May 2 1960

Dear Friend Macrodes,

With a little in-between time at the moment I can begin a reply to one of your remarks relative to my answer to you in the Festschrift.

On your foolscap sheets you write, "On p. 443 you challenge my claim that a random set can be axiomatized. You presnet such a set and then ask, "With these as axioms, what can be deduced?" But this is clearly the wrong question." etc.

I must acknowledge that according to your explanation now, which seems quite correct, I misunderstood your point and ansked the wrong question. You admit that the axiomatization you suggest is trivial, but you suppose that the axiomatization I want is also trivial.

To all of which I would like to say: I misunderstood your point because I thought it was an objection to my position. What you meant is not an objection to my position, but rather is somewhat in my favor. My position has been that the axiomatization of theology is at least an ideal toward which we should press, even if we cannot attain it. I hold this position in opposition to Barth. See my account of of his rejection of axiomatization in my Karl Barth's Theological Method, p. 67. This is one of a series of points I am raising against against Barth. It ties in with the other points. My position is also directed against Brunner, who holds that faith must cure logic and that we must believe contradictory propositions. This ties in with his notion that God and conceptuality (or intellectualism)are mutually exclusive. Beyond this my position opposes all those who say life is deeper than logci and who rely on some sort of mysticism. Against them I have defended the logical consistency of the Scripture and the consequent axiomatization.

You now have said that of course, any random set of propositions can be axiomatized. This is more of a support to my view than it is an objection.

Of course, I do not quite admit that any random set can be axiomatized - and still retain any meaning. For example, David was King of Israel, and David was not King of Israel. I agree that these two contradictory statements follow validly from, Washington as the first president of the USA, and Washin on was not etc. From a falsity (which the product of contradictories is) anything follows.

This sort of thing I am more than willing to admit is trivial. But I am not convinced that what I have said is trivial. At least I am opposing well known and widely held opinions. The construction I am aiming at is the deduction of the Westminster Confession from Scripture, and this I take it is a step toward axiomatization, or systematization, and it is also a refutation of Barth and a number of others.

Have I made myself clear?

This does not answer all you wrote on the foolscap pages. Sometime I hope to get to the remainder, but I send this now to assure you I do not want to brush you off, and that I regard your criticisms as valuable and stimulating.

Cordially yours,

I'm not sure that I understand your 1st criticism thoroughly, since I am not sure what "product of contradictory propositions" you think I have used. As you say

(1) $(-F \cdot D) \rightarrow M$

can be expanded to

(2) $[-F \cdot (F \vee M)] \rightarrow M$

By multiplication we get (I think)

(3) $[(-F \cdot F) \vee (-F \vee M)] \rightarrow M$

{not, as in your letter,

(3*) $[(-F \cdot F) \vee M] \rightarrow M$ }

Now, it is true that (3) contains a contradictory expression as a part

of its left-hand branch. do this the product of contradiction to which you refer? If so, we ought to note that this criticism has nothing special to do with my argument. It applies equally to every argument which has the form ~~hypothetical~~ disjunctive syllogism (and, of course, to every modus ponens as well) for all of them yield the above multiplication. Do you intend to reject all uses of these forms?

Since I accept disjunctive syllogism I did not intend to deny that

my argument involves a ~~contradiction~~ contradiction
in this sense. On p. 362 I denied
that my arguments used ~~as~~ contradictory
premises. But the contradictory
expression which is a part of (3) is
not the analogue of any premise or
combination of premises which I used.
It is a part of a reformulated
premise.* But I cannot think of
any reason for rejecting (in general)
premises, or reformulations of sets of
premises, merely on the ground that
they include some contradiction as
a part. For many propositions which

* More properly, it is the analogue of a part, etc.

include contradictions as parts are true (indeed, some ~~of~~ such propositions are necessary truths, and others are contingent). Do you have a general reason for rejecting the use of such truths as premises, or do you detect some special failure in the arguments which I use?

If that is not the product of contradictions to which you refer I'm afraid I've missed the point of your 1st criticism.

If I understand your second objection I think it rests upon a

misconception. The reason why I suggest that D may be known independently of M is that in general a disjunction can be known to be true without knowing either of its disjuncts to be true, and I see no reason to suppose that D is a special case in this respect. If this is so then a person might come to know D without knowing anything about either disjunct, and then later come to know ~F. He would then, if he thought of it, be in a position to infer M.

Do you have some reason to think

that no one can know D independently of knowing either F or M? Do you, for example, have an argument to show that God could not reveal D without revealing F and without revealing M? I can't think of any such argument, though I would be interested in hearing one.

I'll turn now to a few comments on your reply in the Mark volume. I can sympathize with your reference to the slanting of machinery. I often feel that way myself. But I guess that how I take the topics to be important enough to justify some sacrifice of esthetic

values for the sake of accuracy.

Pp. 442 & 443, if I understand them, seem to me to contain some fallacies. E.g. on p 442 you seem to complain that while P_5^- implies P_5- this is not enough since there is no showing that P_5 is true. And you seem to think that this is remedied by the addition of P_1 and P_4 to the list of premises. And on p. 443 you complain of another deduction that "there is no explicit assertion that the axiom is true." Now, consider the following two propositions

(1) Euclid was a king of Israel.

(2) It is true that David was a king of Israel.

I am inclined toward the "eliminability" theory of truth, and I think that (2) contains no more information than (1). Since you, however, are not satisfied with the assertion of (1) but seem to want an "explicit assertion that the action is true" I take it that you take (2) to be in some way stronger and more informative than (1), a different proposition from (1). Let us assume for the moment that it is. From (1) and (2) we can deduce

(3) David was a king of Israel.

But how are we better off than before? For the new argument contains no explicit assertion that (2) is true. If the lack of such an assertion is a defect in my argument it is equally a defect in this new one. Of course, we can add another premise, (4), which says that (2) is true, etc., but then the defect will attach to (4), etc. ~~This is one of the~~ In fact, a person who takes up this line of argument can be expected to object that your own arguments, though they include the Axiom, contain no explicit assertion that

the Axiom is true. But this just seems to be a vicious regress. The assertion of a statement does not require another assertion that the statement is true, etc. Sometime we have to let our yea be yea, and our nay, nay.

A second point. In p 443 you challenge my claim that a random set can be axiomatized. You present such a set and then ask, "With these as axioms what can be deduced?" But this is clearly the wrong question. To axiomatize this set we need to find a set of axioms which entails this set,

rather than to discover what this set entails. In my essay I suggested a number of ways of constructing such axiomatizations. I will mention only one here. Let P be taken as the conjunction of the three propositions you mention. Then P is an axiom which entails the set you propose.

As I said in my essay this axiomatization is trivial. But it leads to my ~~third~~ next point. Surprisingly, to me at least, you seem to maintain in your reply that the axiomatization you want is exactly of this trivial sort. At

At the top of p 442 you seem to suggest that we should take the name "The Bible" to be a short way of referring to every proposition in the Bible. If I understand this it seems to mean that we should take the Quran to be an abbreviation of a proposition something like the following:

(6) It is true that David was a king of Israel, and that Moses was born in Egypt, and that ..... etc....

Where the proposition is to contain a conjunction of all the propositions in the Bible. (This is, of course, a surprising

abbreviation. One can be glad that the Biblical writers were nominalistic enough not to use it.) ~~I~~ I agree, of course, that (6) entails that David was a king, and all the rest of the information in the Bible. But so far as I can see (6) is a quite trivial approximation of that information. It is exactly the same sort as the P which I mentioned previously. Surely, if we can get nothing better than this would we not be better off just to read the Bible as it is?

At the bottom of p. 443 you sum

to doubt that there are any axioms that entail the 12th chapter of the Confessions. I will be happy to accept a contract to produce a million such axiom sets for fifty cents apiece (I will probably throw in an extra 100,000 free). I will construct one here. Let W abbreviate the 12th chapter of the confessions. Let D abbreviate "David was a king of Israel." The following two axioms, then, entail the 12th chapter of the Confessions:

7. $-D \vee W$
8. D

Going on to p. 445 I think you are right in thinking that I refer to

your psychological sense of what is obvious. I must confess I have no idea of what the logical sense of "self-evident" is.

I am puzzled by p. 446. You say it treats a major problem, etc. And on p 447 you seem determined to reject empiricism. I expected, then, that you would explain how to get Biblical knowledge without empirical procedures. But so far as I can see you just drop the subject. To put it bluntly, when I want to find out what the Bible says on a certain topic

I get one or more copies off the shelf and use my eyes. What non-empirical method do you use?

Pp 448 ff seem to me to be a very easy sort of answer to the problem I was concerned with. I am, I guess, rather uneasy with passing off something as important as the canon as just a definition. At least three questions come to mind:

1. Is there any evidence that the Westminster divines construed their list as a <u>definition</u> of "Scripture"? I certainly did not get that impression

from reading the Confession

2. Has any other major Calvinist theologian construed the canonical list in this way? These two questions are in the end of historical and exegetical interest. The third is more important.

3. Is there any evidence that any Biblical writer used the word "Scripture" (or any similar word) with this definition? I don't know of any, and if there were any it would be cited, I should suppose, in every conservative discussion of canonicity. But it seems to be universally overlooked. But if there

Biblical writers did not use these words with this definition then how can any of the confessions' statements about the Bible be deduced from Biblical statements without committing the fallacy of equivocation?

I have nothing against the statements you quote on p. 450. I think they are basically on the right track, though perhaps they take too narrow a view of what the testimony of the Spirit is. And I suppose that until someone shows me the relevant information in the Bible I will

continues to think that what the Spirit thus reveals is information which is not in the Bible. (Incidentally, do you also believe that the Spirit's testimony enables you to distinguish between reliable and unreliable manuscripts, translations, etc., of the Bible?)

Well, I hope that you can make something out of these rather disjointed comments. Are you planning to attend the Western Division meetings in May. I may go. Perhaps we will see each other there.

Sincerely
George L. Mavrodes

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PHILOSOPHY

ON DERIVING THE NORMATIVE FROM THE NONNORMATIVE

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Is it possible to derive a normative conclusion from nonnormative premises, or, as it is sometimes put, to derive an "ought" from an "is"? A large number of ethical theorists have appeared to answer this question in the affirmative, as they have attempted to derive ethical principles from a variety of metaphysical or theological premises. On the other hand, a powerful modern tradition in ethics, stemming from Hume, appears to answer it in the negative. This latter view, which I will sometimes call the "gap thesis," has recently been challenged anew.[1]

In this paper I want to do several things. I will try to distinguish two senses of this question, senses which have been run together in recent discussions. And I will develop, and defend against a number of possible objections, a simple argument for an affirmative answer to the question in one sense, an argument simpler than any which has been discussed in the recent literature. Along with this I will discuss what would be required in order to maintain the gap thesis in the other sense. But it is not my purpose to defend any particular moral principle, nor to defend any particular historical attempt to derive a normative conclusion from nonnormative premises.

It will be convenient to develop the argument first and then to distinguish the senses of the question and of the gap thesis in the

[1] See John R. Searle, "How to Derive 'Ought' from 'Is'," *Philosophical Review* LXXIII, No. 1 (January 1964), 43-58; Max Black, "The Gap Between 'Is' and 'Should'," *Philosophical Review* No. 2 (April 1964), 165-181; and George I. Mavrodes, "'Is and 'Ought'," *Analysis* 25, No. 2 (December 1964), 42-44. Searle's paper has been criticized by James Thomson and Judith Thomson, "How Not to Derive 'Ought' from 'Is'," *Philosophical Review* LXXIII, No. 4 (October 1964), 512-516; Antony Flew, "On not Deriving 'Ought' from 'Is'," *Analysis* 25, No. 2 (December 1964), 24-32; and James E. McClellan and B. Paul Komisar, "On Deriving 'Ought' from 'Is'," *Analysis* 32-37. Black's paper is criticized by D. Z. Phillips, "The Possibilities of Moral Advice," *Ibid.*, 37-41.

course of replying to possible objections. Throughout the discussion I will assume that there is a distinction between normative and nonnormative statements, and I will use in my arguments statements which seem to be paradigms of their respective types. But I recognize that the upshot of the whole argument may be that no such viable distinction can be drawn. If that is so then, of course, both forms of the gap thesis collapse.

Consider then the following statement which I call F: *The Fisher building is the tallest building in Detroit.* Now, F appears to me to be a paradigm case of a nonnormative statement. But if anyone believes he knows a better paradigm of such a statement he is free to substitute it for F without, I think, affecting the course of the argument. And then consider the statement which I call M: *Men ought never to lie.* As before, M seems to me to be a paradigm of a normative statement, but the reader is free to substitute for M any statement which he takes to be a better paradigm. F and M are then the first statements which I wish to consider.

But I do not claim that M can be derived from F. My first claim is less ambitious, merely that F logically entails a new statement, D. And D is the truth functional disjunction, *F v M*.[2]

Now, F and M were both chosen as paradigms of their respective types, but the status of D may be more problematic. Fortunately, however, we need not here decide whether it is normative or nonnormative. We can, instead, examine the significance for our topic of both suppositions. If D is normative then the matter seems simple enough. D, which is normative, is logically entailed by F, which is nonnormative. Therefore, the thesis that the nonnormative never entails the normative is false.

But perhaps we are more inclined to think that D is nonnormative. And if it is, then the matter is only slightly more complex. In

[2] The meaning of the symbol v which occurs here is close to that of the word "or." In fact, some philosophers hold that they are identical in meaning. Though I now lean toward this view myself I will not argue it here. Instead, we can stipulate that v is a new term introduced here for the first time. It can be defined by reference to this much longer expression:

"The following is a list of two statements, and at least one of them is true:
1. *F*
2. *M*."

F v *M* can now be defined as entirely equivalent to the above statement or, if we prefer, as an abbreviated way of writing the above expression. In general, any statement of the form *p* v *q* consists of nothing more than the claim that at least one of the two statements, *p* and *q*, is true.

$F \angle (F + M)$

this case we will need an additional statement, not-F: *The Fisher building is not the tallest building in Detroit.* Not-F, like F, is nonnormative. But the combination of not-F and D logically entails M. So we will now have a pair of nonnormative statements which entail one which is normative. Whether D is normative or nonnormative, then, we are able to construct a case of the required sort of entailment.

At this point, therefore, I claim to have proved the following thesis: If some statements are normative and the remainder are nonnormative, then there necessarily are some nonnormative statements, or some sets consisting entirely of nonnormative statements, which logically entail some normative statements. And this is the central thesis of this paper.

I want to consider some possible objections to this argument. Before doing so, however, it may be interesting to compare my argument with a pair of arguments which have been given in support of the gap thesis. No doubt the best known, and historically most influential, is that of Hume. In a famous passage he writes:

> In every system of morality, which I have hitherto met with, I have always remark'd, that the author proceeds for some time in the ordinary way of reasoning, and establishes the being of a God, or makes observations concerning human affairs; when of a sudden I am surpriz'd to find, that instead of the usual copulations of propositions, *is* and *is not*, I meet with no proposition that is not connected with an *ought*, or an *ought not*. This change is imperceptible; but is, however, of the last consequence. For as this *ought*, or *ought not*, expresses some new relation of affirmation, 'tis necessary that it shou'd be observ'd and explain'd; and at the same time that a reason should be given, for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it?[3]

If we convert Hume's "surprize" over what he takes to be "altogether inconceivable" into an argument it becomes something like this.

1. No nonnormative statement contains a normative term.
2. Every normative statement contains a normative term.[4]
3. In a valid argument the conclusion cannot contain a term which does not appear in the premises.

[3] David Hume, *A Treatise on Human Nature,* Book III, Part I, Section 1.

[4] Surely we must broaden Hume's references to the words "is" and "ought," as I do here by reference to "normative" terms. For "You broke the window" is a paradigm of a nonnormative statement though it contains no "is," and "It is your duty to pay for it" is a paradigm of a normative statement though it does contain an "is" but no "ought."

4. A normative conclusion cannot be validly derived from non-normative premises.[5]

Hume's argument is valid. It fails, however, because premise 3 is surely false. In fact, one of the arguments which I used above, F; ∴ F v M, is a good example of a valid argument which violates it. Premise 3 is, of course, a rule of the traditional syllogistic logic, but there are many valid argument forms (and many of them are common) which are not in the form of a categorical syllogism. And so premise 3 must be rejected, and with it Hume's argument.

Moreover, the construction of D may serve to make us doubt premise 1. For though D contains the term "ought" (and "ought" occurs there in its strongest moral sense), it is not clear that D is a normative statement. Of course, perhaps we will decide that D is normative after all (thus accepting the simplest form of the derivation of the normative from the nonnormative). But even so, though perhaps encouraged by the doubtful character of D, we can now think of some other statements which include normative terms but of which it seems very implausible to say that the statement itself is normative. E.g., "He said that men ought never to lie," and "He thinks that men ought never to lie." And so it appears that Hume's argument also fails because of its reliance upon premise 1, which is false.

R. M. Hare states the gap thesis in the form of a logical principle, which, he says, "is of the most profound importance for ethics." He states the principle as: "No imperative conclusion can be validly drawn from a set of premises which does not contain at least one imperative."[6] He then goes on to an attempt to confirm this rule.

> The rule that an imperative cannot appear in the conclusion of a valid inference, unless there is at least one imperative in the premisses, may be confirmed by an appeal to general logical considerations. For it is now generally regarded as true by definition that (to speak roughly at first) nothing can appear in the conclusion of a valid deductive inference which is not, from their very

[5] This is exactly the way in which P. H. Nowell-Smith interprets this passage of Hume's. He states the conclusion of Hume's argument (with which he agrees) as "This [the derivation of normative from non-normative] must be illegitimate reasoning, since the conclusion of an argument can contain nothing which is not in the premises, and there are no 'oughts' in the premises." *Ethics* (Harmondsworth, Middlesex: Penguin Books, Ltd., 1954), p. 37.

[6] R. M. Hare, *The Language of Morals* (New York: Oxford University Press, 1964; first published in 1952), pp. 28, 29.

meaning, implicit in the conjunction of the premisses. It follows that, if there is an imperative in the conclusion, not only must *some* imperative appear in the premisses, but that very imperative must be itself implicit in them.[7]

This argument of Hare's, even if it is accepted in toto, is quite inconclusive against my thesis. The principal reason for this is that no independent meaning is given to the phrase "implicit in the conjunction of the premisses." That P is implicit in a set of premises means no more than that P can be validly inferred from those premises. Indeed, that seems to be why Hare can refer to a truth by definition. If we accept that definition then we will simply have to say that some normative statements are implicit in some nonnormative statements. But this is merely another way of saying (less clearly) that those normative statements can be validly inferred from those statements.

Put in another way, Hare's argument makes us take a second look at his alleged logical principle. At first its meaning, though not its truth, seemed clear, but now, after the argument, it appears ambiguous. In particular, the meaning of the phrase "does not contain at least one imperative" is now in doubt. At first it seemed reasonable to assume that it referred to a case in which no one of the premises *was itself an imperative.* If the principle is interpreted in that way then my argument above conflicts with it and provides a conclusive refutation of it. But also if the principle is interpreted in that way, then Hare's argument entirely fails to support it and is, in fact, irrelevant to it. For Hare's argument makes no reference to any premise's *being* an imperative but only to the premises' *implicitly containing* an imperative.

On the other hand, if Hare's argument is to support the principle, then the ambiguous phrase must be understood to mean "does not *implicitly* contain at least one imperative." But this means nothing other than "does not validly entail at least one imperative." And on this interpretation the whole principle becomes "No imperative conclusion can be validly drawn from a set of premisses which does not validly entail at least one imperative." Hare's argument does support that principle (though it is hardly in need of support). But on this interpretation, of course, the principle is completely trivial. It does not conflict with my thesis, nor is it a statement of the gap thesis nor of any other thesis about the relation

[7] *Ibid.*, p. 32. Hare appears to believe that moral statements are imperatives. Though I do not share this view I will use the term "imperative" while discussing Hare.

of the normative and the nonnormative. For it makes no mention of nonnormative or nonimperative statements.

I turn now to several objections which might be urged against my argument.

Objection 1.—Statement D is illegitimate or ill-formed because it is improper to represent "or" by "v" since the truth-functional "v" does not capture the full meaning of "or."

I do not wish to argue here whether "v' does or does not accurately represent the sense which "or" bears in some or all of its uses. That is because in any case this objection is irrelevant to the argument at hand. I do not propose D as an analysis of, a translation of, or a substitute for any statement containing the word "or." It is, rather, a statement in its own right containing the term "v," which is given a contextual definition by means of the usual truth table. (See also footnote 2.)

Objection 2.—D is illegitimate or ill-formed because normative statements do not have truth values (or do not have them in the requisite sense), and hence cannot function as constituents of truth functional compounds.

Now, the significance of the claim that normative statements are neither true nor false is far from clear.[8] This can, perhaps, be illustrated by constructing an analogue of the above argument without claiming that any normative statement is either true or false.

Whatever else may be involved in the notion of truth, it seems clear that the term (along with "false") has a sense in which it is applied to statements and in which, for example, the statement "The Fisher building is the tallest building in Detroit" is true if and only if the Fisher building is the tallest building in Detroit. And otherwise that statement is false. In general, "p" is true if and only if p, and otherwise "p" is false. *And this feature of truth and falsity is the only feature which is operative in truth functional arguments.* Nothing in the propositional logic depends upon any other feature of "truth."

Now if we object to using the terms "true" and "false" of normative statements, then we can simply introduce a pair of new terms, say "right" and "wrong." And we can say, e.g., that a normative statement such as "Men ought never to lie" is right if and only if

[8] Charles Stevenson argues in a way basically similar to what follows that, even on the basis of an analysis like his own, ethical statements are properly characterized as being true or false. See his *Facts and Values* (New Haven: Yale University Press, 1963), pp. 214-220.

men ought never to lie, and otherwise it is wrong. (In general, "n" is right if and only if n, and otherwise "n" is wrong). And we can then define a new connective, say "w," such that a statement of the form, p w q, is true (or right, depending upon whether we decide that it is normative or nonnormative), if and only if at least one of its components is either true or right, and otherwise the compound statement is false (or wrong). And a valid argument can be redefined in the new terms as one in which it is logically impossible for all of the premises to be either true or right if the conclusion is either false or wrong.

We can then construct a new statement, D', which is *F w M*. Just like D, D' is validly entailed by F. And, as before, D' and not-F jointly entail M. Thus, we rehabilitate the argument in a form strictly isomorphic with the original.

It should be evident that no significant change is involved in this alteration in terminology. This is, of course, because the validity of the operations of the propositional calculus does not depend upon their connection with "truth." It depends, rather, upon the fact that they are performed in a two-valued system which includes a "negativising" transformation, i.e., one whose effect is to convert propositions of one value into propositions of the other value. Therefore, the logic of the amended argument is precisely that of the original.

One cannot, then, base a serious objection upon the claim that normative statements are neither true nor false (a claim which appears to be logically vacuous). The objector must go further and claim that normative statements are not two-valued, or that they do not admit of a negativising transformation. But it does not appear that most of the defenders of the gap thesis should be willing to go this far. For if one adopts this stronger claim then one must also adopt a corresponding new logic, *or else give up the claim that normative statements are entailed by anything at all, even including other normative statements.* But defenders of the gap thesis generally maintain that normative conclusions can be validly derived by standard rules of logic from premises which include normative statements. If normative statements are not two-valued, however, this would be nonsense; standard logic would not apply to them at all.

It appears, then, that the objection must either be abandoned or strengthened. But the project of strengthening it in any reasonable way will, I think, seem inordinately expensive to most of

those involved in this discussion. I will, therefore, carry on the remainder of the discussion within the context of standard logic. And since no significant alteration is introduced by the change in terminology, I will continue to use the terms "true" and "false" (though any who object to them are free to make a substitution along the lines suggested above). However, readers who seriously wish to consider the possibility that normative statements are not two-valued should amend my thesis to read as follows: either normative statements are not validly entailed by anything at all (even by normative statements) in standard logic, or else there are some sets of nonnormative statements which validly entail some normative statements.

Objection 3.—If we construe D as nonnormative, then the argument proves only that normative statements are entailed by a special sort of nonnormative statement, i.e., by statements such as D. But statements of this form, though they may be well formed, are somewhat odd and occur only rarely. On the other hand, the argument does not show that normative statements follow from more ordinary nonnormative statements such as F. And so, presumably, the significance of the argument is to be minimized.

This objection is correct in its assessment of what my argument shows. It is not correct in its assessment of significance. What appeared to be the original claim of Hume and his followers was interesting. They claimed that a certain general class of statements was logically separated from the remainder of our discourse. There was no span of entailment which would bridge the gap from the nonnormative to the normative. This interesting thesis is now shown to be mistaken. There are such entailment bridges.

Of course, it is consistent with my argument, and very likely to be true, that there are many nonnormative statements which do not, by themselves, entail any normative statements. But that claim appears to be rather trivial. However, it would be interesting if we could find some subclass of nonnormative statements *which had some other important characteristics* and which was also separated from the normative by a logical gap. The significance of such a claim would, of course, depend largely upon how such a subclass was defined or delimited. Perhaps such a proposal will be made. If so, it will be interesting to examine it.

Objection 4.—This is closely related to the preceding one, and it claims that I misinterpret the gap thesis. The holders of that thesis did not claim that normative statements cannot be derived

from *nonnormative* statements (i.e. from the complementary class), but that they could not be derived from another limited class of statements, e.g., from "factual" statements.

The force of this objection is somewhat hard to assess, since many formulations of the gap thesis are vague on this point. But some, at least, pretty clearly conform to my interpretation. Hare, for example, requires an imperative to be in the premises (in some sense of "in") if the conclusion is to be imperative. And this clearly implies that, if the premises are nonimperative, then no imperative conclusion can be validly inferred.

Hume, of course, is vague here, because he expresses himself purely in terms of a distinction between "is" and "ought." But Hare appears to interpret Hume as holding Hare's principle.[9] Karl Popper, on the other hand, asserts "the impossibility to derive non-tautological ethical rules—imperatives; principles of policy; aims; or however we may describe them—from statements of facts."[10] This seems to give color to the objection. But Black, referring to this passage, says, "Popper would presumably wish to make a similar claim about all non-factual statements; like many other philosophers, he believes that only statements of fact can follow from statements of fact."[11] And Hare says that this statement of Popper's is an "explicit" formulation of Hare's own principle.[12] So the matter does not seem to be clear.

Whatever has historically been claimed, of course, someone may now wish to make the weaker claim that there is a class of statements (I suppose they are to be the "factual" statements, of which presumably F and not-F are paradigms) such that they entail no normative statements. I do not intend to argue against this claim here, since we should first have a criterion for this class. For example, we should have some way of deciding whether D belongs to it. But even without that we can say this much. If there is such a class of "factual" statements, and if F and not-F belong to it, then there is a third class such that statements in the third class are entailed by factual statements and such that factual statements plus statements from the third class entail normative statements.

[9] Hare, *op. cit.*, p. 29.

[10] Karl R. Popper, "What Can Logic Do for Philosophy," *Aristotelian Society Supplementary Volume XXII* (London: Harrison and Sons, Ltd., 1948), p. 154.

[11] Black, *op. cit.*, p. 165.

[12] Hare, *op. cit.*, p. 32.

Objection 5.—The argument shows only that a *contradictory* nonnormative statement (F and not-F) entails a normative statement. And this entailment holds in virtue of a well-known feature of the ordinary propositional calculus. But the gap thesis can easily, and without significant loss, be reformulated as the claim that no normative conclusion can be validly derived from *noncontradictory* nonnormative premises. And the argument does not affect this form of the gap thesis.

This objection is related to the next one, which raises an important point. But in the form given here it is simply mistaken about the structure of the argument which I have discussed. I have nowhere used or discussed any argument which includes both F and not-F (or any other contradiction) among its premises. I have instead pointed out that if D is normative then it is entailed by F, and hence there is a nonnormative statement which entails a normative one. On the other hand, if D is nonnormative, then D and not-F together entail M, which again subverts the gap thesis. Now *neither* of these entailments involves any self-contradictory premises. One of them has only the single premise F, and the other has the pair of premises D and not-F. But neither of them involves the contradictory premises F and not-F. Nevertheless, it is a necessary truth that one or the other of these entailments, *by itself,* is a contravention of the gap thesis, i.e., one or the other of these entailments exhibits the valid derivation of a normative statement from *noncontradictory* nonnormative premises. Thus this objection rests upon a mistaken reading of the argument, and the gap thesis cannot be saved by the proposed emendation.

Objection 6.—The argument does not show that it is possible to establish normative conclusions on the basis of nonnormative premises. For we may take D to be nonnormative. But then we see that D is established on the basis of F, while M is established on the basis of D and not-F. F and not-F are, however, the contradictions of each other, and they cannot both be true. Therefore, an argument which appeals to both of them cannot be sound and cannot be used to establish a conclusion. And so the proferred argument fails.

In a sense this objection is correct. But it is important to understand just what that sense is, for there is also a sense in which the objection misses the point of the argument. In constructing and discussing the argument I have avoided the use of the term "estab-

lish" and similar terms, and I have made my claim in terms of what is entailed. In other words, my claim has been one about logic, about the logical relations which can subsist between statements of different classes.

It is for this reason, of course, that in constructing and defending my argument I have not found it necessary to claim the truth of M, or of D, or of F, or of not-F. I have not asserted that the Fisher building is the tallest building in Detroit, nor have I claimed that men ought never to lie. For I have been concerned so far only with a thesis about their logical relations.

Since I am not here concerned with the truth of either D or M I have not tried to establish either. Nor have I claimed that D might be established by deducing it from F, and that M might then be established by deducing it from D and not-F. For I have not been concerned with how any of them might be established. I have concerned myself only with their logical relations.

What I do claim to have established is a principle concerned with logical relations: If some statements are normative and the remainder nonnormative, then there are necessarily some nonnormative statements which entail some which are normative. Therefore, if the question with which this paper begins is construed as a question about logic, about the entailment relation between statements of two classes, then the answer to it is "yes," and the gap thesis, interpreted in the same way, is false.

There certainly seem to have been holders of the gap thesis who have interpreted it in this way. Hare, for example, puts his rule in terms of what can be *validly drawn* from a certain type of premise. And Popper prefaces the principle which I quoted above with the claim that "perhaps the simplest and the most important point about ethics is purely logical."[13] But, as we have seen, that point is instead a purely logical error.

Perhaps, however, the question and the gap thesis can be understood in another sense, as epistemological rather than logical. There would then be a question and a thesis about what we can know and how we can know it, rather than about what is entailed or what can be inferred. If we adopt this interpretation, then the objection makes a point. For it calls attention to the fact that I have not even attempted to establish the corresponding epistemological

[13] Popper, *op. cit.*, p. 154.

thesis, i.e., that we could come to know some normative statement on the basis of some nonnormative statement. Nor will I attempt to do so here.

I have, however, done something else which is relevant. I have eliminated one sort of argument which might be used in an attempt to show that the revised gap thesis is true.[14] If there is an epistemological gap between the nonnormative and the normative, this cannot be due to the presence of a logical gap. For my argument shows that there is no such logical gap.

If the epistemological gap is to be defended, then, it must be defended upon other grounds. Presumably these will include the claim that some of the nonnormative statements involved in the derivation cannot be known except by deriving them from the normative conclusion. If that were so, then the derivation, though it might be valid and sound, would be epistemologically circular, and hence would not provide a ground for knowing the conclusions. But there seems to be little possibility of defending the epistemological gap against my argument if D is construed as normative. For it seems evident that we might know F (if it is true), and then get to know D by inferring it from F.

If, however, we decide that D is nonnormative, then interest will center on how we might come to know D. Of course, if we know F we could infer D from it as before. But in that case we could not know not-F (for it would be false) and so could not carry out the suggested inference to M. On the other hand, if M were true we might know it and infer D from it. But then, of course, we could not be coming to know M by inferring it from D and not-F.

But perhaps F is false, D is true, and *D is known independently of knowing M*. If that were so we might come to know M by inferring it from D and not-F. And if that is so then the epistemological gap thesis fails just as the logical gap thesis fails.

What the gap defender needs at this point is a proof that, under these circumstances, it is impossible to know D without resting that knowledge upon a knowledge of M. And that conclusion is prima facie highly implausible. For under these circumstances D will be logically entailed by every one of an indefinitely large set of true statements. And so there would appear to be many ways of establishing a knowledge of D without inferring it from M.

Nevertheless, it is possible that a defender of the gap thesis may

[14] Where the revised gap thesis claims that no normative statement can be known on the basis of purely nonnormative statements.

be able to present a plausible argument that this is impossible. If so, it will be very interesting to examine. Of course, even if it were sound it would not be sufficient to establish the epistemological gap. For it would still remain possible that the gap might be bridged by a maneuver different from the one I have considered. But a proof that even this simple maneuver fails would be a difficult and interesting achievement.