

CRITICAL STUDY

New Essays in Informal Logic

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This book is a collection of essays based on papers presented at the Third International Symposium on Informal Logic held at the University of Windsor in June, 1989. The essays are almost without exception solid and good; most could profitably be read several times. It is regrettable that due to publication delays the work did not appear earlier. However it is a tribute to the authors and editors that the material remains interesting, timely, and worthwhile more than six years after the conference for which these essays were first written.

In their introduction, editors Johnson and Blair outline some major developments in the past dozen years of research in informal logic, offer their impressions of the current state of affairs, and express their hopes for its future development. They offer evidence that scholarship is increasing in scope and in depth, but regret the relatively low status of informal logic within its home discipline of philosophy and the lack of opportunity in departments of philosophy for specialized doctoral work in informal logic. They note that no one dominant theory plays the role of paradigm in setting a research agenda for the field.

Informal logic is in some contexts an alternative to symbolic logic. As such, it aims to specify principles and standards for the analysis and evaluation of arguments. Informal logic should not be identified with argumentation theory in general, because unlike many other areas of argumentation theory, informal logic is specifically concerned with normative issues. Its central question is: what norms do, and should, govern arguments?

The book is divided into three sections. Part I contains essays by Maurice Finocchiaro and James Freeman about the relationship between Informal Logic and Logic. Part II is about Argument Assessment; and has essays by Derek Allen, David Hitchcock, Christopher Tindale, John Woods, and Michael Wreen. Part III, about Epistemological Dimensions of informal logic and argument evaluation, contains essays by Jonathan Adler, Robert Pinto, Harvey Siegel, and Mark Weinstein.

I. Logic and Informal Logic

In his thorough and helpful essay, "The Positive vs. the Negative Evaluation of Arguments," Maurice Finocchiaro discusses the distinction between an argument and its logical form, and the implications of this distinction. He explores the

notorious and challenging argument, put forward by James W. Oliver (1967) and Gerald Massey (1975) that there are no good arguments that bad arguments are bad. If we formalize an argument, representing it by some formal structure, and then go on to show that that formal structure is invalid according to the rules of a formal system, what does that prove about the argument we began with? Not that that argument itself is invalid, because there is (apparently) nothing to guarantee that it could not be represented by another formal structure and turn out to be valid by the rules of some other formal system. Hence there is (apparently) no reliable way to show that an argument is invalid. Massey contended that this meant fallacy theory and informal logic were in big trouble. We can show good arguments are good by formal proofs, but we have no reliable way of showing bad arguments are bad: there is an asymmetry. Massey understood informal logic to be the study of fallacies and held fallacies to be invalid arguments; hence he saw the problem as undermining informal logic.

Critics questioned Massey's asymmetry, pointing out that the gap between an argument and its formal representation is as real when we are doing positive as when we are doing negative evaluation. Any evaluation of an argument which proceeds through an identification and evaluation of its form presupposes that we have aptly represented the argument by the formal structure we are evaluating. To have the same form, two arguments must share all relevant structural details. (One might say logical details.) When we formalize an argument in order to evaluate it, we indicate our convictions as to what its form is. We indicate which other arguments we would understand to have the same logical structure. When we formalize an argument, we presume that we understand words, can recognize various expressions as synonymous or non-synonymous, and can spot the features of the argument which are relevant to its logical evaluation.

What this means is that formal procedures, whether used for positive evaluation (proof) or negative evaluation (showing invalidity), presuppose informal—nonformal—procedures. In short, Finocchiaro shows clearly that the Massey problem can be resolved if we are willing to acknowledge that the reliability of formal processes presupposes the reliability of nonformal ones. Massey sought to de-bunk informal logic by showing that there was no foundation for judgments of fallaciousness. But ironically, the problem he articulated points to the epistemic priority of nonformal procedures over formal ones. Ultimately the Massey problem provides a basis for arguing that informal logic is presupposed by formal logic.

In "The Place of Informal Logic in Logic" James Freeman reaches a similar conclusion for rather different reasons. He says, "Informal logic has a specific place both within the canon of tools for appraising reasoning or argument and within logical theory. In both areas we see the place of informal logic as fundamental." Freeman sees the core of informal logic as the diagramming of arguments and their evaluation with regard to the acceptability and relevance of their premises and the "weight" (sufficiency, or adequacy of grounds) of those premises in establishing the conclusion. If we accept common definitions stating

that logic is a tool for evaluating reasoning and arguments, it will follow immediately that informal logic is a central part of logic. Freeman claims that apart from being nonformal, informal logic differs from formal logic in (a) seeking more generic criteria for argument evaluation, (b) dealing with macrostructure, not microstructure, and (c) including discussions of premise acceptability.

Freeman emphasizes the importance of diagramming in illustrating the relationship between sub-arguments and main arguments and the ways in which premises "hang together" to support conclusions. He argues convincingly that formal evaluations of the deductive validity of any actual argument tacitly presuppose an understanding of the relationships diagramming attempts to represent. Only if A is supposed to support C in an argument does it make sense to determine whether an inference from A to C is formally valid, as part of an evaluation of that argument. In a case in which A is supposed to support B, which is then linked with D to support C, whether C can be deductively inferred from A itself will be irrelevant.

Unfortunately, Freeman does not discuss any of the difficulties with the linked/convergent distinction or address the rather common complaint that for many actual cases, it is unclear whether the support pattern is linked or convergent. He offers interesting suggestions about the relationship between different patterns of support (divergent, convergent, linked, linear) and challenges to argument. Freeman sees argument as primarily dialogical or dialectical, not monological. This is a conception of argument which could have been given a lengthier and deeper exploration.

II. Argument Assessment

In the section on argument assessment, Derek Allen contends that it is inference claims, not inferences, which should determine our evaluation of the inferential merits of argument. David Hitchcock makes proposals for appraising "validity" in conductive arguments. (Following Carl Wellman, Hitchcock defines conduction as the sort of reasoning in which a conclusion about an individual case is drawn nonconclusively from one or more premises about the same case without any appeal to other cases.) In separate essays, Christopher Tindale and John Woods explore the problems that arise when we try to say what relevance is. Michael Wreen re-visits the old question "what is a fallacy?"

Allen argues against the standard view of inferential soundness, according to which there are criteria for judging the soundness of an inference, and an argument is inferentially sound if and only if its premises are soundly connected to its conclusion according to those criteria. He explores, and supports, a different view, according to which an argument is inferentially sound if and only if its inference claim is true. What is an inference claim? Any argument implicitly claims that its premises provide support for its conclusion. If we consider the argument 'Van Gogh seriously injured himself so perhaps he was insane,' the

inference claim is only that 'Van Gogh's seriously injuring himself provides weak support for the claim that he was insane.' The premise weakly supports the conclusion, but the argument claims to do no more. Allen proposes that because it claims to do no more than it does do, such an argument should be deemed inferentially sound. He says, "If an argument *claim* provides only weak support for its conclusion, and then does offer weak support, it is not just or correct to accuse it of having an unsound inference. To make this accusation is to fail to evaluate the argument's reasoning on its own terms."

There are neutral logical indicators: 'therefore,' 'so,' 'thus,' 'hence,' 'then,' 'for,' 'since,' and 'because.' And there are many arguments with no logical indicators. For such cases, Allen proposes that barring a balance of evidence to the contrary, we should assume that the inference claim is that the premises and the conclusion are soundly connected. Allen discusses several different approaches and succeeds in showing that an earlier response to his work by Govier (1988a) does not result in a simpler solution than the one he proposed.

In "Validity in Conductive Arguments," David Hitchcock explores validity in conductive arguments. Carl Wellman (1971) who first introduced the notion of conductive arguments, argued that there was no formal or general logic that could be used to evaluate them, saying that the only way to check the inferential merit of a conductive argument was to "think it through again." Finding this advice "unhelpful" Hitchcock is looking for more. He does not find the suggestion that we determine whether the positively relevant premise "outweigh" the negatively relevant premises (Govier 1988, 1992) more helpful than Wellman's comment. Neither "positively relevant" nor "negatively relevant" nor "outweigh" is adequately explained.

Woods, in "Sunny Prospects for Relevance?" argues that Johnson and Blair, Govier, the probability calculus, Bowles, and Walton all fail to offer satisfactory accounts of relevance. We do not have a good theory of relevance. He believes that to take the notion as a primitive as in Govier (1988, 1992) is not satisfactory. Even in the context of a textbook account, Woods thinks, this amounts to a "counsel of despair." After a thorough and technical discussion Woods is led to the view that either Govier's approach or trying to work out a semantics for "counting towards" (used as an undefined term in Govier's textbook) would be best. In "the truth of A counts in favor of the truth of B," Woods argues plausibly that the expression "counts towards" should be understood as expressing a connective weaker than that of material implication. Woods implies that trying to work out a semantics would be "more fun" than leaving the notion as primitive. (Woods may have a strange conception of fun!)

Like Woods, Hitchcock is not happy to work with an intuitive notion of relevance. How are we to understand relevance in conductive arguments? Hitchcock proposes that a conductive argument is non-conclusively valid only if there is no parallel case which has the feature(s) cited in the premise(s), but lacks the property inferred in the conclusion, and also lacks overriding features which are negatively relevant to the conclusion. Consider a simple, single premise

conductive argument, saying that a photo should not be displayed because displaying it will cause distress. If causing distress is a reason not to display this photo, then causing distress is a reason not to do other things. (Reasons are implicitly universal; so we can generate a covering generalization.) Other things being equal, if something causes distress, it should not be done. This single premise conductive argument will be non-conclusively valid if and only if the covering generalization holds for all cases except those where there is an overriding relevant reason making it permissible to cause a person distress.

In a conductive argument, where P is put forward as being relevant to C and as offering nonconclusive support for P, *is* P a reason for C? How could we tell? We form the covering generalization with the *ceteris paribus* clause and ask ourselves whether the "other things" are "equal" in the case at hand. Hitchcock states what he calls a "formal" conception of non-conclusive validity for conductive arguments. "P(a), so c(a) is non-conclusively valid if and only if it is not conclusively valid but, for any situation x, if P(x) then either c(x) or x has an overriding negatively relevant feature F which not c(x) does not deductively imply."

It is worth noting that in his definition, Hitchcock uses "relevance" as an undefined term, just as Govier did. Furthermore, "overriding" plays a similar role to "outweigh" in Govier's 1988 and 1992 textbook accounts. (Has progress been made?) Later Hitchcock explains that it will turn out that some conductive arguments will in this sense be "valid" though offering "very weak" reasons. Because the reasons even in a "valid" conductive argument may be "very weak," after using his method, we will have to "look for other relevant (sic) features of the situation which might tip the judgment (sic) the other way." I am not convinced that the "formalization" contributes significantly to our understanding. The need for intuitive notions such as negative relevance and positive relevance has not disappeared. Nor has the need to make judgments.

In "Contextual Relevance in Argumentation," Christopher Tindale also tackles the problem of relevance. Tindale notes aspects of Aristotle's discussion which continue to affect contemporary work. He derives from Aristotle the suggestion that "when something is relevant to another it belongs to it in some sense, shares its nature" or, in the case of an argument, shares its meaning. But Tindale finds this suggestion both vague and extreme. As he points out, it is easy to find examples of propositions A and B which are about the same thing and in a sense share meaning, such that A is not relevant to B. Consider, for example, the propositions 'Wayne Gretzky is clean-shaven' and 'Wayne Gretzky is one of the best hockey players in the world.' Both are about Gretzky; neither is relevant to the other. Tindale briefly explains and assesses Sperber and Wilson's 1982 account, finding their notion of degrees of relevance somewhat implausible and contesting an implication of the account, that irrelevance is unintended. Tindale also discusses Belnap and Anderson (1975) and Walton (1982) but does not find a satisfactory account of relevance in these authors.

Tindale proposes a three-part account of relevance, distinguishing three issues. These are: (1) relevance internal to an argument (are its premises relevant to its conclusion?); (2) relevance in a setting or context (is a claim or argument relevant to an issue?); and (3) relevance from the perspective of the audience (is the argument relevant to the audience?) The first Tindale calls internal relevance; the second topic relevance; the third audience relevance. Tindale does not make the point, but it should be noted that all these can easily be construed as cases of propositional relevance. For internal relevance the question is whether premise P is relevant to conclusion C. For topic relevance let the issue be whether Q is the case; the question is whether a claim or argument, R, is positively or negatively relevant to Q or to not-Q. For audience relevance, suppose the audience believes B; then we may ask is claim R relevant to B, or to -B. (If we want to take into account more of the beliefs of the audience, B can be a conjunction; if necessary, a long one; if we want to consider an argument R may represent its conclusion, or a compressed version of the argument.)

Both Tindale and Woods (at points) suggest that it is a mistake to see relevance and irrelevance simply as a relation between propositions. Whether A is relevant to B may be a matter of “pragmatics.” This, I take it, means that what is relevant to what may depend on the context. Taking this view seriously, we might conclude that we should not ask “is P relevant to C?” but rather “is P relevant to C in X (a context)?” or, still more completely, “is P relevant to C in X for A (an audience)?” That idea strikes me as somewhat plausible and deserving of further exploration. But several points should be noted. First, these further questions continue to use “relevance” as an undefined term. If that is a problem—and we have seen that it is a serious one for some people—then the problem persists. Secondly, in working towards their accounts of relevance, both Tindale and Woods employ counter-examples of the simpler form. If propositional relevance in the simpler sense is to be rejected, these counter-examples will be rendered unavailable for such use. And thirdly, it may turn out—in fact, this strikes me as arguable, even plausible—that “P is relevant to C, in X, for A” is reducible to “P is relevant to C’,” where C’ is a qualified and more complex proposition. In other words, I am suggesting that ultimately propositional relevance may be basic after all.

Michael Wreen’s “What is a Fallacy?” offers a strange combination of pedestrian ruminations about fallacy and apparently radical assertions. The pedestrian ruminations include the following: fallaciousness has something to do with arguments as such, and it is bad; a fallacy is committed when someone argues fallaciously; to understand what makes bad arguments bad, we need a concept of good argument; fallaciousness is a property of argument as such, not any of its parts. I’ll comment only on the apparently radical assertions. The first is that an argument-type cannot be a fallacy, because an argument type is not an argument, and a fallacy must be an argument. ‘If p then q; q; therefore p’ is not a fallacy because it is not an argument; it is, rather, an argument type or argument form. Fair enough. We have arrived back in the territory of the Massey problem.

But we can still say that any argument that is aptly and correctly formalized as 'If p then q; q; therefore p' is an instance of affirming the consequent. IF all of its essential logical features are captured in that formalization, that argument amounts to a fallacy.

Wreen's second radical assertion is that "there cannot be anything like a list of fallacies as standardly given in logic texts." By "as standardly given" Wreen means "as given in a simple, formal or quasi-formal, epistemically neutral definition of an argument-type, such as the definition of the fallacy of affirming the consequent mentioned above." It is too bad that Wreen gives himself less than a paragraph in which to argue for this apparently provocative claim. Why does he believe that standard lists amount to a mistake? Because they are comprised of formal (or presumably quasi-formal) definitions which purport to state necessary and sufficient conditions for the commission of a fallacy; as such they are open to counter-examples and readily refuted. Wreen offers a counter-example to a formal definition, but it is one in which logically relevant features are not captured in the 'q; if p then q; therefore p' representation. Here again we have arrived at the Massey problem, which seems to me to have been satisfactorily dissolved by Finocchiaro earlier in the book.

III. Epistemological Dimensions.

We now come to the epistemic section, comprised of essays by Adler, Pinto, Siegel, and Weinstein.

Jonathan Adler takes on a brand new topic, that of self-criticism. He believes that self-criticism is an intellectual virtue, although—like all virtues—it can on occasion be taken too far. Self-criticism is an aspect of intellectual honesty; a person who is intellectually honest should be able to recognize and acknowledge that there are objections to his or her beliefs, and that he or she may be wrong. It is easy, Adler suggests, to understand this in a case where self-criticism is a preface to, and explanation of, a change in belief. What seems more problematic, and what Adler is most interested in exploring, is a different sort of case, that in which a person acknowledges objections to a belief that he or she continues to hold. For instance, a person might hold a certain belief, say on abortion, and nevertheless recognize the correctness of some point which she also recognizes to count as an objection to that belief. One can believe C and know that there are plausible objections to C. One thing which makes this epistemic situation intelligible is the fact that there are various different ways of responding to such objections.

Adler's comments can readily be appreciated when we reflect on conductive arguments as discussed in Govier (1992, Chapter 10 and Govier, 1997 forthcoming; Chapter 11.) Grant that we have reasons for a claim, C, and we acknowledge that there are reasons against it. In holding C, we have judged the supporting reasons to outweigh the counter-considerations—and we could, if pressed, give various reasons for that judgment. But that judgment is obviously

open to debate, a fact that we recognize. In judging that X, a counter-consideration or objection to C, counts for less than A and B, which support C, we understand ourselves to have good reasons for C, even though we know there is an objection to C, one that others think is a strong objection and that *we ourselves* acknowledge as having some force. We acknowledge the objection, we recognize that it has force, we know that others see it as a compelling reason to reject C. We believe that we may think about the matter further and we may at some point change our minds.

From where I sit, the fact that such a situation should seem logically puzzling or strange (especially in contexts where people discuss critical thinking) in any way is itself somewhat shocking. Perhaps this fact indicates that something is deeply wrong with our fundamental concepts of belief, evidence, and reasons. From a common sense point of view, reflecting on an issue, or deliberating on a problem often involves considering the relative significance of pros and cons and making some sort of judgment that “on balance” some factors “outweigh others.” If we understand thought, deliberation, and belief properly, such a phenomenon should be routine, and routinely understandable.

Adler offers the following example of this species of self-criticism: “Capital punishment is the correct response to certain crimes, but its finality implies, given that the courts are fallible, that we will sometimes punish the innocent without possibility of correction nor any compensation to the victim for the terrible miscarriage of justice.” Such a case, he says, invites explanation, perhaps even a long story. But it does not pose Moore’s paradox; it need not amount to “p but I do not believe that p” or even “p but I have serious doubts that p.” Adler suggests that such intellectual honesty and self-criticism should be encouraged in educational contexts and, if possible, in public life. I strongly agree—although my own experience with the media, as an occasional commentator and occasional columnist, does not make me optimistic. It has been my experience that when one acknowledges objections to one’s own views, one is likely to be regarded as not having a recognizable or sufficiently provocative view to express. One will be edited out of public discourse.

In “Logic, Epistemology, and Argument Appraisal” Robert Pinto argues clearly and carefully that the soundness of arguments as traditionally understood (premises are true and deductively validly support the conclusion) is not a very useful standard for judging the merits of arguments. Instead he proposes, following Hamblin (1970) and Govier (1987) that both in the case of the acceptability of premises and in the case of the suitability of the link between those premises and the conclusion, the appraisal of an argument is more epistemic than logical. In both cases, the position of the audience must be taken into account. For the acceptability of premises, this is perhaps unsurprising; it is more novel to propose that the evaluation of the inferential link must take into account some degree of audience relativity. Pinto argues for this view largely on the grounds that there is no overall theory for nondeductive support; whether some nondeductive support is sufficient will thus turn into the question of whether it

suffices for practical purposes (including an estimation of what we will lose if we are wrong and gain if we are right.) Thus the appraisal of the inferential link in an argument is relative to context and audience.

In "Justification by Balance and the Epistemology of Informal Logic," Harvey Siegel poses the question of how the criteria used in informal logic for the evaluation of arguments are to be justified. He does not, however, explore this question directly. Instead, he devotes himself to examining a common view as to how the basic principles of formal logic are justified. This view, "justification by balance," stems from Nelson Goodman, who said "Principles of deductive inference are justified by their conformity with accepted deductive practice. Their validity depends upon their accordance with the particular deductive inferences we actually make and sanction. If a rule yields unacceptable inferences, we drop it as invalid. Justification of general rules thus derives from judgments rejecting or accepting particular deductive inferences." (Goodman 1983: 63-64) Rules and particular inferences are justified by reference to each other; on this view, a rule needs to be amended if it yields an inference we are not willing to accept, and an inference should be rejected if it violates a rule we are unwilling to amend. There are mutual adjustments involved, bringing rules and particular inferences into a delicate balance.

The Justification by Balance view is strongly criticized by Siegel. He argues that people in fact often make faulty inferences; for this reason, yielding inferences that people in fact accept is neither necessary nor sufficient to justify a rule. But at this point Siegel ignores the fact that Goodman's formulation refers to "accepted deductive practice" and "inferences we make and sanction;" his refutation is too quick, and in this respect unfair to Goodman. But then Siegel considers a version of the Justification by Balance view proposed by Stich and Nisbett (1980) where "Rule R is justified" means "Rule R accords with the reflective inferential practice of the (person or) group of people I (the speaker) think appropriate." (Presumably these people would be experts or authorities.) Siegel does not find this amendment satisfactory; at best it says what someone would mean if he claimed that R was justified and not what it would be for R to in fact be justified. And given that some authority or expert were to accept R, it would always be an open question whether R was in fact a correct rule. A "cognitive rebel" might point this out. Stich and Nisbett, Siegel submits, fail to give the cognitive rebel his or her due.

Siegel is not convinced that Goodman's circle is a virtuous one. We could have dubious inferential practices and dubious principles of inference, and proceed blithely on, "justifying" each by reference to the other. In such a case the circle would be vicious, not virtuous! To justify principles, Siegel argues, we must try to find good reasons for them, and to defend the goodness of these reasons by the best theory of goodness of reasons available to us. That means that ultimately, defending logical principles will depend on epistemology.

Applying his conclusions to the case of informal logic, Siegel concludes that "The epistemology of informal logic is then of a piece with the epistemology of

formal logic and that of anything else. It involves spelling out the character of particular informal practices and principles, and making cases for regarding them as valid or invalid, justified or unjustified. These cases must in turn be evaluated in terms of our general theoretical understanding of the strengths and weaknesses of such cases, and of the reasons which make them up."

Siegel's alternative to Justification by Balance is spelled out only briefly. Siegel seems to be suggesting that we'll give good reasons (sic) for our views as to which inferences are valid, and we'll defend those reasons by other reasons. Is there a circularity here too? Siegel's interesting case against Goodman needs to be supplemented to take into account Goodman's use of "accepted practice" and "inferences we sanction," and to show why it is not circular.

The volume concludes with Mark Weinstein's important and thought-provoking essay, "Informal Logic and Applied Epistemology." Weinstein argues that informal logic and critical thinking cannot by themselves provide sufficient resources for evaluating many arguments. He understands arguments as embedded in varying "discourse frames" provided by the specialized disciplines. Some informal logicians such as Donald Hatcher (1991) have made extremely ambitious claims for logic and critical thinking (in the informal logician's sense), seeing them as necessary conditions for good thinking of any kind. Weinstein notes that others such as Govier (1987; 236) have made far more modest claims. Govier, he notes, says that "we can teach some things needed to evaluate arguments on any subject. We can also teach many things needed to evaluate many arguments. But we cannot teach everything needed to evaluate every argument." On the ambitious-modest spectrum, Weinstein locates himself at the modest end. But unlike Govier, Weinstein insists on the necessity of disciplinary vocabulary, procedures, and knowledge to evaluate arguments which are embedded in what he calls discourse frames. There are limits to what informal logic and critical thinking "techniques" can do. Weinstein believes that it is the special disciplines which will fill the gaps.

The disciplinary knowledge that would be relevant to the appraisal of embedded arguments is what Weinstein calls applied epistemology. Weinstein's conception of applied epistemology, which derives from the work of Stephen Toulmin and John McPeck, is not that of an utterly general philosophical epistemology (describing sense impressions, rationalism, foundationalism or whatever) which is then to be applied to history, physics, biology, and so on. Nor is it the philosophy of these various subjects. It is rather a naturalized epistemology taken directly from the practices of the disciplines. (Unlike Siegel, Weinstein is willing to assume that standard accepted practices in a subject S are reliable indicators of what is correct in S.) Weinstein understands applied epistemology to be committed to the view that "the disciplines are more than repositories of knowledge; they include other valuable things. In particular the various disciplinary fields offer the concepts and procedures required for supporting and evaluating substantive claims, including concepts and procedures required for the complex claims that are the stuff of sophisticated issues in

ordinary life, in politics, and in social decisions of all sorts." In this volume he does not offer an illustration.

Weinstein suggests that linking informal logic to applied epistemology (in his sense of the term) would provide greater depth and a wider range of theory to informal logic, and would link informal logic to important current issues, some of them deep, in the sciences and other specialized disciplines. In so doing it could improve both the content and the stature of informal logic. These would be important advantages.

Battersby (1989) drew a parallel between applied epistemology and applied ethics. Ethics can be divided into meta-ethics, normative ethics, and applied ethics. Similarly, Battersby suggests, we may wish to think of epistemology as potentially divided into meta-epistemology, normative epistemology, and applied epistemology. Battersby's candidates for inclusion in meta-epistemology and normative epistemology are (a) meta-epistemology—discussion of the concept of knowledge; (b) normative epistemology—rationalism versus empiricism and the role of intuition. These were rather unsubstantial—too thin, Weinstein thinks, to resolve substantive debates that would constitute problems in applied epistemology. As it stands, philosophical epistemology is too abstract to be readily useful for resolving questions about rich arguments and the complex issues that face us. "(P)hilosophical analyses have tended to be reductive, turning complex epistemological realities into monolithic conceptual structures, substituting univocal accounts for the complex realities that philosophers took as the objects of their analyses." If there is to be a normative epistemology, it should draw on philosophy—but only as one discipline among many. Applied epistemology in Weinstein's sense of the term would be based largely on specialized disciplines.

Weinstein recounts a detailed discussion of the problem of missing premises by Govier (1987) which led to the rather unsettling conclusion that we can rarely pronounce with confidence that such-and-such premise is missing from such-and-such argument. Govier argued that whether a statement can rightly be regarded as "missing" depends on one's theory of argument, one's purpose in understanding the argument, and much else—including sometimes the intentions and beliefs of the arguer. Weinstein finds Govier's discussion far too indefinite. He proposes that discourse frames could help to solve the problems Govier identifies. Weinstein makes the extremely interesting suggestion that in Govier's case, an abstract view of argument and informal logic has perversely led to extreme particularism, if not relativism. "However paradoxical it may seem at first, excessive generality in the theory of argument leads to undesirable particularity in application; whereas, a more particularistic level of theoretic analysis fosters coherent and general applications." What Govier needed and failed to find, Weinstein suggests, is a principled analysis helpful for identifying the missing elements in arguments. The disciplines could help.

The problem is a real one, and the suggestions Weinstein makes are fascinating. But his account needs to be filled out in order to be plausible. What

we need is an example (at least one) in which there seem to be missing premises, an appropriate discourse frame, grounded in a discipline and identified as the frame to which that example belongs, is "posited," and a proposed solution to the missing premise dilemma is shown to emerge naturally and correctly from that framework. We need to see how smoothly and plausibly such a framework would resolve the sorts of problems Govier identified. Without even a single case showing how these frames are related to particular arguments on the one hand and disciplines on the other, Weinstein is, in effect, offering promissory notes.

I hope this review makes it obvious that the book is worth buying and reading, and deserves close study. If anyone is looking for topics for research, it is packed full of them. I heartily recommend it to all readers of *Informal Logic*.

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