

# Replies

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would like to express my deep thanks to the scholars who have been so kind as to offer their comments on my book and to Peter Hare whose brainchild this symposium was and who organized and published it. It is not often that one has the benefit of such thoughtful criticism and I am very grateful to all those who have participated. The replies that follow are too brief to do justice to their work, but considerations of space have made more extensive ones impossible.

## John Corcoran

Corcoran has done us all a service in emphasizing something I did not—that Lewis was a pioneer in the field of the history of logic. This had not occurred to me as I wrote the book and I am happy to be corrected. It was quite typical of Lewis that having undertaken to work in logic, he would have explored its history, and his was certainly the first such account to describe Peirce's contribution to the subject. Lewis's history is chiefly a history of the algebraic tradition. Some subsequent writers, particularly those influenced by Quine, have slighted this tradition and have made Frege the hero of their tale. I am glad to see that experts in the history of logic such as Corcoran, and I might also mention Geraldine Brady whose fine book Peirce to Skolem has recently appeared, are giving the algebraic tradition the place it deserves.

Corcoran points out that the double use doctrine was introduced by Peano. Unfortunately, I have no information that tells when Lewis read Peano; it is clear that he did know Peano's work, but whether he got the double use doctrine from him, from some other source, or invented it himself, I do not know. It had occurred to me that he might have gotten it from Peirce's notion of a leading principle, but I have no evidence to support that.

Replies
Murray G. Murphey



Corcoran notes that Lewis held an "apodictic" theory of proof. Certainly he did hold that from "p  $\supset$  q", one cannot deduce "q", and he faulted Whitehead and Russell for their use of material implication in *Principia Mathematica*. But in *Symbolic Logic*, Lewis made it very clear that while "p  $\supset$  q" does not warrant the assertion of "q" alone, "[{p & (p  $\supset$  q)}  $\supset$  q]" does. Lewis argues that any theorem of the form "[{p & (p I q)} I q]", where "I" stands for any implication relation, is equivalent to "[{p & (p I q)} < q]", and it is his stated view that from "p < q", "q" does follow. As I have tried to make clear in the book, Lewis believed that strict implication is the relation of deducibility, and that deductions in other systems of logic must be shown to be valid by arguments using strict implication. Unfortunately for Lewis, Ruth Marcus proved that the deduction theorem does not hold unconditionally for any of the five Lewis modal logics. And just how Lewis thought his claim could be proven for multivalued logics such as Lukasiewicz's three-valued logic I do not know.

# Stephen Barker

Barker finds my treatment of Lewis's logic too descriptive and not critical enough. I will not argue the point. What I attempted to do was to describe the development of Lewis's logic, starting with his early reaction to *Principia Mathematica* and carrying it through the *Survey* in chapter 3 and *Symbolic Logic* in chapter 6. There are other treatments of Lewis's logic that pursue a different and more critical point of view but these involve formulations of his logical system from the standpoint of current logical theory, whereas I have tried to present Lewis's work in his own terms. If this is a fault, I plead guilty.

Barker says that in my discussion of the controversy over implication, I give the impression that "Lewis won over Russell." If so, that is regrettable and was not my intention. Clearly, among philosophers generally, Russell's view became the standard one. But a bit more should be said about Lewis's objections to the use of material implication in the Principia. Lewis did of course object to the idea that from "p  $\supset$  q" one can derive "q". But as noted above, by the time he wrote his chapters in Symbolic Logic, he recognized that from " $\{\{p \& (p \supset q)\}\}$ ", "q" could be legitimately derived. But Lewis's objections to the Principia were more fundamental than that. He thought that the paradoxes of material implication showed its inadequacy, and in his early papers he listed many more theorems derivable in the *Principia* system that he thought were equally absurd. The fact that in the system of Principia, for any two propositions whatever, one implies the other showed that material implication could not be a legitimate form of implication. But Lewis's real objection to the Principia was its extensionalism. Lewis believed that implication depended on relations of meaning, of intension, between the propositions involved. Even when he came to recognize that " $[\{p \& (p \supset q)\} \supset q]$ " was a tautology, he objected to the fact that the meaning of "p" could be completely irrelevant to that of "q." The requirement that implication must rest on meaning he believed was met by strict implication; that is, by holding that "p" implies "q" only if it is impossible that "p" is true and "q" false. So for example, the proposition "If anything is a square then it is a rectangle" is a strict implication because, given the meaning of the terms "square" and "rectangle", whatever is a square is necessarily a rectangle. This is why he was so puzzled by the paradoxes of strict implication—that a necessary proposition is implied by every proposition and that an impossible proposition implies any proposition. It is not obvious that "pigs can fly" implies "2 + 2 = 4". But Lewis was forced to accept these paradoxes since they were undeniably consequences of his system, however much he disliked them. Strictly speaking, they do not conform to his own view that implications rest on meaning relations.

Lewis has been sharply criticized, not only by Barker but by Quine and others, for having confused use and mention. The prevalent view today is that "p  $\supset$  q" uses the "if . . . then" relation as a propositional connective whereas "p implies q" mentions "p" and "q". That Lewis called both of these "implication" is not surprising since he was here following Russell's practice, as Barker makes very clear. And as Barker also noted, the distinction between object language and metalanguage was not available to either Russell or Lewis in the nineteen tens. But even after Tarski published and Quine and others had criticized Lewis's usage, he did not change it, and rejected the criticism. Lewis's position seems to be this. Lewis distinguished a proposition from a statement; by a proposition he means a participial phrase, such as "Mary baking pies (now)" or an adjectival clause such as "that Mary is baking pies (now)"; Lewis takes these as equivalent. The proposition "Mary baking pies (now)" is, Lewis says, the content of the statement "Mary is baking pies" that asserts the proposition, just as "Is Mary baking pies?" questions it. A proposition is therefore adjectival; it denotes the actual world and signifies a state of affairs. The intension of a proposition is the conjunction of all the propositions that must apply to whatever the given proposition applies to, or equivalently the conjunction of all the propositions deducible from the given proposition. Lewis takes this to mean that proposition B is included in the intension of proposition A iff from the premise that A applies to x it is deducible that B applies to x. This is the relation that Lewis calls "implication." The statement " $p \supset q$ " taken in extension means that the class denoted by "p" is included in the class denoted by "q". For Lewis, "p < q" means that the intension of "q" is included in that of "p"-that is, whatever "p" is true of "q" is also true of. One may agree or not agree with Lewis's view, but it is important to understand what it is. Lewis perfectly understood the difference between use and mention; what he rejected is the claim that "p < q" involves any such confusion. Implication is then an intensional relation, or relation between intensions. Hence if "that p" implies "that q", we are not talking about propositions, we are asserting a relation between their intensions. And this leads Lewis to remark "in terms of the propositions so expressed, the formulation of their relations of intension never requires quotation marks; and one superficial objection to the logic of intension thereby loses it superficial plausibility."<sup>2</sup>

## Eric Dayton

I find myself in agreement with Dayton on most of the issues he has raised. Clearly, Lewis's interest was in metaethics, not substantive ethics. It is one of the characteristics of Lewis's philosophy that it is all normative, so that Lewis's decision to write on ethics was only a further carrying out of the normative position he had always held in logic, epistemology, and value theory. This is one of the features of his pragmatism and Lewis himself thought that Pragmatism required such a normative position. I am also at one with Dayton as regards Lewis's debt to Kant—a debt of which Lewis made no secret. Lewis's strategy in his ethics, as in his epistemology, has a clearly Kantian ring; as he says in the passage Dayton quotes, the question is not whether we have knowledge but how. Lewis is very clear on the fact that neither the correctness of epistemology nor that of ethics can be proven by something like a deductive proof. Any such "proof" would assume an imperative to consistency, which is just what needs proving. Lewis's effort is rather what Dayton terms "pragmatic vindication"—a nice term and an accurate one.

For Lewis, the basis of his views is his concept of human nature. It is the fact that human beings are free to choose their own actions, that they are temporal beings who not only live in time but know that they live in time, and that they seek gratification that sets the parameters of his philosophy. Because human beings know they have a future, they must plan for that future; because they seek to maximize their goods and because goods are scarce, they must weigh present gratification against future gratification. This is not easy, given our impulsive nature, and it requires imperatives (or normative rules) to control our impulses in favor of our greater good. Thus for Lewis, the basis of imperatives is human nature, or more exactly the temporal character of human beings. There is then no problem of why we must govern ourselves by imperatives; the problem is what imperatives are to govern us. Lewis admits that these facts introduce a circularity into arguments to justify ethical imperatives, but I agree with Dayton that this circularity is benign.

This leaves Lewis with two problems, as Dayton points out. One is to refute false imperatives, the other is to justify the particular imperatives he has chosen. The first problem is dealt with by the use of pragmatic contradiction. The Cyrenaic who says, "Have no thought for the morrow," issues an imperative as to how we should act toward the morrow; the contradiction is not logical but pragmatic. The second problem Lewis attempts to solve by adopting Kant's imperatives of action—the technical, the prudential, and the moral, and adding the imperatives of consistency and cogency. The imperative of consistency is of course assumed in any argument, but in its practical form it is required to carry out any plan of action. It cannot be

proven without circularity, but its basis is not logic but life—the necessity for consistent action is the source of logic. Lewis's imperative of cogency similarly has a practical justification that Lewis gives in the form of a Kantian deduction to justify induction—an argument he got from Reichenbach. Justification of the technical and prudential imperatives poses no real problems for Lewis; the problem is the justification of the moral imperative. And here perhaps Dayton and I have some differences. The moral imperative as Lewis sees it is the Categorical Imperative of Kant, but the form in which Lewis states the Categorical Imperative is purely formal—the requirement of universal law. To give it content, Lewis does need knowledge of the inner lives of others, and this he seeks to guarantee by claiming that we can have empathetic knowledge of others. Dayton is no doubt right that Lewis needs a moral psychology, but in lieu of one he relies on empathy. And empathy will not do it. The problem Lewis could not solve was how to reconcile the prudential imperative to maximize one's own goods with the moral imperative to treat others as if their weal and woe were our own. As I tried to suggest in the book, I think Lewis had a way out in his claim that without membership in a community, one can have no interests at all, but it was not a path he took.

Lewis's view that all forms of knowledge are normative and that all experience is value laden underlies his pragmatism. We strive for goods, for gratification, and can only attain them through action. Thinking as well as doing are forms of action and so are right or wrong. The question is always what the practical upshot will be; not simply will our predictions of matters of fact be confirmed but will we realize in future experience the values we seek. Lewis is here fully in the tradition of Peirce, James and Dewey; if there are no goods worth while seeking, then thought and action are meaningless.

Dayton raises the question of why Lewis could never finish his book on ethics. It was not for lack of trying. Lewis says that from the beginning of his career, he had regarded ethics as the most important branch of philosophy, and throughout his career he taught courses on ethics. In his retirement, ethics was, if not his sole concern, certainly the subject to which he devoted most of his energy and time. In an article published not long after the publication of the AKV, Robert Browning said that he did not think Lewis could find a way to incorporate other-regarding imperatives within his own perspective. I think Browning was right. Lewis elevated the prudential imperative to the status of a categorical imperative. He then had two categorical imperatives, and he could not find a way to reconcile them. In some of the late passages he wrote, Lewis makes it clear that he thought in cases of conflict between these two, the moral imperative must rule, but he could not find a principled justification for that claim, nor could be derive one imperative from the other. Dayton thinks I attribute Lewis's failure to finish the book to failing health. Not so. Of course Lewis's health did fail eventually, as everyone's health does, but I think his failure to finish the book was due to his inability to solve the problem of the conflict between the two

imperatives. And Lewis I think recognized that, as his comments regarding heroes and martyrs indicate. I am not sure that the problem can be solved within the categorical system Lewis employed, or, for that matter, in any other.

# John Greco

Greco's paper is so well written and so lucid that I am embarrassed to say I do not understand it. With his characterization of Hume's position I have no argument, but his description of Lewis's position leaves me flummoxed. Lewis's argument in Mind and the World Order has a certain analogy to Peirce's argument in "Grounds of Validity of the Laws of Logic" that a world to which conceptions do not apply could not be conceived. But what Lewis emphasizes is that a world without concepts of objects is impossible. The argument Lewis gives for this is that our experience without some degree of regularity is impossible, and this claim is supported by his attempt to show that regardless of the character of our experience we could always find regularities in it, even if the method for doing so were patently artificial. This is not I think the way Lewis would try to support an analytic proposition. Rather, it rests on his confusion of the real object with the regularity in experience that is the causal result of the existence of the real object. I agree with Greco that Lewis's argument doesn't work, but we seem to differ on why it doesn't work.

But I am more puzzled by his argument against Lewis's position in the AKV. Greco thinks Lewis can meet Hume's challenge by his pragmatism; so do I. I believe Lewis thought that Reichenbach's argument was a pragmatic argument and that it was sufficient to do the job. Reichenbach's argument is that the fundamental form of induction is enumerative induction, and that we have no choice but to accept the validity of enumerative induction as a posit because if there is a true answer to be found enumerative induction will find it, and if there is not, then no other method will. But Greco says that this argument at most establishes that our inductive reasoning and our inductive beliefs have a kind of practical rationality, and for this reason he considers them inadequate. But he then goes on to argue that what Lewis ought to have done was to argue that since knowledge "plays a normative role in our thought and action" that "has its source in knowledge's practical function," "it is wrongheaded to demand more than that practical function requires." But this, it seems to me, is just what Lewis did argue in accepting Reichenbach's position.

Lewis's arguments for the validity of induction and the credibility of memory are Kantian, as Lewis signals by entitling that section of the AKV "Deduction' of the basic validity of memory and of induction." The argument is that we have to assume the validity of both or else accept total skepticism. Lewis does not claim to have proven either memory or induction valid; he thinks no such proof is possible. But he also thinks no such proof is necessary because the alternative to accepting their validity is totally unac-

ceptable. For purposes of action, he considers this Kantian deduction the best we can do, and all that is necessary.

#### Naomi Zack

Zack's paper raises so many issues that I cannot do it justice in a brief space, but I do want to discuss at least some of her points. She says quite rightly that for Lewis the given is ineffable (that is, cannot be described in words) and that it is prelinguistic. One could take this to mean that we apprehend the given before we have language, and certainly Lewis would agree to that. But it is also critical that the given is a component of all perception, with or without language. Consider Ayer's leaf. As Ayer gazed at the leaf, what he actually saw were multiple shades of green on the leaf's surface. No language has words for all such shades, because color variation is continuous and language has a finite (and very limited) stock of words. The qualia (not qualities!) Ayer experienced were given, whether he knew enough to classify them as "green" or not. Lewis's point, as Zack makes admirably clear, is that the given is not just prelinguistic in a historical or biographical sense, but in a logical sense. The given is not linguistic at all; it is what is actually sensed and what we classify under rubrics such as "green" and "red". And Zack is quite correct that the given are not limited to visual experience but are found in all sensory experience, auditory, olfactory, kinesthetic, and gustatory. Taste has its givens too; the sweetness of honey is not that of saccharine.

Lewis emphasized repeatedly that language is not a necessary condition for knowledge, though it is immensely useful. To claim that it is necessary is to say that animals have no knowledge. How then can a dog be said to know its owner, or a tiger its prey, or a horse its fodder? No one can deny the great importance of language, but to identify knowledge with its linguistic formulation is absurd. Infants have knowledge before they have words. Fish can learn, as psychologists have proven; even worms can learn. Those philosophers who have been bewitched by language are well on the way to linguistic idealism.

Lewis holds that the given can and do function as signs. They are not signs of external realities but of other givens that are to be expected in future experience under appropriate conditions. If on the basis of the appearance of the clouds I anticipate rain, how would I know whether that prediction is confirmed? To know that is to know what future experiences I will have, either what I will see or what I will feel on my skin. It is not enough to proclaim "It is raining;" I have to have the experience that it is raining, and that requires that I experience certain qualia.

As Zack points out, sense meaning was the way Lewis sought to tie language to the world. As she explains, Lewis took sense meaning to be a schema (in Kant's sense) together with the imagined result of applying that schema. And the imagined result is crucial. We all know the word "square." How do we know what the word refers to? If we do not have in mind (that is, in imagination) a representation (which in this case would be visual) of a

square, we could never recognize one when we met it. Or consider "honey." How would we know we were tasting honey if we did not have in mind a representation of how honey tastes? These points are obvious, yet to an astonishing degree they are ignored by philosophers. They were not ignored by Lewis.

I fear that I must disagree with Zack on Lewis's view of Idealism. It is true that in his early years Lewis was an Idealist; it is also true that he always retained a deep respect for Idealism. But he did repudiate Idealism, saying that its great error was to believe that everything was mental. He also rejected the notion of sense data, at least as employed by Broad and others, and did not regard the given as sense data.

What chiefly concerns Zack is Lewis's views on reality, or his realism. and here I fear I do disagree at least with some of what she says. As I understand Lewis, the foundation (yes, that's word I mean!) of all knowledge is experience, and what experience gives us is first of all the given. Lewis is explicit that the given includes everything we experience, including dreams, hallucinations, illusions, etc. The real enters our knowledge as a posit to account for the given. What signals to us that we are dealing with a real object is that it is the source of possible experiences. If my dog is a real dog, then if I act in certain ways toward him, I will have certain experiences; if not, not. The given quale alone does not generate possibilities; it is the real that gives us possible experience. Lewis of course holds that we have a priori categories, among which the category of the real is one of, if not the, most important. But the categories do not create the objects of experience; they only sort them out into those that are real and those which are not. The girl of my dreams is not real, and one of the criteria by which I know that sad fact is that the experiences of her I lovingly predict never occur. The criteria of the real that I use in sorting my experiences are changeable. For any particular experience, they are a priori; but if my categorical system doesn't work I can change it and find ones that do. But for Lewis the real is the ground of possible experience, and if the object is real, those possible experiences are real, whether they are ever actualized or not. It was not for nothing that Lewis constructed a modal logic.

Now Zack will doubtless object that I have ignored her comments on individuation, and it has to be said that Lewis could have been clearer on this point than he was. But he does say that objects are individuated by their temporal and spatial relations. As Lewis says, "I am satisfied to conceive individuals as continuous and bounded parts of the space-time whole." "The space-time attributes of a thing may serve as the 'principle of individuation' but cannot be exhaustive of its individuality; and space-time attributes themselves are specified only in relative terms." Of space-time, Lewis says "the space-time whole itself is a Pickwickian individual, not being bounded." This is a part of the Whiteheadian metaphysics that Lewis refused to publish, but he says enough about it to show that for him objects

occupy bounded regions of space-time. How he would deal with masses such as water or snow, I do not know, and so far as I am aware he never said.

Does Lewis assume the existence of the knower? He thought not; Lewis is explicit that we learn about our minds (and I presume he would include our bodies) from experience, just as we learn about other objects. And in the same way we learn about action. Here as elsewhere there is a given in experience—the experienced qualia of ourselves, our sensations, feelings, thoughts, etc., and we bring coherence to this welter by the posit of an existing being who acts, feels, thinks, and so forth. Lewis does not trace the ontogenesis of the knower in any writing I have seen, but it does seem to me clear that this could be done within his framework.

It is interesting that Zack says Lewis is not a foundationalist. I have never been altogether sure what a foundationalist is, though it seems to be someone that a lot of people dislike. Lewis does use the metaphor of a pyramid to describe his theory of knowledge; whether that makes him a foundationalist or not I leave to others. What is clear is that from the earliest philosophical writings of his that survive, Lewis saw knowledge as the conceptual interpretation of the given. The given he held to be ineffable, because to describe them in language would require the use of classificatory terms and that would already constitute some degree of interpretation. But in his late years, he did hold that statements describing the given (which on one occasion he called "protocols") are certain. I take it that what he meant by this is that such a statement is "verified" by the experience it reports, and he did believe that empirical knowledge requires some statements that are certain as a basis. I happen to think Lewis was right about the given, but that is another matter.

#### Richard Robin

Robin has given us an interesting and incisive analysis of Peirce's position with respect to cognition and poses Peirce's views as a contrast to those of Lewis. He is on Peirce's side here and believes that Lewis should have discarded his "Cartesianism" in favor of the "Lewis who is more squarely pragmatic and who thinks of himself as a contrite fallibilist in the manner of Peirce." I regret that I am unable to agree. But I want first to address the question of the relation of Quine and Lewis that Robin raises.

With the publication of "Two Dogmas of Empiricism," Quine announced that he was a pragmatist, or at least he thought he was. And we know that the targets of "Two Dogmas" were Carnap and Lewis. Like Carnap, Lewis believed in the analytic-synthetic distinction that Quine is widely believed to have destroyed. From Lewis's point of view, Quine's argument was of small merit. What Quine showed was that analyticity and synonymy could not be defined in an extensional language, and that Carnap's way of specifying statements as analytic in formal languages was arbitrary. The latter point is irrelevant for Lewis who attached little value to formal languages. But the former argument also left Lewis unmoved. Lewis had always believed that

analyticity and synonymy could not be defined in extensional terms; he believed and repeatedly said that these were intensional relations. Quine's refusal even to consider intensional relations meant, as far as Lewis was concerned, that he had begged the question and that his arguments proved nothing that was not already obvious.

But to return to the Peirce-Lewis relation, I do not see the contrast in quite the terms Robin does. In his 1868 papers, Peirce did deny that there were any first cognitions of an object, any unmediated statements that applied directly to external things. And he did illustrate his argument, as Robin shows, by the analogy to the triangle being dipped in water. All that is clear enough, though the assumption that cognition requires no finite time is an assumption that is extremely dubious. But by the 1890s, Peirce found it necessary to revise his categorical theory very substantially. In the later version of the categories, "Firstness" refers to sense qualities very similar to what Lewis called qualia, while "Secondness" refers to experience of shock or opposition between ego and non-ego. This position was seemingly inconsistent with his 1868 view, but Peirce avoided the contradiction by arguing that the percept is the product of a process of unconscious inference from a series of sensations that has no first sensation, but that for the knower the percept must stand as the first experience he has of the object. This slight of hand allows Peirce to have both his infinite series of "inferences" leading to the percept and a starting point in cognition. Being the result of unconscious inference, the percept cannot be criticized, nor can the perceptual judgment that tells us what the percept is; both are generated by processes beyond our control, and are therefore beyond criticism—that is, both are given. Cognition begins with the percept and the perceptual judgment and from there on is subject to critical review.

Is this theory of Peirce's superior to Lewis's theory of the given? I doubt it. Peirce is very clear that the percept is an "image", by which he means something sensory—he did not mean to limit percepts to something visual. And he is quite clear that the perceptual judgment is verbal, and that a perceptual judgment such as "this is red" is in no way similar to the percept to which it refers. But he is not clear as to how the perceptual judgment relates to the percept. Since both the percept and the perceptual judgment are automatic—that is, generated by unconscious processes over which we have no control, Peirce gives us no explanation of how the percept, which is a sensory "image" in the broad sense which includes all five senses, and the perceptual judgment, which is a linguistic entity, a proposition of some sort, are related. They just are. By the time we can consciously think about the percept we already have its description formulated in language, and we cannot criticize or analyze the way the language hooks onto the sensory image. The point Lewis makes over and over is that the sense meaning of a proposition must include not only words but "images", in the broad sense, for if it did not we could never apply the proposition to anything. I think Peirce

understood this very well but he does not explain just how it is done, whereas Lewis does. Lewis thought of his theory of sense meaning as a development of Peirce's famous pragmatic maxim of 1878, and I think he was quite right in believing he had correctly interpreted Peirce's intent.

Peirce's perceptual judgments are fallible but indubitable, Robin tells us, and he sees this as a better analysis than Lewis's. So both men agree that such report propositions are indubitable. But are they fallible? Both agree that they are. Lewis notes that the perceiver could lie about his perception, so his report of it could be false. But assuming that the report proposition is honestly made, what could prove it false? In his debate with Reichenbach and Goodman, they both tried to prove that Lewis's report propositions could be false even if honestly made, and they failed. Lewis clearly won that debate.

Is there, as Robin seems to suggest, something unpragmatic in Lewis's adherence to the given? I think not. Lewis was always very clear that it was the conceptual element in knowledge that is pragmatic, not the given. The problem of knowledge for Lewis is the interpretation of the given—of experience as it comes to us. Our interpretations are designed to guide action to the attainment of our goals; knowledge is for action, and action is for the achievement of the good life. Lewis's position is thoroughly pragmatic, but it can only be so if the content of experience is fully respected.

# Joel Isaac

Isaac remarks that I did "not explicitly justify [my] claim that Lewis was 'the last great pragmatist' until the very end of the book." I had, perhaps naively, thought that the book itself justified that claim, but since Isaac does not think so, I imagine that there are others who will also raise that question. I want therefore to deal first with what I think are Isaac's mistakes and then with Lewis's contributions to Pragmatism.

Isaac sees Lewis as having failed in logic, failed in epistemology, and failed in his theory of meaning, and he finds statements of mine and Lewis's to support his case. But cherry-picking quotes does not make a proof. I think these "failures" are not quite what Isaac takes them to be. In logic, Lewis set out to create an intensional modal logic that would be an alternative to Whitehead and Russell's extensional logic of the Principia. Lewis did succeed in creating such a system—in fact he created five of them, and his modal logics are generally accepted as marking the beginning of modern work in that field. For any philosopher, this is surely a major achievement. What Lewis did not succeed in doing was in displacing the extensional logic of the Principia, but even so his work in modal logic can hardly be considered a failure. His decision to leave the field of logic in 1932 was not based on the failure of the work he had done, but was chiefly motivated by his desire to deal with other problems in philosophy and his recognition that with the increasingly technical nature of the work being done in logic, he could not do both.

Isaac also thinks Lewis failed in his theory of meaning because, as Isaac sees it, he could not counter Quine's attack on the analytic-synthetic distinction. To support that, he quotes a passage in which Lewis said that his whole philosophy depended on that distinction and "if that plank is pulled out from under me, the whole structure will come tumbling down." But Lewis did not think the plank had been pulled from under him. As noted above, Lewis thought Quine's argument against the analytic-synthetic distinction in "Two Dogmas" was fallacious. In the beginning of that article, Quine dismissed talk of "meaning" as too obscure to merit discussion and then went on to show that analyticity and synonymy could not be defined in an extensional language. But Lewis had always agreed with that; for him those were intensional relations, and Quine refused to discuss intensions. What Lewis was really attacking in the passages quoted by Isaac was the trend toward extensionalism that he saw among his contemporaries and that he considered a high road to skepticism.

Lewis wrote two major books on epistemology—Mind and the World Order and the AKV. His theory of terminating and non-terminating judgments did assume reductionism, as did the Logical Positivists who were his targets in that book, and Quine's attack on the second dogma did raise fundamental objections to that thesis. Lewis never answered Quine's attack on the second dogma; in fact to my knowledge he never mentioned it. Whether he thought Quine's argument could be met we don't know. In any case, he did not meet it but went on with his planned book on ethics. One can argue that Lewis's failure to address Quine on the second dogma marked the failure of his epistemology, but if so the same would have to be said of Peirce, James and Dewey, all of whom also adopted reductionism in some form. Yet Isaac does not seem to feel that these men were failures.

Isaac also attacks Lewis for elitism and for what he calls "his disdain for social issues and the concerns of the public." This is nonsense; certainly elitism was not a characteristic of Lewis's dealing with ordinary people. But what Isaac has in mind here seems to be two things. The first is Lewis's "racism." As he is aware, racism, anti-Semitism, anti-Catholicism, and similar prejudices were pervasive in the United States before World War II, and did not end with the war. Lewis was a man of his times and he had the prejudices of his times, as most people do. So did James and Peirce. One has only to read James's lectures to recognize that it never occurred to him that there might be a Catholic in his audience. The second is academic elitism. As Kuklick has shown, philosophy became professionalized in the period of the first World War, and Lewis was no more or less so than most. That he worked on technical issues such as logic and epistemology is true, but one should not confuse the focus on technical issues characteristic of all professions with an elitist claim that nothing else matters. Otherwise all scientists would be classified as elitist. It is true that some in the 1960s did believe that, but they also thought they could levitate the Pentagon.

Isaac also faults Lewis for failure to deal with social issues. I agree that what he had to say on such matters is surprisingly thin, a fact that puzzles me since he taught a course on social ethics. But even in the materials we have, Lewis showed himself to be dedicated to liberty and democracy. Moreover, he did deal with valuation and ethics, although what he did in ethics was metaethics. Certainly he did not advance a social philosophy of reform such as Dewey did. But this is a criticism that can be even more strongly made against Peirce. There is just no social philosophy in Peirce, and what he has to say about ethics and aesthetics is trivial and is motivated by his architectonic. Nor is James an important social thinker, though he has more to say about such things than Peirce. Of the great Pragmatists, it is Dewey who stands out as the social philosopher. One can hardly say then that doing social philosophy is a requirement for admission to the Pragmatic pantheon.

Finally, Isaac thinks that my device of separating Lewis's philosophy from his biography by the use of biographical notes interspersed among the chapters on his philosophy is an indication of a failure to consider Lewis in the context of his times. I wrote an extended introduction to place Lewis in the context of his times, and I discussed at various points the developments in philosophy that paralleled his. Isaac does not consider this sufficient and perhaps he is right, but the reason I adopted the organization I did in this book was the lack of data. There are four sources of information about Lewis's life: his autobiographical pieces in the Schilpp volume and in the Adams and Montague volume, his wife's writings, his son's recollections, and comments by his colleagues. The autobiographical pieces deal chiefly with his philosophy, though they do contain essential information about his life. His wife's writings are the richest source of biographical material, but they portray Lewis from her point of view, not his. His son's recollections are invaluable, but since he was born in 1925, they are limited to the period after 1930, and do not give the "inside story" of Lewis's life at Harvard, and his colleagues comments, while helpful, are not sufficient for a biography. The organization I chose was dictated by the fact that I did not have the data for a full biography. There is no Lewis diary; there are masses of Lewis papers but they deal with his philosophy, not his life. To take but one illustration, nowhere in Lewis's writings from the 1930s and 1940s have I found any mention of Hitler or Nazism. Yet I know from other sources that Lewis helped refugees from Nazism when they came to the United States, and there is no doubt that he abhorred Hitler and all he stood for. Given the sparse character of the data, I think the organization I used made sense.

Now to the case for regarding Lewis as belonging to the pragmatic "pantheon," to use Isaac's term. There is more to say on this score than I can cover here, and I have already said it in the book, but some points apparently need added emphasis. Remember where pragmatism came from. It was a form of Idealism that tried to provide a compromise position that on the one hand could support science and on the other religion, values, and ethics. Lewis

was trained in this school. But it was one of his great achievements to free Pragmatism from Idealism and to anchor it firmly in a realist view. At the same time, unlike pseudo-Pragmatists like Quine, he maintained the commitment to deal with the full range of issues from philosophy of science and epistemology to values and ethics. He did not produce a philosophy of religion; there is no argument for God such as one finds in Peirce or in James's revision of Pascal's wager in the *Will to Believe*. But he did develop a theory of value and tried to develop a theory of ethics, both of which dealt with the issues that his progenitors had seen as central to religion.

Lewis's greatest contribution to Pragmatism was the pragmatic theory of the a priori. That synthetic systems of belief—that is, scientific theories—could be evaluated on pragmatic grounds was a contention of all the major Pragmatists. But that systems of mathematics and logic could be thrown overboard and replaced by others that were pragmatically superior was a startlingly new conception when he introduced it. In this he was every bit as holistic as Quine, but unlike Quine he did not reject the notion of the a priori, he redefined it. The vaunted certainty of mathematics and logic were not compromised, but their universal applicability was. This was a fundamental contribution to epistemology that many of his contemporaries found too radical to accept but that today is generally approved.

Lewis also demonstrated that not only were there alternative mathematical systems such as the metrical geometries, but alternative logics as well. He not only advanced this thesis, he created alternative logical systems and showed that the choice among them could only be on pragmatic grounds. That was a new idea when Lewis advanced it and again one that his contemporaries had difficulty accepting, however obvious it seems today.

Lewis was also a staunch defender of intensionalism, which he saw clearly was essential for Pragmatism and for Realism. To take the latter point first, Realism involves the notion of possibility, which is an intensional notion. To say that x is real is to say that there are possible experiences of x at times when actual experiences of x are not occurring. It thus involves the claim that contrary-to-fact conditionals can be true. The reality of the possible is granted every time an "able" or "ible" ending is used, as they are constantly in science and in ordinary life. Resort to talk of dispositions or use of Carnap's reduction sentences does not avoid the necessity of conceiving the real as containing possibilities that are never actualized. Peirce understood this far more clearly than James or Dewey, but Lewis was also very clear about it. Secondly, that Pragmatism requires the reality of possibilities should be fairly obvious. If Pragmatism is taken as a theory of meaning, as Peirce intended it, it requires statements of "conceivable" effects—that is, the conception of possible effects. If it is taken as a theory of truth, as James saw it, there too one must specify the possible experiences that will confirm a proposition. If it is taken as a theory of action, it involves the weighing of different courses of action that must be really possible if a genuine decision is to be made. Possibility is a notion that a Pragmatist cannot

do without, and Lewis's construction of modal logics involving possibility and necessity were basic to that purpose.

Pragmatism also involves the notion of value. Lewis repeatedly pointed out that to be rational action must be directed toward the attainment of goals that are valuable; otherwise it becomes pointless. As Lewis put it:

Pragmatism might almost be defined as the contention that all judgments of truth are judgments of value; that verification is a value-determination; and the criterion of truth is realization of some kind of value.<sup>5</sup>

Lewis's theory of value is part of his theory of empirical knowledge. Intrinsic values are given in experience; they are qualia like any others. Inherent values are properties of objects: "the goodness of a good *object* is a potentiality for the realization of goodness in experience." Here again it is the *possibility* that there will be future experiences of the object that involves intrinsic values that makes the object inherently good. Intensional notions are fundamental to Pragmatism. This is implicit in Peirce, James and Dewey, but it is explicit in Lewis.

Lewis was also a defender of the analytic-synthetic distinction. Putnam somewhere remarks that Quine's attack on this distinction only showed that Quine could not think of a way of defining the terms. In fact, if one considers "Two Dogmas," the surprise is how weak Quine's arguments are. He considers only extensional languages and Carnap's formal languages; he refuses even to discuss question of intensionality. White's paper on the analytic-synthetic distinction is specifically aimed at Lewis, but while acknowledging that in AKV Lewis had given a powerful defense of this distinction, he refuses to discuss it on the grounds that it is intensional. But Lewis's theory does I believe show that at least some propositions are analytic—e.g., "All squares are rectangles." Reports of the demise of analyticity are premature. And it should be noted that Quine's holism does not accomplish anything that Lewis's theory of the pragmatic a priori does not do. In both, a theory or conceptual scheme can be rejected if a pragmatically superior alternative is available. Quine thinks a theory so withdrawn is shown to be false; Lewis that it is not false to the meaning relations involved but merely useless. In either case, empirical evidence can force the withdrawal of even a mathematical or logical system.

In the AKV, Lewis formulated the best theory of the credibility of memory that I know of. That the credibility of memory is assumed by all Pragmatists, in fact by all empiricists, and for that matter in everyday thought, is too obvious to require belaboring. As Lewis noted, the failure of philosophers to deal with the problem of memory was something of a scandal<sup>6</sup>, but the difficulty of the problem was obviously such that few tried to solve it. Lewis's solution is Kantian, just as his solution to the problems of induction is. By requiring that memories constitute a congruent system, and that the fact of being remembered gives any proposition a small initial credibility, he

showed that the credibility of memory in general could be assured. And by showing that the alternative to granting such credibility was total skepticism, he showed that if we are to have any knowledge at all, such credibility must be granted. This was a fundamental contribution to the theory of knowledge, and of course to Pragmatism, and one that his progenitors had failed to make.

It was one of Lewis's great strengths that he never made the linguistic turn. Those who did have found themselves caught in the coils of language and in some cases have ended in linguistic idealism. Lewis saw correctly that concepts are prior to language although they can be expressed in language. He therefore saw that claims that all knowledge is in language—in propositions or statements—were simply false. In his theory of sense meaning he faced squarely the problem of how language relates to experience and produced a solution that seems to me correct. For Pragmatism, this is an essential step, for if the consequences of a proposition or theory cannot be confirmed by experience, but only by other propositions, we are forever caught in the linguistic spider's web.

Indeed, on no other single point is Lewis's writing more relevant to the current philosophic scene than his emphasis on the priority of experience over language. Those like Rorty and Fish who have become so ensnarled in language that they cannot make contact with the world illustrate precisely what Lewis had in mind when he talked about "jibbering semanticists." For Lewis, experience was always primary; predictions are not tested against other statements but against experience. Whether one agrees with Lewis that experience is "given" or not, and I think Lewis's arguments for the given have yet to be refuted, his unwavering insistence that experience sets the problems for knowledge and provides the tests for the truth of knowledge are essential to any genuinely Pragmatic theory. And Lewis faced the problem of how language relates to experience more explicitly and more successfully than any of his pragmatic predecessors. The relation of words to experience is arbitrary; the relation of concepts to experience is not arbitrary; and the function of language is to express conceptual thought. Once words are assigned to express concepts—that is, are assigned meanings those meanings must remain fixed within that particular argument, though of course they may be subsequently changed. The relations of propositions to experience are given by sense meanings. It is this that makes verification possible and so truth, for unless propositions are true of something that is outside of language, we are left to wander in the splendid labyrinth of our fantasies without end.

One way to view Lewis's work is to say that he took over the basic ideas of Pragmatism from Peirce and James and extended and reformulated them in a precise and systematic form. The epistemology of the AKV is the most impressive example of that. In doing so, he dealt in detail with many of the issues that the founders of the movement had left vague, and if this exposed weaknesses as well as strengths in the Pragmatic position, both represent

contributions to clarity. Bringing rigor to bear on ideas that have previously been formulated only vaguely is one of the great contributions of analytic philosophy, and one the importance of which is not diminished by the howls of 1960s radicals. But Lewis did much more than merely reformulate older ideas; he also contributed important innovations of his own, such as the pragmatic a priori, and important concepts, such as sense meaning. More than any other thinkers of his time, Lewis advanced the Pragmatic cause. The contrast with those who have come after him is stark.

Isaac seem to have considerable sympathy for the '60s and after thinkers who abandoned what he calls the "new rigorism" and have found their idols in Kuhn and Rorty. Kuhn was a good historian of science and a very poor philosopher of science whose mistaken views led many to believe that the attainment of truth is impossible. Rorty has been another pied piper who has led his followers round and round in hermeneutic circles until they are too dizzy to find their way out. That there is now a large group who believe they find enlightenment in this linguistic fetishism is beyond question, and for them I doubt that Lewis will be a compelling figure. But the costs of abandoning philosophic rigor are great and must be paid, if not now then in the future. I do not believe that philosophy's future lies in pleasant conversations or in the murky doctrines of literary theorists whose extravagant claims have created so much confusion. For those who still consider philosophy a serious discipline, Lewis has much to offer.

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#### **NOTES**

- I. C. I. Lewis, "Some Suggestions Concerning Metaphysics of Logic" in Sidney Hook, ed. *American Philosophers at Work* (New York: Criterion Books, 1956), 98.
  - 2 Ibid 89
- 3. C. S. Peirce, "Grounds of Validity of the Laws of Logic" in *The Collected Papers of Charles Sanders Peirce*, eds. Hartshorne and Weiss (Cambridge: Harvard Press, 1934)), 5.318–357.
  - 4. Lewis, "Some Suggestions", 101.
- 5. Quoted in H. S. Thayer, "Pragmatism: A Reinterpretation of the Origins and Consequences" in Robert J. Mulvaney and Philip M. Zeltner, eds., *Pragmatism: Its Sources and Prospects* (Columbia: University of South Carolina Press, 1981), 15.
- 6. C. I. Lewis, An Analysis of Knowledge and Valuation (LaSalle: Open Court, 1971), 333.