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Book Review

Logic, Truth and Inquiry

by **Mark Weinstein**

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Mark Weinstein's, *Logic, Truth and Inquiry* is an ambitious and provocative case for a theory of truth and warrant strength that will undergird an "account of argument in the broad sense of current argumentation theory" (p. 12). I begin with a very schematic synopsis of Weinstein's rich discussion through his six chapters. Weinstein himself notes that his arguments are "frequently presented in broad outline" (p. 1), so my quick sketch will be even broader. I conclude with some brief observations about both what the book leaves unresolved and the merits of Weinstein's intriguing book.

1. Synopsis

In the first chapter, Weinstein frames the challenge of providing an adequate account of truth for argumentation theory. According to

Weinstein, despite recognition of the importance of context (and audience), informal logicians and argumentation theorists still tend to adhere to a basic logic that is underpinned by a correspondence theory of truth. But, “ordinary argumentation most often deals with issues for which a corresponding reality is none too clear” (p. 7). One consequence, says Weinstein, has been a shift away from truth toward acceptability within the theory of argument evaluation. But Weinstein wants to resist this shift since “no matter how construed or qualified, acceptability still remains vulnerable to the question: It is (e.g., rationally) acceptable, but is it true ...?” (p. 9). But if not correspondence or acceptability, “whence the epistemic adequacy of arguments?” (p. 15). Weinstein considers James Freeman’s commonsense foundationalism, which locates the epistemic adequacy in the generation of acceptable premises via reliable belief generating mechanisms, but rejects it on the grounds that at best this is only the beginning of the story, for the reliability of the mechanisms can only be judged against the backdrop of critical inquiry. Next, Weinstein considers Robert Pinto’s appeal to “critical practice,” which Weinstein, in at least broad outline, accepts. But Weinstein eschews Pinto’s (and most of informal logic’s) prevalent focus on “ordinary argumentation” and instead proposes scientific inquiry as “more appropriate as an epistemological paradigm of successful critical practice than the procedures of commonsense solutions to everyday problems” (p. 35).

Weinstein turns from his discussion of the adequacy of premises in the first chapter to a discussion of the adequacy of inferences in Chapter 2. In particular, Weinstein is interested in grounding a theory of entailment adequate for argumentation theory as he conceives it. Hence, in the first section of the chapter, Weinstein runs through a quick exploration of deductive validity, Carnap’s meaning postulates, Harvey Siegel’s fallibilist foundationalism, Trudy Govier’s discussion of argument reconstruction, and Stephen Toulmin’s warrants. In the second section of the chapter, Weinstein proposes and defends modeling Toulmin’s warrants not in terms of a metamathematical model

based on arithmetic, but rather one based on scientific inquiry. The hope is to avoid Siegel's worries about relativism while avoiding the narrow applicability of deductive validity as a standard. The upshot of Chapter 2 is that the adequacy of inferences will be based on the warrants backing them, so argumentation theory needs a theory of the adequacy of warrants. That is the general project of Chapter 3.

Weinstein begins Chapter 3 with a discussion of Putnam's internal realist take on truth, in which truth is not external to our theorizing, but grows within it (p. 75). Unfortunately, like many in argumentation theory, Putnam resorts to an ideal epistemic community to try to avoid relativism. But "without some sense of what warrants the standards to which such an ideal community would appeal truth collapses into acceptability" (p. 76). Weinstein instead recommends trying to capture Putnam's insights about truth via metamathematical models based on capturing scientific inquiry rather than arithmetic. Part II of Chapter 3 presents Weinstein's Model of Emerging Truth (MET). While typical of the dense going of formalism, Weinstein helpfully intersperses the formalism with scholia, paragraphs that in his words "explain or amplify the formalism." The general gist of the formalism is to define a sequence of models, ordered in time, based not on a logical consequence relation, but a weaker explanation-like relation. While truth in a model is standard, Weinstein claims the more relevant features of the overarching structure are the features of the sequences of models. Very roughly, the ordering of the models is meant to capture the breadth, depth, and consilience of the theories the models represent. The ordering will generate a "best" theory, T , with a "best" ontology, O^* , from which a fairly standard Tarskian truth predicate can be defined: " s is true" for s in T and T in scientific structure TT , iff $O^* \Vdash s$ (p. 100). But, "the truth condition for the various theories T , of TT , that is to say O^* , cannot be ascertained independently of the history of TT , but grows out of the progressive nature of TT " (p. 101).

In Chapter 4, Weinstein uses the MET to ground a theory of warrant strength. In particular, taking the generalizations contained

in the ordered realizations of theories modeled in MET as warrants, He proposes to determine the strength of a warrant in terms of the embeddedness of the warrant within the ordering of models. In this way he hopes to account for a more nuanced view of contradiction and how we maintain generalizations even in the light of counter-instances. Briefly, counter-instances that are not themselves supported by warrants at least as deeply embedded as the generalizations they challenge are rationally resisted. In the latter sections of the chapter, Weinstein shows how this can be done by amalgamating his MET with a modified adaptive logic of Christian Straßer and Dunja Seselja. An elaboration of this amalgamation is done in Part V via Weinstein's discussion of Straßer and Seselja's example of the continental drift debate of the 1920s (which in this context also serves as an example of the application of MET to a substantive debate).

Chapter 5 is devoted to connecting the MET to empirical instances in order to show that the theoretical framework is not empty. The primary example is the development of the periodic table. Of course showing that the inquiry that leads to the periodic table matches the MET should be no surprise since it is that inquiry that motivated Weinstein's development of the MET. But in the latter half of the chapter, Weinstein presents a "metaphoric extension of the logical metaphor that is the MET," (p. 158) to legal, ethical, and political argument "to indicate the possibility of applying the core concepts of the MET across the spectrum [of argument cultures]" (p. 179).

One of the apparent consequences of Chapter 5, was that the adequate evaluation of arguments requires understanding the larger frameworks within which particular arguments are made. What then are the implications for critical thinking and informal logic? Chapter 6, while on the one hand a tracing out of some of the implications of Weinstein's work for critical thinking, informal logic, and argumentation theory (and the teaching of critical thinking to undergraduates), is mostly devoted to discussions of the motivations and insights that led Weinstein towards the MET (as but one possible way to encapsulate those insights) (p. 200).

Hence, much of the chapter recapitulates much of Weinstein's earlier work arguing for an "applied epistemology" focus for critical thinking and informal logic and could almost be read first as a foundation for the previous five chapters.

2. Observations

Those familiar with Weinstein's work will recognize many of the arguments and themes of his papers and presentations from the last three decades. Weinstein's hope is that in this book "others see my work,..., as a unified whole" (p. 214). Given the usual dense and wide-ranging nature of Weinstein's papers and talks, it is a benefit to see what Weinstein himself calls the "fragments" connected in a mostly unified package. Of course, given three decades of scope, there are tensions within the text. I give four interconnected examples. Firstly, there is an unresolved balancing act between the judgments of the experts in a field determining such things as the appropriateness of approximations within the model framework, and the resulting model complexes being normative constraints on the judgments of experts in the field. This is related to a second tension between the pragmatics and the formalism. Those who are leary of formalism's role in argumentation theory are unlikely to be assuaged by Weinstein's account, and those who treat formalism seriously are likely to be concerned by the appeal to intuitive judgments to ground the formalism—for example, resolving ties in competing warrant strength is a pragmatic decision (p 126). In general, one might worry about the degree to which our parochial decisions underpin the normativity of the models versus the alleged objectivity of the resulting model complexes acting as a constraint on what counts as a "good" judgment.

Thirdly, despite early attempts to eschew acceptability in favor of at least an emergent truth, later chapters seem to fall back on acceptability. For example, Weinstein writes: "to indicate a logical structure for acceptability that, at the limit, is as true as we can ever hope for" (p. 147). Indeed, we might wonder whether

what Weinstein calls scientific truth or TT-truth is also subject to the open question that Weinstein, in Chapter 1, poses as a problem for acceptability—yes s is satisfied by the complex of models that constitute the ontology of TT, but is it true? Finally, there is a tension between how the model is supposed to be applicable from science to politics (in that sense it is a general account of argumentation) and yet it also be the case that “restricted principles from within the disciplines, order and inform the understanding of substantial arguments more effectively than do many of the more abstract analyses common in informal logic” (p. 203).

Given the ambitious and broad-ranging project Weinstein undertakes, it is also unsurprising that there are unresolved questions about the consequences of his views. For example, what is the upshot for argument cogency? Is it that we really cannot determine argument cogency without a whole lot more background analysis than is usually available? On the one hand one may be skeptical of this result since we do seem to make local judgments of adequacy—in the face of dubious or even obviously false premises, or clearly insufficient reasons we are right to reject (or at least abstain from) certain propositions, views, theories, etc. But on the other hand, if Weinstein is correct, then there is a worry that we will not be able to adequately assess arguments without being experts in the domain of use and given the desire to prepare students (and ourselves) to be able to assess a wide variety of arguments from a plethora of domains, without being experts in all these domains. Also, Weinstein presents an idealized, well-behaved model of inquiry. Model chains are added to over time in a nice neat fashion. But one might wonder how chains or parts of chains are redacted in a scientific structure. Put another way, the ideal model may give us a way to see emerging “truth,” but how does it capture or represent what is rejected or taken to be false? In standard model-theoretic constructions of possible worlds for example, falsehood is just absence from the world. But in Weinstein’s proposal we are comparing complexes of models over time. Hence, it may just be that all (relevant) model chains are considered—it is just the ones that will be “rejected” as false will

be the ones that are not as deeply embedded and interconnected with what inquiry reveals as the most “virtuous” model complex.

Weinstein is not unaware of many of these tensions and unresolved questions, but these just point the way to future research. For example, he writes: “My use of intuitive, oversimplified and idealized metamathematical constructs should be seen as an invitation to others to extend and correct the basic insight through mathematical constructions that more adequately describe the model relations in chains of models for particular aspects of significant inquiry” (p. 95). Given his own view, the inquiry required for the filling in of the details of the model or, say, the details of the relationship between the generality of Weinstein’s proposal and the reliance on discipline specific norms could easily engender significant shifts in the overall structure of the resulting theory. (Though if Weinstein is correct, even these shifts would still vindicate the underlying intuition of his model of inquiry.) For example, how general the standards are (even if the model used to measure the standards in the various disciplines is roughly the same) may depend upon the outcome of the possibility of a TOE (theory of everything) in which the model networks will be connected to each other in ways that allow for univocal assessment of the strength of warrants, or whether the networks will only be connected in a way that allows for discipline specific evaluations of arguments and warrant strengths. Either outcome is consistent with Weinstein’s proposal.

One should not construe my raising of these tensions and questions within Weinstein’s work as refutations of its worth, but rather goads for continued refinement.

There are many intriguing, even if controversial, proposals and arguments that warrant argumentation theorists’ interest and deep consideration. For example, the radical, yet intriguing view that “truth is seen as a field property rather than a relation between a proposition and a state of affairs” (p. 2); or that argumentation theory need not eschew formal models and yet can still capture the dynamics of argument and inquiry rather than just some static absolute truth; or that a shift in focus away from commonsense

everyday argument to the more rigorous, but still less than absolutely certain, domain of scientific inquiry as the basis for a theory of argumentation is merited—after all, if we are interested in improving the reasoning of others why focus on how people in fact argue everyday rather than on the more demanding and self-corrective practice of scientific inquiry? But perhaps the most promising proposal is the view of Chapters 3 and 4 that warrant strength can be measured in the MET. If true, then a means of comparing the respective weight of competing arguments is possible and may help resolve the dialectical tier issue of how much defending against objections an arguer is obligated to perform.

My brief observations barely scratch the surface of the deep, broad-ranging, and challenging discussions in Weinstein's book. An unabashed foray into the foundations of argumentation theory (and inquiry in general), along with unreserved metamathematical modelling makes *Logic, Truth and Inquiry* not for the faint of heart. But argument and inquiry are extremely complex phenomena, so we should expect attempts to elucidate them to be equally complex. The diligent reader, however, will be rewarded by the rich and fruitful position Weinstein lays out—a position that needs consideration by a broad spectrum of argumentation theorists.