabit said, he, too, would have been entitled to know.

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[218]Sosa, "Two Conceptions...," p. 62.

Although problematical, Sosa's case brings me to a crushing argument against (D.38, (iii)). Suppose that there is some conjunctive statement, q, which completely justifies S in believing that p. Suppose further that there is some true statement, r, such that the conjunction of q and r does not completely justify S in believing that p. In addition, suppose that S is not only completely justified in believing r to be true, but in fact, S knows that r is very strong evidence against p, but chooses to ignore r when presenting his justification for believing that p. It is quite clear that in the above situation, r defeats S's justification for believing that p, even though r fails to be defeating according to (D.38). One might object at this point by arguing that q could not have completely justified S in believing that p since q was not the sum total of S's evidence relevant to p. Such an objection might be sustained given other analyses of knowledge and/or defeasibility, but it does not apply here. Neither Lehrer, in his discussion of "completely justifies" nor Lehrer and Paxson in their presentation of these analyses has any such weak total evidence requirement. Consequently, the case is a legitimate one, clearly demonstrating that the inclusion of (iii) in (D.38) is unnecessary. If one were to combine (D.38) with (D.35) as Lehrer and Paxson do, it is easy to see via the above situation that S can gain entitlement to knowledge by choosing to ignore damaging relevant evidence and basing his belief on adequate, but incomplete evidence. Surely such results are unacceptable.

Before leaving this section I would like to discuss a peculiar aspect of Mrs. Grabit's Boys Case as presented by Lehrer and Paxson, viz., the statement "Mrs. Grabit said that Tom was not in the library, etc.", which appears to be defeating, but which the Lehrer and Paxson analysis rules out. What is it about this statement which makes it appear to us to be defeating? Does it appear defeating because it is Mrs. Grabit who does the speaking? Or does it appear defeating because of what Mrs. Grabit said? Or both? It seems to me that under those conditions where little or nothing is known about the speakers, the statement, "Mrs. Grabit said that Tom was not in the library..." is no more or less defeating than the statement "Uncle Wiggley said that Tom was not in the library...". That is, usually it is not who said it, but what was said that does the defeating. If I am correct in this, and I believe that I am, then it is easy to understand why the statement about Mrs. Grabit is not defeating. It is not defeating not because we are not completely justified in believing that the statement is false, but because what Mrs. Grabit said is not true. The defeating effect of the statement about Mrs. Grabit has been neutralized, or as Chisholm might say, has been overridden,

or even, has itself been defeated by the fact that what Mrs. Grabit said is false. Lehrer and Paxson rightly point out that the statement about Mrs. Grabit is merely misleading rather than being defeating, but they failed to grasp the reason for this. They attempted to explicate this peculiarity in terms of a relation between S, the supposed knower, and the supposed defeating statement. I trust that I have shown that this approach is wrong-headed. There is a relationship to be examined here, but it is not the one between knower and statement. In some future work I hope to present what I consider to be an adequate account of this at present unknown relationship.[219]

III

Although I am content to preserve it, Sosa also attempts to knock down part (ii) of their analysis,

(ii) the conjunction of p and q does not completely justify S in believing that h,

by means of the following argument.

> A third difficulty emerges if we modify Skyrms' pyromaniac example, endorsed by Lehrer and Paxson. "The pyromaniac has found that Sure-Fire matches have always ignited when struck. On the basis of this evidence, the pyromaniac is completely justified in believing that the match he now holds will ignite upon his striking it." Let us now suppose further that on the basis of the evidence derived from his past experience he is also completely justified in believing that upon the match's ignition he will smell powder when appropriately situated and will feel pain on contact with the match, etc. But he will not smell powder or feel pain, etc., since he will be struck with temporary sensory paralysis. Presumably if we take the proposition (q) that he will not smell powder or feel pain, etc., even when appropriately situated, and conjoin it with the pyromaniac's evidence (p), the resulting conjunction (p&q) will not completely justify him in believing (h) that the match will ignite. But should this preclude his knowledge that the match will ignite, as it does according to the present definition.[220]

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[219]For an interesting, but inadequate attempt, see Slaght, Defeasibility and the Analysis of Non-Basic Knowledge (Ph.D. dissertation, Department of Philosophy, University of Pennsylvania, 1972), pp. 221-254.

[220]Sosa, "Two Conceptions...", pp. 62-63.

This argument is unsatisfactory, however, because when q is properly stated, it certainly is not at all clear that the conjunction of p and q does not completely justify the pyromaniac in believing that h. Suppose we rephrase part of the account to read: "Let us suppose further that on the basis of the evidence derived from his past experience he is also completely justified in believing that very shortly after striking the match he will smell powder, feel pain,..." Now, if we let q be the statement "Very shortly after striking the match he will not smell powder...", then it might be argued more effectively that the conjunction of p and q does not completely justify the pyromaniac in believing that h. However, even though this q is better than Sosa's q, it is still not very clear that it has the effect that Sosa thinks it has. Furthermore, even if we grant Sosa's point here, this alone does not show that (ii) is not a necessary condition of q's being a defeating statement. What we would be faced with if we granted Sosa's point is the disjunction: "Either (ii) is not a necessary condition of defeasibility or having one's justification undefeated in the manner of (i) and (ii) is not a necessary condition for knowledge." I think that it is the second alternative which is the correct one here. Surely, Lehrer and Paxson would agree with me on this point, for that was the purpose of their Mrs. Grabit's Boys Case. There is something wrong with my amended version of Sosa's q and it is the same kind of malady that afflicted the purportedly defeating statement in Mrs. Grabit's Boys Case, viz., the statement is merely misleading rather than defeating, since the defeating effects of it are in turn defeated by another true statement to the effect that the pyromaniac is suddenly hit with a temporary sensory paralysis.

Consequently, Sosa's case against (ii) does not wholly succeed. However, it does serve to spur us on in our search for a more adequate analysis of defeasibility or non-basic knowledge.

Thus I have come to an end of my examination of the Lehrer and Paxson analyses of defeasibility and of non-basic knowledge. I have shown that their analysis of defeasibility is defective by showing that two of the four conditions which they lay down for a statement defeating someone's justification for believing are not necessary conditions. And in doing so, I have called into question their analysis of non-basic knowledge which depended on their analysis of defeasibility. Since I grant that Mrs. Grabit's Boys Case is a genuine counter-case to the analysis of non-basic knowledge which employs (D.36), it is now incumbent upon me to show how the situation can be remedied.

In the next part, I shall examine two major attempts to

avoid these objections. Both Gilbert Harman and Keith Lehrer have presented analyses of knowledge which are amalgamations of the Type I and Type II analyses. Part D is devoted to an investigation of their attempts, as well as to a critical presentation of Lehrer's theory of justification.

PART D

AMALGAMATION ANALYSES

In this fourth and final part I present two analyses of knowledge which attempt to combine the advantages of the Type I analyses with the virtues of the Type II analyses. Both of these attempts to construct an adequate analysis of knowledge were made within the corpus of a book and hence, of necessity, I have been forced to omit many of the interesting topics which the books contain. Nonetheless, I do not believe that I have inadequately represented either of the two authors' positions concerning their analyses of knowledge. I begin first with an examination of Gilbert Harman's work and then deal with Keith Lehrer's account.

I

In his book Thought, Gilbert Harman has attempted to construct an acceptable account of knowledge in a way which involves both Type I and Type II analyses.[221] His analysis is a Type I analysis since it deals with the relation of the evidence to false statements. However, his account is also a Type II account since Harman finds it necessary to conclude that the result of each legitimate inductive inference implicitly contains the conjunct "...and there is no undermining evidence to this conjunction."[222] Hence, when in Harman's analysis of knowledge there is a clause which reads "S is warranted in making the inference...", he has included a defeasibility clause into his analysis.

Harman has a great deal to say about the nature of inference and inductive reasoning in Thought. A detailed examination of his claims and arguments in these areas would, I believe, take me beyond the purview of my work here, but I would like to present those aspects of his positions on these matters which pertain directly to his analysis of knowledge.

Inference, according to Harman, can be unconscious, instantaneous, can proceed without awareness of its premises, does not proceed step-wise, and results in the modification of one's total view.[223] For Harman, that inference usually

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[221] Gilbert Harman, Thought (Princeton, 1973).

[222] Harman, Thought, p. 154.

[223] Harman, Thought, pp. 19-23.

is unconscious is clear from the remarks which I have made already, viz., each legitimate inductive inference contains implicitly the conjunct "...and there is no undermining evidence to this conjunction." If inference were not unconscious, Harman would be able to find little evidence for this claim of his. Indeed, the adequacy of these views of Harman's concerning inference are largely contingent upon the adequacy of his account of knowledge. Harman is proposing a theory concerning knowledge which entails that inductive reasoning have the characteristics which have been ascribed above to inference. Since his account of inference is so far from the ordinary conception of the word, if his analysis of knowledge were to be found to be inadequate, then there would be little reason left to continue to accept his account of inference.

Harman's account of knowledge is given by his principle P*, which I have designated "D.39":

(D.39) S comes to know that h by inference (A, B) if and only if
- (i) the appropriate reasoning instantiator F ascribes (A, B) to S,
- (ii) S is warranted in making the inference (A, B) given his antecedent beliefs,
- (iii) there is a possibly empty set C of antecedent beliefs not antecedently known by S to be true such that the inference (Ø, B U C) is warranted when antecedent beliefs are taken to be the set of things S knows (and continues to know after the inference),
- (iv) B U C contains the belief that h, and
- (v) B U C contains only true beliefs.[224]

However, before this analysis can become intelligible to most readers, several notions must be explained. First of all, in clause (i) Harman refers to a reasoning instantiator F. According to Harman, F is a reasoning instantiator just in case F is a mapping from mental or neurophysiological processes to abstract structures of inference.[225] He says, "if x is a process in the domain of F then F(x) is the (abstract) reasoning that x instantiates."[226] Apparently, clause (i) is designed to insure that the inference (A,B) by which S comes to know that h is indeed an inference that S himself makes.

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[224]Harman, Thought, p. 171.

[225]Harman, Thought, p. 48.

[226]Harman, Thought, p. 48

Secondly, since Harman takes inference to be "...a change that can be described simply by mentioning what beliefs are given up and what beliefs are added (in addition to the belief that there is no undermining evidence to the conclusion)",[227] he lets 'A' designate the set of rejected beliefs and 'B' the set of new, additional beliefs. Hence, the notation '(A,B)' refers to the inference that rejects the beliefs in A and adds the beliefs in B. The other two bits of notation, 'Ø' and 'U', are the familiar set-theoretic symbols for the null set and for set union, respectively.

There is, I believe, little reason to spend much time examining clause (i) of (D.39). Since S comes to know that h by means of inference (A,B), it surely must be S's inference rather than someone else's inference that brings him/her to believe that h. Clause (i) makes this a necessary condition, and rightly so.

With regard to clause (ii), "S is warranted in making the inference (A,B) given his antecedent beliefs", Harman is not very enlightening. However, Harman ought not to be faulted on this point since the question of justification or warrantedness is one which has been avoided by many of those who have attempted to construct analyses of knowledge. He does offer some clues on the matter. Inference, of which induction seems to be the only kind--Harman claims that deduction is not inference--is "...an attempt to increase the explanatory coherence of our view, making it more complete, less ad hoc, more plausible."[228] He continues, "At the same time we are conservative. We seek to minimize change. We attempt to make the least change in our antecedent view that will maximize explanatory coherence."[229] It is clear, then, that an inference will be warranted given one's antecedent beliefs only if the coherence of our total view is increased. Harman's view, expressed near the end of the book, that the inferences upon which direct perceptual knowledge is based are derived not just from prior beliefs, but also from sensory stimulation, raises more trouble for our understanding of what a warranted inference is.[230] Harman is very explicit on this point. These sensory stimulations upon which inferences are based are indeed the data for the inference. The data are not beliefs about the sensory stimulations, they are the sen-

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[227] Harman, Thought, p. 169.

[228] Harman, Thought, p. 159.

[229] Harman, Thought, p. 159.

[230] Harman, Thought, p. 186.

sory stimulations.[231] Hence, it would seem that truth cannot play much of a role in determining warrantedness. Actually, that truth is not a necessary condition for an inference being warranted is not unusual if one takes as a model for warrantedness, deductive validity. Nonetheless, that sensory stimulations can serve as data for inferences seems to complicate our coming to an understanding of what it is to be warranted, since the premises of the inferences may now be both beliefs and sensory stimulations. It is not fruitful, however, to pursue the question of warrantedness much farther since Harman himself fails to pursue it. After acknowledging that one's interest in the matter as well as one's conception of the situation affects the coherence, he says, "However I am unable to be very precise about how our interests and conceptions of the situation affect coherence or indeed about any of the factors that are relevant to coherence."[232] I think that a fair and reasonable account of Harman's analysis of knowledge can be presented and evaluated in spite of this unresolved problem concerning warrantedness if we treat warrantedness the same way that we have been dealing with justification, viz., by relying on some shared presystematic understanding of the notion.

Clause (iii) of Harman's analysis requires some explanation. One of the reasons for its inclusion is to take care of cases where S comes to know that h by the inference (A,B), where h is an old belief for which S lacked sufficient evidence to have it constitute knowledge prior to making the inference (A,B). S believed it all along, but now, finally, it can be said that S knows. S's belief that h cannot be a member of B, since B is the set of new, additional beliefs that S comes to have as a result of the inference (A,B). Hence, Harman needed some way to connect the inference (A,B) with the old belief that h which has been retained and supported. Clause (iii) in conjunction with clause (iv) does just this. In discussing this problem, Harman refers us to an earlier-mentioned case where Larry believes that h (Mabel is innocent), but his evidence at the time does not justify this belief. He sets out to find the real culprit and discovers that it was the manager. Let A be the set of rejected beliefs consisting solely of the belief "I (referring to Larry) do not know who embezzled the money." Let B be the set of new, additional beliefs consisting solely of the conjunctive sentence "The manager did it and there is no undermining evidence to this conjunction." Note that h is not a member of B, since

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[231] Harman, Thought, p. 186. Also, for a discussion of this point, see Laurence A. BonJour, Review of Thought, Philosophical Review, (1975), pp. 256-258.

[232] Harman, Thought, p. 161.

h is not a new, additional belief. Presumably, Larry's inference (A,B) is warranted by his newly acquired beliefs, as well as by some of his earlier-acquired ones, and presumably, there is some appropriate reasoning instantiator F which ascribes (A,B) to Larry. Hence, (D.39, (i)) and (ii) are satisfied. There is a set of beliefs, C, consisting of the belief that h, whose members were not known antecedently to Larry's making the inference (A,B). Now the question is whether or not the inference (Ø, B U C) is warranted when the antecedent beliefs are taken to be the set of things Larry knows and continues to know after the inference in (A,B). This part of clause (iii) places stricter conditions on the warranting of inferences than does clause (ii). In (ii) there was no requirement that the antecedent beliefs be known to be true. Presumably any old belief, or set of beliefs, would do for (ii). But that is not the case here in (iii). The premises of the inference must be known to Larry. There is a puzzle about this requirement, however. Why is the inference identified as (Ø, B U C), rather than as (A, B U C)? Harman gives us absolutely no clues here but I suppose that having made the inference (A,B), i.e., having given up the beliefs in set A, there are now no old beliefs to be rejected pertaining to this embezzlement case. One cannot give up the same thing twice without reacquiring it at least once. Hence, the set of abandoned beliefs here in this second inference is indeed the null set. Let us presume that Larry's new evidence, when restricted to those beliefs that he knows and continues to know after (A,B) does warrant the inference (Ø, B U C). Clause (iii) is thus satisfied. Since h is a member of C, h is also a member of (B U C) and clause (iv) is satisfied. Finally, if all the beliefs in (B U C) are true, then, according to (D.39), Larry knows that Mabel is innocent.

I have gone through the above example partly to illustrate the necessity for the inclusion of clause (iii) and partly to explain its operation. The inclusion of (iii), however, raises questions about the necessity of (ii). Can there be cases where (iii) is satisfied, but (ii) is not? It is hard to imagine that there could be, but let me look at the possibilities. First, where C is the null set, (iii) requires that the known antecedent beliefs warrant the inference (Ø,B). Surely whenever (Ø,B) is warranted by known antecedent beliefs, (A,B) will be warranted by those same beliefs plus, perhaps, some other beliefs which are not known by S to be true. Hence, in this case (ii) is superfluous. What happens when C is not empty? Surely the same result follows here, too. For if some restricted set of beliefs warrants an inference to a conjunctive set of beliefs, then any superset of those beliefs will warrant the inference to any of the conjuncts of that original conjunction. Hence, it would appear

that Harman could well do without (ii).

There is an additional problem which clause (iii) brings to light, a problem which I mentioned several paragraphs ago when I was discussing warrantedness. According to (iii), the premises of our inferences must be true in order for there to be knowledge in any particular case. However, as I mentioned earlier, Harman allows that sensory stimulations may serve as premises of inferences. It is a bit difficult to understand how the notion of truth applies to a stimulation, except in some metaphorical sense. Not only has Harman stretched the meaning of 'inference', he has also stretched the meaning of 'true'.

There should be no difficulty in understanding clause (iv): it simply requires that the knowledge claim be a member of a set of beliefs warranted in accordance with clause (iii). Further discussion of this clause is unnecessary.

It is clause (v) which led me to claim earlier that Harman's analysis is a Type I analysis. Clause (v) requires that the conclusion of the inference which was warranted in accordance with (iii) contain only true beliefs. This, of course, is in accord with the usual claim that what we know be true. But clause (v) goes beyond that claim in that it requires that all of those new beliefs acquired by means of the inference (A,B), as well as those old beliefs which the warranted inference (Ø, B U C) produces, be true as well. Type I analyses, it should be recalled, are those analyses where the authors are concerned with the relation of the evidence to false statements, a concern which usually produces clauses in their analyses which rule out knowledge in all those cases where the connection of the evidence to false statements could not be avoided. That this is what Harman has done here in (v) should be immediately clear.

Very early in his book, Harman comes face-to-face with the Gettier counter-cases.[233] In many of the Gettier-type cases, Harman points out, one infers a false conclusion from premises which one knows to be true and then, subsequently, one infers a true conclusion from the earlier-inferred false one. He argues that the natural explanation of the Gettier cases leads to the adoption of what Harman calls principle P:

(P) Reasoning that essentially involves false conclusions, intermediate or final, cannot give one knowledge.[234]

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[233] Harman, Thought, pp. 46-47.

[234] Harman, Thought, p. 47.

Since in the above characterization of the Gettier cases there was intermediate reasoning to a false conclusion, principle P would rule out those cases as cases of knowledge. However, there are Gettier-type cases where it is not obvious that intermediate reasoning to false conclusions has taken place. Indeed, some defenders of the Gettier-type cases argue that that is often what takes place. One does not first infer falsely that Nogot owns a Ford and then subsequently infer truly that someone owns a Ford. One infers that someone owns a Ford directly from the evidence, not mediately through some intermediate conclusion. What Harman does to deal with this way of looking at the Gettier-type cases is to claim that since principle P is the most natural explanation of why knowledge is absent in those cases, it is reasonable to assume (his underline) that such reasoning has taken place, that is, one has unconsciously inferred an intermediate false conclusion. Harman asks us to consider the case of a man who is told that h by someone else.[235] In the situation where the teller does not believe what he has told the hearer, we would agree that the hearer does not know that h. Of course, he knows that he has been told that h, but he does not know that h. The reason, says Harman, that the hearer does not know in this case, even though what he has been told is true, is that his reasoning has essentially involved false conclusions. The hearer must infer that his teller believes that h, an inference which has a false conclusion--the teller does not believe that h. The hearer must infer that the teller says what he says because he believes it--another false inference, since the teller may be saying what he says in order to deceive the hearer. There may be other inferences as well which are involved here, but these will suffice to explain Harman's point. Principle P is the most natural explanation of what is wrong with the knowledge claims in instances like this, as well as in the other Gettier-type cases. In order to preserve principle P one must suppose that a certain amount of unconscious reasoning takes place.

As a condition of knowledge, principle P runs into some trouble, so Harman transforms it into principle P*, i.e., (D.39), where clause (v) preserves the important features of principle P. Thus, according to Harman, summing up principle P*: "...we know by inference only if one of our inferences remains warranted and leads to the acceptance only of truths when restricted in premises to the set of things we know ahead of time to be true."[236]

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[235]Harman, Thought, p. 47.

[236]Harman, Thought, p. 172.

This concludes my explanation of principle P*, (D.39), but there remains some subsidiary problems. At the outset of this analysis of mine I mentioned that Harman's analysis of knowledge was an amalgamation of both Types I and II. I have shown above why it is a Type I analysis, but, other than the brief remarks which I made at the very beginning of this section on Harman, I have not dealt with the defeasibility aspects of his account. Defeasibility comes into Harman's account because of problems that are created for knowledge claims which involve evidence that one does not possess. Harman presents three different cases, along with a variant of each case, to highlight these difficulties. I shall deal only with the first case and its variant, the Mrs. Grabit's Boys Case, which has been presented in detail elsewhere.[237] To refresh the readers' memory, let me repeat the salient features of the case. I see Tom Grabit, a former student of mine, steal a book from the library. In Harman's version of the case, I testify to this effect before the University Judiciary Council and then return to the library. Later on, Mrs. Grabit, Tom's mother, comes before the Council and testifies that Tom was out of town, could not possibly have been in the library, and that Tom has an identical twin brother, John. This much of the case is the same for both variants. Harman now suggests two different endings for this story. Ending #1: Mrs. Grabit is lying, but none of her hearers know this. They assume that Mrs. Grabit is an honest woman. Furthermore, I know nothing of the goings-on in the Council chambers after my departure; I do not know of Tom's mother, of her testimony, of her other son, Tom's twin; or, obviously, of the Council members' attitudes and reactions to her testimony. Harman claims that in this case, although it is true that Tom stole the book, I do not know it. Ending #2: Mrs. Grabit is lying and everyone in the room knows it. Mrs. Grabit is a notorious liar--pathological, in fact-- and her testimony is immediately disregarded. Nonetheless, as in ending #1, I do not know anything about what went on in the Council chambers after my departure, I have never heard of Mrs. Grabit, I do not know that she is a liar, I have never heard of Tom's alleged twin brother, John, etc. Harman claims that in this case I do know that Tom stole the book from the library.[238]

The following sketch brings out, I believe, the important aspects of these two variants:

(E.1): (a) Mrs. Grabit testifies that it was not Tom.
(b) Her hearers do not know that she is lying.
(c) I know nothing of either (a) or (b).

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[237]See above, pp. 90-91.

[238]Harman, Thought, p. 146.

(d) Harman says that I do not know.

(E.2) (a) same as (E.1, (a)).

(b) Her hearers know that she is a pathological liar.

(c) same as (E.1, (c)).

(d) Harman says that I do know.

To account for the difference regarding the knowledge claims, Harman formulates principle Q:

(Q) One may infer a conclusion only if one also infers that there is no undermining evidence one does not possess.[239]

Harman himself admits that there is a bit of obscurity associated with Q, an obscurity which immediately becomes apparent when one tries to come to an understanding of what constitutes undermining evidence. According to (D.39, (v)), the conclusion of the warranted inference which contains the knowledge claim must contain only true beliefs. Furthermore, according to principle Q, every warranted inference must contain in its conclusion the claim that there is no undermining evidence to this conclusion which I do not possess. Harman takes it that the above facts entail that I know on (E.2), but not on (E.1), since he believes that there is undermining evidence in (E.1) which I do not possess, but that there is no undermining evidence in (E.2) which I do not possess. Nonetheless, the question remains, what is it about the evidence in (E.1) which makes it undermining which the evidence in (E.2) lacks? Harman says that he cannot formulate criteria to distinguish between the two cases and instead, he simply labels cases of the first kind, cases of "undermining evidence one does not possess."[240] This attempt, of course, is ultimately unhelpful, as Harman himself seems to have realized, but nonetheless, he continues to maintain principle Q because, presumably, he believes that it is the best way out of the difficulty and because some such principle seems to be at work in all good scientific practice. Harman suggests that no good scientist would accept a conclusion unless he/she had good reason to think that there was no heretofore undiscovered evidence which would undermine the conclusion.[241] Hence, Harman concludes that all acceptable inferences have conjunctive conclusions where one of the conjuncts is self-referential and is of the form "...and there is no undermining evidence to this conclusion."

It is regrettable, however, that Harman does not have more to say about the differences between the evidence in (E.1) and in (E.2). This problem has attracted attention in recent literature and Harman seems to have ignored it.

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[239] Harman, Thought, p. 151.

[240] Harman, Thought, pp. 150-151.

[241] Harman, Thought, p. 152.

Lehrer-Paxson pointed out the difference between genuinely undermining evidence and misleading evidence, misleading evidence being evidence which appears to be undermining but actually is not undermining, and they attempted to work out the criteria for distinguishing between the two kinds.[242] More recently, David Annis[243] attempted the same sort of thing, as did both Ackerman[244] and Slaght.[245] None of these attempts were successful, but nonetheless it is disappointing that Harman offers no clues at all here. Indeed the notion as Harman has put it is so vague that one would have a difficult, if not impossible, time trying to see whether or not his analysis of knowledge was susceptible to a counter-case.

As a critic of Harman's analysis of knowledge, I am in trouble when it comes to supplying countercases to his analysis, not because the analysis is flawless, but because his account is vague in at least three areas, each one critical to countercase construction. First of all, I have no idea what he takes to be undermining evidence which one does not possess. Hence, in trying to construct a countercase that makes use of such evidence, I have only clouds with which to grapple. It is well-known that a precise and ambiguous account which misses the mark is much easier to criticize than is a vague and imprecise account. Secondly, his notion of warrantedness as it concerns the coherence of a set of beliefs has been left unspecified. I am in a bit better shape with this bit of unspecificity since I can always substitute 'justifies' for 'warrants', but the connection of 'justifies' with 'coherence' is totally unclear. Finally, since Harman takes it that we make many unconscious inferences, in attempting to construct a Gettier-type counter-case, I must keep in mind that there is always the opportunity for Harman to rebute any of my purported counter-cases by his simply asserting that some heretofore unthought-of unconscious inference has taken place which brings into play a false conclusion, thus ruling out knowledge by means of clause (v).

Harman's principle P, which subsequently became P*, (D.39),

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[242]Lehrer and Paxson.

[243]David Annis, "Knowledge and Defeasibility," Philosophical Studies 24 (1973), pp. 199-202.

[244]Terrence F. Ackerman, "Defeasibility Modified," Philosophical Studies 26 (1974), pp. 431-435.

[245]Ralph L. Slaght, "Defeats, Overridings, and the Analysis of Non-basic Knowledge" (dittoed paper read to the Pacific Division of the American Philosophical Association) March 1975.

was defended in large part by an appeal to its naturalness. It could well be, however, that what appears to be natural to Harman does not so appear to others. Indeed, the defeasibility theorists would argue that analyses of knowledge which involve defeasibility clauses are more natural than are analyses which are dependent upon principles such as P where the concern is with the relationship of the evidence to false statements. Surely it is the case that what we seek is not a "natural" account of knowledge, which may vary according to the ideas of its authors concerning naturalness, but rather, we seek the correct account. Harman once criticized epistemologists who argued that the search for an analysis of knowledge was futile and should be abandoned by saying, in effect, that it was much too early in the game to give up. It would appear, however, that he himself has given up in that he is willing to accept the consequences of adopting principle P, especially those consequences pertaining to inference, regardless of how far from ordinary usage those consequences take him. If there is no reasonable account of knowledge which does not produce distortions of ordinary language, then, perhaps, a closer look at Harman's suggestions might be warranted. But surely it is too early to give up the search at the moment. It may well be that Harman has taken the right turn by combining the Type I and Type II approaches, but the vagueness and distortions of language involved in his account keep it from being wholly satisfying.

II

Keith Lehrer's latest contribution to the literature concerning the analysis of knowledge is an elaborate, extensive, and well-argued book-length defense of the justified-true-belief thesis.[246] But Lehrer does much more in his latest book, Knowledge, than just to repeat and elaborate earlier-presented accounts. Certainly, those who are familiar with Lehrer's earlier work, work which has been discussed in prior pages of this study,[247] will be at home with much of what Lehrer has to say in Knowledge. Nonetheless, while the book contains much that is old, it also contains much that is new. One of the oft-heard objections to Lehrer's work concerning the analysis of knowledge, as well as to others who have proposed analyses of knowledge, is the fact that he has offered no account of justification. Without such an account serious attempts at evaluation and utilization were often fruitless either because of clashing intuitions concerning what was or was not justified by some particular piece of evidence or because logical complexities

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[246]Keith Lehrer, Knowledge (Oxford, 1974).

[247]See above, pp. 19-24, and pp. 76-99.

made the determination of justification by means of intuitive feelings impossible. In Knowledge Lehrer presents a coherence account of justification and defends it against its competitors, its competitors being all versions of what are commonly called "foundation" theories, as well as what Lehrer calls "explanatory" coherence theories. It is to this question of justification that Lehrer has devoted more than fifty percent of the book.

Before I examine Lehrer's latest attempt to construct an adequate account of knowledge, I would like to examine his account of justification. Lehrer, after rejecting several different theories of justification, adopts a coherence theory based on the beliefs of an impartial and disinterested truth-seeker, whom Lehrer chooses to call a "veracious inquirer."[248] The problems which all coherence theorists face are the problem of specifying with what must a belief cohere in order to be justified and the problem of explaining the nature of the coherence relation. Lehrer's solutions to these problems follow.

What is it which justifies a person's beliefs? It is another belief or set of beliefs, argues Lehrer. Those who argue that sometimes our own sensory experience can serve to justify a belief are mistaken, since "...Sense experience is by itself mute. The question of what we are to believe when our senses are pricked has no answer in the prick of sense."[249] If we grant that Lehrer is correct here, and I believe that he is, what kind of system of beliefs must be constructed to explain the coherence? If a person's beliefs are to be justified by an appeal to other beliefs, then Lehrer claims that it is those statements describing the person's beliefs with which the belief in question must cohere. Such a system of beliefs he calls "a doxastic system of a man."[250]

(D.40) D is a doxastic system of a person, S, if and only if D is a set of statements of the form "S believes that p", "S believes that q", and so forth, which describe what S believes.

However, since people can and often do have very strange, irrational, and biased beliefs, to mention only a few varieties of possibilities, if all that was required for justification was coherence within any old set of statements describing beliefs, then most any belief could be justified in spite of its preposterousness. To avoid this untoward consequence, Lehrer suggests that these doxastic systems of beliefs in question be purged of certain kinds of beliefs. This purgation yields:

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[248]Lehrer, Knowledge, p. 190.

[249]Lehrer, Knowledge, p. 200.

[250]Lehrer, Knowledge, p. 189.

(D.41) D' is a corrected doxastic system of a person, S, if and only if D' is that subset of some doxastic system D where D' is obtained from D by deleting every statement from D which describes S as believing something S would cease to believe were S an impartial and disinterested truthseeker.[251]

That is, a corrected doxastic system is a doxastic system of a veracious inquirer.

Having specified within what kind of system a statement must cohere in order for that statement to be completely justified for a person by the system of beliefs, Lehrer now turns to the problem of specifying the coherence relation. He views it as one of winning in a competition with other statements within the corrected doxastic system of beliefs.[252] Lehrer's notion of competition is based on an account of relevance, which in turn is based on a notion of relative probabilities, rather than on quantitative probabilities. That is, in order for Lehrer's account of justification to work, he must suppose that probabilities have a role to play in the determination of that justification, but he does not need quantitative measures of chance such as one finds in the discussion of the probabilities of obtaining a straight flush in the next deal of the cards. A mere relative measure will suffice for his theory where probabilities are not given in discrete numbers, but in terms of 'less than' and 'greater than'.

Of those beliefs that a veracious inquirer might have, some beliefs will be related to others such that the chance of one being true will affect either positively or negatively the chances of some other statement in the system being true. Lehrer's concern is with negative relevance:

(D.42) One statement is negatively relevant to a second if and only if the second statement has a lower chance of being true on the assumption that the first is true than otherwise.[253]

E.g., my belief that it is nearly 90°F. this afternoon is negatively relevant to my belief that today is a day in the month of December in the northern hemisphere, since if one were to assume that it is nearly 90°F. this afternoon, the chance of my belief that today was a December day being true would surely be considerably less than if one were not to make any assumptions about the truth of my temperature belief at all.

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[251]Lehrer, Knowledge, p. 190.

[252]Lehrer, Knowledge, p. 192.

[253]Lehrer, Knowledge, pp. 192-193.

One might have supposed that it would be an easy matter to construct a defintion of the notion of competition among statements simply by appealing to the notion of negative relevance. There are technical problems with that kind of move, and hence, Lehrer is forced to erect some more theoretical scaffolding before he can deal with 'competition'.[254] The first bit of scaffolding deals with the set of statements which the veracious person considers to be germane to the statement in question:

(D.43) The epistemic field of a statement, p, for a person, S, is some set of statements which S, as a veracious inquirer, believes to be germane to p.[255]

Once the epistemic field is constructed, one then partitions that set of statements in the same way in which Carnap constructed his state-descriptions.[256] In order to partition a set of statements, one first puts the statements into a numerical order. One then conjoins all the members of the set in a numerical sequence, making a conjunction, and then continues to form conjunctions by replacing one or more of the statements in earlier-formed conjunctions by its negation. This process continues until it is logically impossible for the whole set of conjunctions to be false. The partition of the set is simply the set of conjunctions thus formed. It turns out that each of the original members of the epistemic field is logically equivalent to some disjunction of members of the partition of the epistemic field. For example, let p be the statement in question and let q and r be the members of the set of statements that the veracious person believes to be germane to p. [q,r] thus constitute the epistemic field of p for our veracious person. The members of the partition of this epistemic field are four in number: m_1 = q & r; m_2 = -q & r; m_3 = -q & -r; and m_4 = q & -r. The partition of this epistemic field consists, then, of the statements m_1--m_4. The reader can quickly verify the fact that q is logically equivalent to the disjunction of m_1 and m_4, while r is logically equivalent to the disjunction of m_1 and m_2. If the partition is formed from an epistemic field, then Lehrer calls it 'the epistemic partition' of the statement.

(D.44) If F is the epistemic field of a statement, p, for a person, S, then the partition formed from F is the epistemic partition of p.[257]

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[254]Lehrer, Knowledge, pp. 193-194.

[255]Lehrer, Knowledge, p. 195.

[256]Carnap, Logical Foundations of Probability, pp. 70-80.

[257]Lehrer, Knowledge, p. 195.

Before proceeding to an account of competition, while we are in the midst of discussing epistemic fields, let me mention the consistency conditions which Lehrer imposes on the corrected doxastic system of beliefs and on the epistemic partitions. Since a doxastic system of beliefs is a set of statements describing those beliefs, rather than the set of statements of what is believed, it is possible for a person to have inconsistent beliefs, yet have his/her doxastic system be consistent, for to believe that p and also to believe that -p is to have inconsistent beliefs, but the statements "I believe that p" and "I believe that -p" are not themselves inconsistent. Hence, even if one happens to be a veracious inquirer, one's corrected doxastic system may well contain inconsistent beliefs. To avoid this problem, and others as well, Lehrer specifies the following consistency condition for corrected doxastic systems:

(C.1) Within a corrected doxastic system, we shall require that the set of statements a man is described as believing be consistent as well as the set of statements describing those beliefs.[258]

It turns out that one must also insure consistency among the set of statements which one is justified in believing. This is done by means of the following condition:

(C.2) The total set of epistemic partitions a veracious man uses at any one time should be such that we obtain a consistent set of statements by taking any single member from each of the epistemic partitions.[259]

These two consistency conditions have a delimiting effect upon the contents of these doxastic systems and upon the relationship among the members of those systems. Standard objections to coherence accounts of justification frequently have been based on the capriciousness of coherence and it is to guard against this sort of objection that Lehrer develops his account along the lines which I have indicated.

Let me now return to the task of constructing an account of 'competition'. A definition of 'strongly negatively relevant' is necessary to avoid several technical problems. Lehrer defines it as follows:

(D.45) A statement r is strongly negatively relevant to p for S if and only if
  (i) r is negatively relevant to p and
  (ii) the disjunction of members in numerical order of the epistemic partition of p for S that is logically equivalent to r, is such that no disjunction of those members is irrelevant to p.[260]

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[258]Lehrer, Knowledge, p. 202.

[259]Lehrer, Knowledge, p. 204.

[260]Lehrer, Knowledge, p. 196.

With this definition of "strong negative relevance", Lehrer is now in a position to define the notion of competition:

(D.46) A statement p competes with another statement q within the doxastic system of a person S if and only if p is believed to have strong negative relevance to q within that system.[261]

Finally, we have

(D.47) S is completely justified in believing that p if and only if, within the corrected doxastic system of S, p is believed to have a better chance of being true than the denial of p or any other statement that competes with p.[262]

To illustrate all of this, Lehrer offers the following example.[263] Suppose that I believe that I am seeing a red apple before me. I also believe that there is little likelihood that I am mistaken about what I am seeing. I do not believe that I am of such a mental state that I can no longer distinguish genuine appearances from hallucinatory ones, that there are fake apples scattered among the real ones, etc. These statements that I am of such a mental state..., and that there are fake apples..., etc., I believe to be germane to my belief that I am seeing a red apple before me and indeed these statements are strongly negatively relevant to that belief. Furthermore, I believe that these statements have strong negative relevance to my belief and I further believe that my belief that I am seeing a red apple before me has a better chance of being true than its denial as well as these competing statements. "In short," says Lehrer, "I believe that there is a better chance that I see a red apple than that any statement is true which, if pressed by another as an objection to my claim to complete justification, would constitute a serious objection to my contention."[264] Hence, according to (D.47), I am completely justified in believing that I am seeing a red apple before me.

There is a problem with this account of justification, however, which is due either to an error on Lehrer's part or to an ambiguity in the wording of one of the definitions. As Lehrer has proposed it, the corrected doxastic system of S contains the beliefs of S. But (D.46) seems to require that the competing statements be members of that corrected doxastic system. Thus, if I believe that I am seeing a blue

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[261] Lehrer, Knowledge, pp. 197-198.

[262] Lehrer, Knowledge, p. 198.

[263] Lehrer, Knowledge, pp. 196-197.

[264] Lehrer, Knowledge, p. 197.

car, usually I will not believe, for example, that I am seeing a green car, that I am hallucinating, that there is a blue light wholly illuminating a white car, that I am viewing a colored holograph, that someone has wired my brain to a machine, etc. Not only will I probably not believe these statements to be true, I probably will not even believe them to be false. I may not have any beliefs about them at all. But more importantly here, if I do have beliefs about these statements, more likely than not I will believe them to be false. This is important to Lehrer's account since it appears from (D.46) that competing statements must be members of the same corrected doxastic system. Since it is highly likely that I will believe, for example, that I am not hallucinating, rather than believe that I am hallucinating, the statement that I believe that I am hallucinating will not be a member of my corrected doxastic system and hence it cannot compete with my belief that I am seeing a blue car. There is no doubt that the statement that I am hallucinating has strong negative relevance to my belief about the car, but it cannot be a competing statement. Indeed, it would seem that for most rational people if someone, S, believes that p, then there will be no statement which S believes which will compete with p not only in S's doxastic system, but also in S's corrected doxastic system. The impact of this is that, given (D.47), complete justification is reduced to trivia, since most people who believe that p will believe that p has a better chance of being true than does -p. Surely Lehrer does not intend this consequence.

One glance at Lehrer's example given above is sufficient to dispell any doubt about Lehrer's intentions here. Note that in the example Lehrer is not requiring that I believe that the competitors are true at all. This fact, however, eliminates them from my corrected doxastic system and hence it would appear that they cannot be competitors after all. It appears that Lehrer's intended analysis of complete justification is at odds with his stated analysis.

There are a number of possible remedies to this situation. First, I could revise (D.46), Lehrer's definition of 'competes', to read:

(D.46') A statement p competes with another statement q if and only if p is believed to have strong negative relevance to q.

But there is one obvious problem with this revision, which, incidentally, is also a problem with (D.46), viz., the phrase "...is believed to have..." is vague in that it does not specify who is to do the believing. But obviously, if we are talking about beliefs competing with S's beliefs, as (D.46) reads, then it would seem reasonable that it be S who does the believing. Although adding some such phrase to

(D.46) will clear up this little bit of trouble, there still remains a difficulty with (D.46) to which I shall return later provided that I can remedy the larger problem which we are not confronting.

My suggestion that one bit of trouble with (D.46) be solved by adding that it be S who does the believing does not solve the problem with (D.46'), however, since there is nothing in (D.46') which refers to beliefs of S. To fix up this problem I could add the condition: If p is a member of the corrected doxastic system of a person, S, then p competes.... This amendment would allow p to compete with statements which S does not believe, something which Lehrer seems to require.

The problem with this amendment is that it seems to require me to modify (D.45), which requires that the strongly negatively relevant statement be a member of S's epistemic field. However, this turns out not to be a problem after all, since S's epistemic field, according to (D.43), is simply the set of statements which S believes to be germane to p. There is no requirement in (D.43) that the members of the epistemic field be statements which are believed by S. All of this points to the belief that the problem with Lehrer's account which I have been discussing is really just a problem of the vagueness of (D.46), rather than some actual incorrectness with some of the definitions. But whether it be vagueness or genuine error, the situation can be remedied by rewriting (D.46) to read:

(D.46'') If p is a member of the corrected doxastic system of a person, S, then some statement q competes with p if and only if q is believed by S to have strong negative relevance to p within that doxastic system.

There may be some question as to why the phrase "believed by S" is contained in (D.46''). I think that the chief reason for its insertion has something to do with the general notion of competition. For what are the two statements mentioned in the definition competing? Presumably they are competing for S's attention, for S's assent, for S's belief. Hence, it is not enough to say that q competes with p if and only if q has strong negative relevance to p, since S may not have formed any beliefs at all about q, thus making it odd to say that some statement about which S has formed no beliefs at all was competing for the support of S.

Although the solution above may suffice with regard to the problem with (D.46), it is not adequate for (D.47). The actual statement of (D.47) does not contain the phrase "believed by S", rather, it contains just "believed", but it

should be obvious that the believing is to be done by S. Hence, there still remains the question as to why Lehrer feels that it is necessary to say that p is believed by S to have a better chance..., rather than saying that p has a better chance.... Lehrer does not make it clear why he has constructed (D.47) in this manner, but my guess is that it has something to do with his reluctance to get involved with quantitative probabilities. If it is required that in order for p to be completely justified for S, p must actually have a better chance of being true than does its negation as well as any other statement that competes with p, then either one will be forced to give precise quantitative probability measures for the truth of p and the other statements or else one will be forced to rely on relative probabilities determined by some standard. Both of these alternatives are not in keeping with Lehrer's coherence account because they impose an unwanted and unnecessary external control into his account. In describing his own account Lehrer says:

> ...we do not suppose that we have any guarantees of truth. Our justification has truth as an objective, but rather than demanding some external guarantee of success, we construct our theory on the subjective integrity of a veracious inquirer and the internal relations among his beliefs. The belief that one statement has a better chance of being true than another need only belong to the corrected doxastic system of a man to provide justification in the quest for truth. We do not assume there to be any guarantee of the truth of these beliefs or those they serve to justify.[265]

There is no doubt that Lehrer's theory of justification is intriguing in a number of ways. There is no one standard of justification for any particular belief to which all people must conform in order to be justified in their belief. Lehrer allows that a plain man and the scientist may both believe the same thing and both be justified in their beliefs, yet come to be justified in diverse ways. The corrected doxastic system of an astronomer, for example, as well as the set of statements which make up the epistemic field of a particular astronomical statement for that scientist may be more extensive, more detailed, more technical, etc., than those of the plain person, yet if each one is seeking the truth in the manner of a veracious inquirer, Lehrer would consider that both of them could be justified in believing the same statement in spite of the differences in the jus-

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[265]Lehrer, Knowledge, p. 192.

tificatory base of each one. There seems to be solid intuitive backing for this position, too. When we ask Bill, the non-astronomer, what reason he has for believing that there will be an eclipse of the sun tomorrow, for example, we will grant that he is justified in his belief under conditions which we would never grant that the director of some nationally-known astronomical observatory was justified. Of course, it is just this feature which makes the evaluation of, and the search for counter-cases to, the theory difficult. One must find out what beliefs make up the corrected doxastic system of a person as well as discover what statements the person takes to be germane to the belief in question before any knowledge claim can be evaluated. As a counter-case constructor, one is always faced with the possibility that he/she did not include the right kind of germane statements in the epistemic field, etc. There is always the possibility that in response to some alleged counter-case, Lehrer could say that no veracious inquirer would ever omit such a statement, etc., and we would be at an impass should I disagree, for there are no standards for veracious inquirers. Nonetheless, this is not a serious objection to the theory, for this possible disagreement of intuitions exists even now when one is discussing analyses of knowledge. Sometimes we disagree about whether or not S knows that p, for some peculiar p, and there is no ultimate standard to which to appeal to resolve the dispute.

Another possible difficulty arises with regard to the epistemic field of a particular statement, p. Suppose that I, as a veracious inquirer who is sincere but a little wacky, believe that some statement, k, is germane to my belief that p. No one else in the world thinks so, but I am adamant. When one plugs k into Lehrer's mechanism, it turns out that k is actually irrelevant to p and hence it cannot be strongly negatively relevant to p. Nonetheless, I believe it to be strongly negatively relevant to p and hence according to (D.46''), k competes with p. Lehrer's account, then, allows that statements which are not genuinely strongly negatively relevant may nonetheless be competing statements. But this is not actually an objection to Lehrer's account of justification, for once again the objection is based on the imposition of some external standard which Lehrer, in his coherence account, rejects. Furthermore, what this case shows is that slightly wacky I have a false belief, and the techniques for dealing with false, justifying beliefs is more of concern to the analysis of knowledge than it is with analyses of justification. I shall examine Lehrer's treatment of false, justifying beliefs shortly.

III

Having examined in some detail Lehrer's account of complete justification, it is time now to return to the purpose at hand, an investigation of Lehrer's analysis of knowledge. It should be clear that Lehrer is not presenting an analysis of non-basic knowledge as he has done in earlier papers,[266] because, given his coherence account, there is no such thing as basic knowledge. Hence, Lehrer's account is one of knowledge, rather than just non-basic knowledge. As it will become clear, his account is an amalgamation of both Types I and II, since not only is he concerned with the relationship of the evidence to false statements, but also he has included a defeasibility condition into his analysis.

What are the necessary and sufficient conditions for a person to have knowledge? Lehrer's response to this question in Knowledge is the same as his earlier answers to this question with the exception of the fourth condition. Lehrer claims:

(D.48) S knows that p if and only if
- (1) it is true that p,
- (2) S believes that p,
- (3) S is completely justified in believing that p, and
- (4) S is completely justified in believing that p in some way that does not depend on any false statement.[267]

Little new ground is broken in Lehrer's defense of the first two conditions, although his defense of the second condition, the belief requirement, is perhaps his clearest statement on the matter. Furthermore, we have already examined his account of the third condition, so let me turn immediately to the fourth condition: S is completely justified in believing that p in some way that does not depend on any false statement, or alternatively put by Lehrer, S is completely justified in believing that p in some way that is not defeated by any false statement.[268] The necessity of having some sort of fourth condition should, by now, be clear, since even though some people have taken issue with Gettier's particular counter-cases, other cases have been proposed which are Gettier-like but which fail to rely on the arguable assumption concerning justification via entailment upon which Gettier relied. Hence, instead of once more

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[266] See above, pp. 76-99.

[267] Lehrer, Knowledge, p. 21.

[268] Lehrer, Knowledge, p. 215.

going through the counter-cases, permit me to deal immediately with Lehrer's fourth condition.

As Lehrer himself points out, the notion of dependence as it is used in the fourth condition is not clear. Klein and Hilpinen, independently, attempted to present analyses of knowledge which involved an explication of the notion of dependence, but as I have shown earlier in this work, and as Lehrer himself shows, their accounts are not satisfactory.[269] Lehrer believes, however, that the mechanisms which he has constructed in his theory of justification, in conjunction with one addition, are sufficient to handle this problem. Lehrer claims that all of the counter-cases to the justified-true-belief thesis have been constructed such that there is always false statements contained in the evidence set. This observation is, of course, not new, but Lehrer's method for remedying the situation is new. What he suggests is that the corrected doxastic system of the person in question be purged of its false beliefs and replaced with the beliefs of the denials of those false statements. That is, if "S believes that p" is a member of S's corrected doxastic system, but p is false, then "S believes that -p" becomes a member of what Lehrer calls the veric alternative to S's corrected doxastic system. Furthermore, if "S believes that p" is a member of S's corrected doxastic system and p is true, then "S believes that p" is also a member of the veric alternative. The purpose of constructing the veric alternative is, of course, to eliminate any false beliefs upon which S might have relied in coming to believe whatever he/she is justified in believing, given (D.48, (3)). 'Veric alternative' is defined as follows:

(D.49) If D is a doxastic system of some person, S, then V is a veric alternative of D if and only if for every statement, p, if 'S believes that p' is a member of D then both if p is true then 'S believes that p' is a member of V and if p is false then 'S believes that -p' is a member of V.[270]

Now, to say that S's justification for believing that p does not depend on any false statements is to say that S is completely justified in believing that p in the veric alternative to his corrected doxastic system. Hence, (D.48, (4)) should read:

(4) S is completely justified in believing that p in the veric alternative to the corrected doxastic

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[269] See above, pp. 73-74; and Lehrer, Knowledge, p. 220.

[270] Lehrer, Knowledge, p. 224.

system of S.[271]

To see how this proposal works, let us examine, as Lehrer himself does, the case as originally proposed by Roderick Chisholm of the misperceived sheep.[272] Suppose that I am completely justified in believing that I see a sheep in the field. Indeed I do see a sheep, but the object in my field of vision which I take to be a sheep is not a sheep, while some other object in that same field of vision which I take not to be a sheep is a sheep. My corrected doxastic system contains, among other statements, the statements "I believe that I see a sheep" and "I believe that the object which I take to be a sheep is a sheep". For ease of exposition, call the statement "I see a sheep", 'p', and the statement "The object I take to be a sheep is a sheep", 'q'. Since p is true, the statement "I believe that p" is a member of the veric alternative to my corrected doxastic system. But since q is false, the statement "I believe that -q" is also a member of the veric alternative. Lehrer now claims that even though I am completely justified in believing that p given my corrected doxastic system, I am not so justified given the veric alternative to that system. Hence, in this case, even though I have a justified, true belief, I do not have knowledge.

There are several problems, however, to Lehrer's treatment of this case. First of all, (D.47), Lehrer's definition of 'completely justifies', speaks only of being justified with the contexts of a corrected doxastic system. Hence, he cannot appeal to (D.47) to establish that I am not justified on the veric alternative to that corrected doxastic system. The problem is not difficult to remedy, but it must be done. It seems to me that what Lehrer needs to do is first to rewrite his third condition for knowledge:

(D.48, (3)) S is completely justified within some corrected doxastic system of S in believing that p.

Secondly, he must alter (D.47) to read:

(D.47') S is completely justified with some corrected doxastic system of S or within the veric alternative to that system in believing that p if and only if, within that system or within its veric alternative, p is believed by S to have a better chance of being true than the denial of p or any other statement that competes with p.

With these amendations, we can proceed with our analysis of his example.

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[271] Lehrer, Knowledge, p. 224.

[272] Lehrer, Knowledge, p. 219 and Chisholm, Theory of Knowledge, p. 23, ftnt. 22.

It seems clear that -q ("The object I take to be a sheep is not a sheep") is strongly negatively relevant to p ("I see a sheep"). Furthermore, it seems reasonable that I, as a veracious inquirer, believe that -q is strongly negatively relevant. Hence, -q competes with p. There is a problem, however, in determining how -q undermines my justification. Presumably, were I a veracious inquirer, I would have considered -q to be in the epistemic field of p and, presumably, as the story goes, I would have believed that p had a better chance of being true than did -q. But how does the changing of the system affect my beliefs concerning -q? Should I not have the same opinions about the relationship of p to -q in the veric alternative as I had in the corrected doxastic system? If so, then changing systems will not affect the justification. The answer to this little problem is found later on in Lehrer's discussion. He points out that the expression in (D.47') which reads "p is believed by S to have a better chance of being true than..." is actually elliptical for "S believes that p has a better chance of being true than... on the condition that the other statements in the system are true."[273] Hence, (D.47') should read:

(D.47'') S is completely justified within some corrected doxastic system of S or within the veric alternative to that system in believing that p if and only if within that system or within its veric alternative, S believes that p has a better chance of being true than the denial of p or any other statement that competes with p on the condition that the other statements in the system are true.

Now, it is clear how changing the system will affect the justification: changing the system changes the base upon which S can base his beliefs.

Looking back at Lehrer's case, we see now that in the veric alternative to my corrected doxastic system, I cannot, as a veracious inquirer, honestly believe that I see a sheep on the condition that the statement "What I take to be a sheep is not a sheep" is true. Hence, Lehrer's account,does indeed produce the correct result: I do not know that I see a sheep, since I am not justified in so believing within the veric alternative to my corrected doxastic system.

All is not well, however, with this account. Suppose that the statement r, "I believe that there is no evidence unknown to me which defeats my justification for believing

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[273]Lehrer, Knowledge, p. 233.

that p", is a member of my corrected doxastic system. If one construes 'defeating a justification' as follows, then it would seem that there are always going to be defeating statements hanging around, even though some of them might be more properly called 'misleading', rather than actually being defeating, as the now-familiar Mrs. Grabit's Boys Case illustrates:

> If S is completely justified in believing that p within some corrected doxastic system, D*, of S, then some statement r defeats S's justification for believing that p within D* if and only if (1) r is true and (2) the conjunction of r and the set of statements in D* which justified S in believing that p does not completely justify S in believing that p.

Now, if I am a veracious inquirer, but neither an epistemologist nor one who is acquainted with the peculiarities of defeating statements, it is reasonable for me to believe that there is no defeating evidence for my justifications in many circumstances. Indeed, Harman claims that such a belief is always part of every knowledge claim. However, if I am justified in believing that p and, unknown to me, someone says that -p, then there is defeating evidence to my justification, even though the someone who said that -p was lying or was simply mistaken. Hence, there is a false belief in my corrected doxastic system which is such that in the veric alternative to that system the inclusion of its denial makes it such that I am not justified in believing that p, since the statement "I believe that there is some evidence unknown to me which defeats my justification for believing that p" is now a member of that veric alternative. If Harman is right concerning the existence in knowledge claims of a belief about the nonexistence of defeating evidence, and it is surely reasonable to suppose that he is, especially where veracious inquirers are concerned, then Lehrer's analysis of knowledge does not yield the answer which Lehrer believes that it does concerning the Mrs. Grabit's Boys Case and, presumably, many others as well. It would appear that Lehrer's analysis has been undermined by the existence of defeating, but misleading evidence. Perhaps he can make some adjustments in his system to accommodate this difficulty, but at the moment, I see no simple remedy.

Hence, although Lehrer has presented an elaborate and well-argued-for account of knowledge, including an analysis of justification, it would appear that further work needs to be done with regard to the problem of the rela-

tionship of merely misleading statements and defeating statements to the corrected doxastic system and its veric alternatives.

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BIBLIOGRAPHY

I. BOOKS

Ackermann, R. J. Belief and Knowledge. Garden City, N. Y., 1972.

Armstrong, D. M. Belief, Truth and Knowledge. Cambridge, 1973.

Ayer, A. J. The Problem of Knowledge. New York, 1955.

Capaldi, N. Human Knowledge: A Philosophical Analysis of its Meaning and Scope. New York, 1969.

Carnap, R. Logical Foundations of Probability, 2nd edition. Chicago, 1962.

Chisholm, R. Perceiving: A Philosophical Study. Ithaca, 1957.

Chisholm, R. Theory of Knowledge. Englewood Cliffs, 1966.

Chisholm, R. Theory of Knowledge, 2nd edition. Englewood Cliffs, 1977.

Chisholm, R., et al. Philosophy. Englewood Cliffs, 1964.

Chisholm, R. M. and Swartz, R. J. (eds.). Empirical Knowledge: Readings from Contemporary Sources. Englewood Cliffs, 1973.

Danto, A. Analytical Philosophy of Knowledge. Cambridge, 1968.

Flew, A. (ed.). Logic and Language, 1st and 2nd Series. Garden City, 1965.

Foster, L. and Swanson, J. W. (eds.). Experience and Theory. Amherst, 1970.

Galis, L. (See Roth, M. and Galis, L.)

Griffiths, A. P. (ed.). Knowledge and Belief. London, 1967.

Hamlyn, D. W. The Theory of Knowledge. Garden City, N. Y., 1970.

Harman, G. Thought. Princeton, 1973.

Hintikka, J. Knowledge and Belief. Ithaca, 1962.

Kyburg, H. E., Jr. Probability and the Logic of Rational Belief. Middletown, Conn., 1961.

Lehrer, K. Knowledge. Oxford, 1974.

Levi, I. Gambling with Truth: An Essay on Induction and the Aims of Science. New York, 1967.

Lewis, C. I. An Analysis of Knowledge and Valuation. LaSalle, Ill., 1946.

Malcolm, N. Knowledge and Certainty. Englewood Cliffs, 1963.

Pollock, J. L. Knowledge and Justification. Princeton, 1974.

Ross, W. D. The Right and the Good. Oxford, 1930.

Roth, M. and Galis, L. Knowing: Essays in the Analysis of Knowledge. New York, 1970.

Russell, B. Human Knowledge: Its Scope and Limits. New York, 1948.

Russell, B. The Problems of Philosophy. Oxford, 1959.

Scheffler, I. Conditions of Knowledge: An Introduction to Epistemology and Education. Glenview, Ill., 1965.

Slaght, R. L. Defeasibility and the Analysis of Non-Basic Knowledge. Unpublished Ph.D. dissertation, Department of Philosophy, University of Pennsylvania, 1972.

Swain, M. (ed.). Induction, Acceptance and Rational Belief. Dordrecht, 1970.

Swanson, J. W. and Foster, L. (See Foster, L. and Swanson, J. W.)

Swartz, R. J. and Chisholm, R. M. (See Chisholm, R. M. and Swartz, R. J.)

II. ARTICLES

Ackerman, T. F. "Defeasibility Modified." Philosophical Studies, 26 (1974), pp. 431-435.

Annis, D. "Knowledge and Defeasibility." Philosophical Studies, 24 (1973), pp. 199-202.

Almeder, R. "Defeasibility and Scepticism." Australasian Journal of Philosophy, 51 (1973), pp. 238-244.

Armstrong, D. M. "Does Knowledge Entail Belief." Proceedings of the Aristotelian Society, 70 (1969-1970) pp. 21-36.

Barker, J. A. "Knowledge and Causation." The Southern Journal of Philosophy, 10 (1972), pp. 313-321.

Barker, J. A. "Knowledge, Ignorance, and Presupposition." Analysis, 35 (1974), pp. 33-45.

Black, C. "Knowledge Without Belief." Analysis, 31 (1971), pp. 153-158.

Broyles, J. E. "Knowledge and Mistake." Mind, 78 (1969), pp. 198-211.

Carrier, L. S. "An Analysis of Empirical Knowledge." Southern Journal of Philosophy, 9 (1971), pp. 3-12.

Champawat, N. (See Saunders, J. T. and Champawat, N.)

Chisholm, R. "'Appear', 'Take', 'Evident'." Journal of Philosophy, 53 (1956), pp. 722-731.

Chisholm, R. "Epistemic Statements and the Ethics of Belief." Philosophy and Phenomenological Research, 16 (1955-1956), pp. 447-460.

Chisholm, R. "The Ethics of Requirement." American Philosophical Quarterly, 1 (1964), pp. 147-153.

Chisholm, R. "Evidence as Justification." Journal of Philosophy, 58 (1961), pp. 739-748.

Chisholm, R. M. "On the Nature of Empirical Evidence," in Foster, L. and Swanson, J. W. (eds.), Experience and Theory. Amherst, Mass., 1970, pp. 103-134, and in Chisholm and Swartz, Empirical Knowledge, pp. 224-249.

Chisholm, R. "Theory of Knowledge," in Chisholm et al., Philosophy. Englewood Cliffs, 1964, pp. 261-286.

Clark, M. "Knowledge and Grounds: A Comment on Mr. Gettier's Paper." Analysis, 24 (1963), pp. 46-48.

Coder, D. "Thalberg's Defense of Justified True Belief." Journal of Philosophy, 67 (1970), pp. 424-425.

Cohen, L. J. "Claims to Knowledge." Proceedings of the Aristotelian Society, Supplementary Volume, 36 (1962), pp. 33-50.

Cole, R. "Knowing Imperfectly." Southwestern Journal of Philosophy, 5 (1974), pp. 69-75.

Day, M. "A Comment on Lehrer's Analysis of Knowledge." Philosophical Forum, 4 (1972-1973), pp. 305-306.

Donnelly, J. "Chisholm on Defining Knowledge." The Heythrop Journal, 12 (1971), pp. 53-54.

Dreher, J. H. "Evidence and Justified Belief." Philosophical Studies, 25 (1974), pp. 435-439.

Dretske, F. "Conclusive Reasons." Australasian Journal of Philosophy, 49 (1971), pp. 1-22.

Eberle, R. A. "A Logic of Believing, Knowing, and Inferring." Synthese, 26 (1974), pp. 356-382.

Ennis, R. "Enumerative Induction and the Best Explanation." Journal of Philosophy, 65 (1968), pp. 523-529.

Feldman, R. "An Alleged Defect in Gettier Counter-Examples." Australasian Journal of Philosophy, 52 (1974), pp. 68-69.

Firth, R. "Ultimate Evidence." Journal of Philosophy, 53 (1956), pp. 732-739.

Firth, R. "Chisholm and the Ethics of Belief." Philosophical Review, 68 (1959), pp. 493-506.

Gettier, E. "Is Justified True Belief Knowledge?" Analysis, 23 (1963), pp. 121-123.

Goldman, A. "A Causal Theory of Knowing." Journal of Philosophy, 64 (1967), pp. 357-372.

Goldstick, D. "A Contribution Toward the Development of the Causal Theory of Knowledge." Australasian Journal of Philosophy, 50 (1972), pp. 238-248.

Grant, C. K. "On Analysing Knowledge." Philosophical Studies, 25 (1974), pp. 289-293.

Harman, G. "Enumerative Induction as Inference to the Best Explanation." Journal of Philosophy, 65 (1968), pp. 529-533.

Harman, G. "How Belief is Based on Inference." Journal of Philosophy, 61 (1964), pp. 353-359.

Harman, G. "Induction," in Swain, M. (ed.). Induction, Acceptance and Rational Belief, Dordrecht, 1970, pp. 83-99.

Harman, G. "The Inference to the Best Explanation." Philosophical Review, 74 (1965), pp. 88-95.

Harman, G. "Knowledge, Inference, and Explanation." American Philosophical Quarterly, 5 (1968), pp. 164-173.

Harman, G. "Knowledge, Reasons and Causes." Journal of Philosophy, 67 (1970), pp. 841-855.

Harman, G. "Lehrer on Knowledge." Journal of Philosophy, 63 (1966), pp. 241-247.

Harman, G. "New Implications of 'Someone'." Analysis, 26 (1966), p. 206.

Harman, G. "Unger on Knowledge." Journal of Philosophy, 64 (1967), pp. 390-395.

Harrison, J. "Does Knowing Imply Believing?" Philosophical Quarterly, 13 (1963), pp. 322-332.

Hart, H. L. A. "The Ascription of Responsibility and Rights." Proceedings of the Aristotelian Society, 49 (1949), pp. 171-194.

Heidelberger, H. "Chisholm's Epistemic Principles." Nous, 3 (1969), pp. 73-82.

Heidelberger, H. "Knowledge, Certainty, and Probability." Inquiry, 6 (1963), pp. 242-250.

Heidelberger, H. "On Defining Epistemic Terms." Journal of Philosophy, 69 (1963), pp. 344-348.

Heidelberger, H. "An Undefined Epistemic Term." Mind, 75 (1966), pp. 420-421.

Hilpinen, R. "Knowledge and Justification." Ajatus, 33 (1971), pp. 7-39.

Johnson, O. "Some Problems in the Standard Analysis of Knowledge." The Southern Journal of Philosophy, 10 (1972) pp. 409-421

Jones, O. R. "Knowing and Guessing--By Examples." Analysis, 32 (1971), pp. 19-23.

Kellenberger, J. "On There Being No Necessary and Sufficient Conditions for Knowledge." Mind, 80 (1971), pp. 599-602.

Klein, P. "A Proposed Definition of Propositional Knowledge." Journal of Philosophy, 68 (1971), pp. 471-482.

Kress, J. R. "Lehrer and Paxson on Non-Basic Knowledge." Journal of Philosophy, 68 (1971), pp. 78-82.

Kyburg, H. E., Jr. "Conjunctivitis," in Swain, M. (ed.), Induction, Acceptance and Rational Belief, Dordrecht, 1970, pp. 55-82.

Lamb, J. W. "Knowledge and Justified Presumption." Journal of Philosophy, 69 (1972), pp. 123-127.

Lehrer, K. "Belief and Knowledge." Philosophical Review, 77 (1968), pp. 491-499.

Lehrer, K. "Evidence and Conceptual Change." Philosophia, 2 (1972), pp. 273-281.

Lehrer, K. "The Fourth Condition of Knowledge: A Defense." Review of Metaphysics, 24 (1970), pp. 122-128.

Lehrer, K. "How Reasons Give Us Knowledge, Or the Case of the Gypsy Lawyer." Journal of Philosophy, 68 (1971), pp. 311-313.

Lehrer, K. "Knowledge and Probability." Journal of Philosophy, 61 (1964), pp. 368-372.

Lehrer, K. "Knowledge, Truth, and Evidence." Analysis, 25 (1965), pp. 168-175.

Lehrer, K. "Letter: On Knowledge and Probability." Journal of Philosophy, 62 (1965), pp. 67-68.

Lehrer, K. and Paxson, T. "Knowledge: Undefeated Justified True Belief." Journal of Philosophy, 66 (1969), pp. 225-237.

Lehrer, K. et al. "Reason and Evidence: An Unsolved Problem." Ratio, 9 (1967), pp. 38-48.

Lesher, J. H. "Lehrer's Skeptical Hypothesis." Philosophical Forum, 4 (1972-1973), pp. 299-302.

Lucas, C. J. "A Note on Justified True Belief and Educational Epistemology." Educational Theory, 21 (1971), pp. 193-197.

Malcolm, N. "Knowledge and Belief." Mind, 61 (1952), pp. 178-189.

Mannison, D. S. "Lemmon on Knowing." Synthese, 26 (1974), pp. 383-390.

Margolis, J. "Alternative Strategies for the Analysis of Knowledge." Canadian Journal of Philosophy, 2 (1973), pp. 461-469.

Margolis, J. "The Problem of Justified Belief." Philosophical Studies, 23 (1972), pp. 405-409.

Meerbote, R. "The Distinction between Derivative and Nonderivative Knowledge." Philosophical Studies, 24 (1973), pp. 192-197.

Mellor, W. W. "Knowing, Believing, and Behaving." Mind, 76 (1967), pp. 327-345.

Meyers, R. G. and Stern, K. "Knowledge Without Paradox," Journal of Philosophy, 70 (1973), pp. 147-160.

Morawetz, T. "Causal Accounts of Knowledge." Southern Journal of Philosophy, 12 (1974), pp. 365-369.

Morris, W. E. "Knowledge as Justified Presumption." Journal of Philosophy, 70 (1973), pp. 161-165.

New, C. G. "Some Implications of 'Someone'." Analysis, 26 (1966), pp. 62-64.

Pailthrope, C. "Knowledge as Justified, True Belief." Review of Metaphysics, 23 (1969), pp. 25-47.

Pailthrope, C. "A Reply to Lehrer." Review of Metaphysics, 24 (1970), pp. 129-133.

Pappas, G. S. "Incorrigibility, Knowledge, and Justification." Philosophical Studies, 24 (1974), pp. 219-225.

Pappas, G. S. "Knowledge and Reasons." Philosophical Studies, 25 (1974), pp. 423-428.

Pappas, G. and Swain, M. "Some Conclusive Reasons Against 'Conclusive Reasons'." Australasian Journal of Philosophy, 51 (1973), pp. 72-76.

Paxson, T. D., Jr. "Professor Swain's Account of Knowledge." Philosophical Studies, 25 (1974), pp. 57-61.

Paxson, T. (See Lehrer, K. and Paxson, T.)

Pitcher, G. "Hart on Action and Responsibility." Philosophical Review, 69 (1960), pp. 226-235.

Pollock, J. L. "Chisholm's Definition of Knowledge." Philosophical Studies, 19 (1968), pp. 72-76.

Pollock, J. L. "Perceptual Knowledge." The Philosophical Review, 80 (1971), pp. 287-319.

Radford, C. "Knowledge--By Examples." Analysis, 27 (1966), pp. 1-11.

Rosen, B. "Chisholm on Knowledge and Principles." Mind, 77 (1968), pp. 411-416.

Rozeboom, W. "Why I Know So Much More Than You Do." American Philosophical Quarterly, 4 (1967), pp. 281-290.

Saunders, J. T. "Does Knowledge Require Grounds?" Philosophical Studies, 17 (1966), pp. 7-13.

Saunders, J. T. "Thalberg's Challenge to Justification Via Deduction." Philosophical Studies, 23 (1972), pp. 358-364.

Saunders, J. T. and Champawat, N. "Mr. Clark's Definition of 'Knowledge'." Analysis, 25 (1964), pp. 8-9.

Skyrms, F. B. "The Explication of 'X Knows that p'." Journal of Philosophy, 64 (1967), pp. 373-389.

Slaght, R. L. "Defeats, Overridings, and the Analysis of Non-Basic Knowledge." Mimeographed paper read at the Pacific Division meetings of the American Philosophical Association, March 1975.

Slaght, R. L. "Induction, Acceptance, and Rational Belief: A Selected Bibliography," in Swain, M. (ed.). Induction, Acceptance and Rational Belief. Dordrecht, 1970, pp. 186-227.

Sleigh, R. C. "A Note on Some Epistemic Principles of Chisholm and Martin." Journal of Philosophy, 61 (1964), pp. 216-218.

Sleigh, R. C. "A Note on Knowledge and Probability." Journal of Philosophy, 61 (1964), p. 478.

Smith, J. M. "New Implications of 'Someone'." Analysis, 25 (1966), pp. 207-208.

Smullyan, A. "The Concept of Empirical Knowledge." Philosophical Review, 65 (1956), pp. 362-370.

Sosa, E. "The Analysis of 'Knowledge that p'." Analysis, 25 (1964), pp. 1-8.

Sosa, E. "The Concept of Knowledge: How Do You Know." American Philosophical Quarterly, 11 (1974), pp. 113-122.

Sosa, E. "On Our Knowledge of Matters of Fact." Mind, 83 (1974), pp. 388-405.

Sosa, E. "Propositional Knowledge." Philosophical Studies, 20 (1969), pp. 33-43.

Sosa, E. "Two Conceptions of Knowledge." Journal of Philosophy, 67 (1970), pp. 59-66.

Stern, K. (See Meyers, R. G. and Stern, K.)

Swain, M. "An Alternative Analysis of Knowing." Synthese, 23 (1972), pp. 429-430.

Swain, M. "The Analysis of Non-Basic Knowledge." University of Pennsylvania, Department of Philosophy, 1968. (Mimeographed)

Swain, M. "The Consistency of Rational Belief," in Swain, M. (ed.). Induction, Acceptance and Rational Belief. Dordrecht, 1970, pp. 27-54.

Swain, M. "Epistemic Defeasibility." American Philosophical Quarterly, 11 (1974), pp. 15-25.

Swain, M. "Knowledge, Causality, and Justification." Journal of Philosophy, 69 (1972), pp. 291-300.

Swain, M. "Skyrms on Non-derivative Knowledge." Nous, 3 (1969), pp. 227-231.

Swain, M. and Pappas, G. (See Pappas, G. and Swain, M.)

Thalberg, I. "In Defense of Justified True Belief." Journal Of Philosophy, 66 (1969), pp. 794-803.

Thompson, M. "Who Knows?" Journal of Philosophy, 67 (1970), pp. 856-869.

Tienson, J. "On Analysing Knowledge." Philosophical Studies, 25 (1974), pp. 289-293.

Unger, P. "Experience and Factual Knowledge." Journal of Philosophy, 64 (1967), pp. 152-173.

Unger, P. "An Analysis of Factual Knowledge." Journal of Philosophy, 65 (1968), pp. 157-170.

Waismann, F. "Verifiability." Proceedings of the Aristotelian Society, Supplementary Volume, 15 (1936).

Woozley, A. D. "Knowing and Not Knowing." Proceedings of the Aristotelian Society, 53 (1953), pp. 151-172.