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Mark Weinstein's "model of emerging truth" is a fascinating attempt to provide a semantics that recognizes the way that scientific theories improve over time. Given that the domain of an axiomatized scientific theory is not already available as a basis for its semantics (since the theory itself may not be the last word on what the entities are that underlie the phenomena that it explains), how can we justify the theory? Weinstein's model is an answer to this question that deserves attention.

In his final paragraph, when Weinstein says that regress is halted because there is an epistemological boundary to the "web of belief" in which scientific warrants are situated, he is speaking about a different regress than the one mentioned by Bermejo-Luque. Weinstein's regress is the regress from the warrant to its support, which in Toulmin's terminology is its "backing", and from the backing to its support, and so on. Weinstein's quite reasonable point is that you stop at the backing, "the available knowledge structure that supports a warrant". Bermejo-Luque's regress is the regress from the justification of the inference-claim by a warrant, to the justification of the second-order inference-claim that the first-order inference-claim follows from the warrant, and so on. In a Toulmin diagram of the layout of an argument, the regress that Weinstein blocks would go from the warrant down to the backing and from the backing down to its support, and so on. Bermejo-Luque's regress would start from the vertical line that joins the warrant to the horizontal line from data to claim. From the middle of this vertical line, a horizontal line would go to a second-order warrant justifying the link between the warrant at the bottom of the vertical line and the inference-claim at the top of it. And this horizontal line would represent another inference-claim that would need to be justified, and so on.

Bermejo-Luque's comments offer a helpful clarification of her claim in her (2006) that the circumstances in which an argument is put forward free us from the paradoxes of material implication when we interpret the argument's inference-claim as its associated material conditional. In fact, the inference-claim is a speech-act, on her view, and the associated material conditional is its semantic content. Since the claim is put forward by the asserter of the argument's premiss(es), and the conclusion is supposed to be not already known to be true, the proponent of the claim pragmatically implicates that the truth of the conditional can be determined to be true without assuming that a premiss is false or that the conclusion is true. And this pragmatic implicature holds if and only if there is some consequence relation between the premiss(es) and the conclusion. If no such consequence relation obtains, the inference-claim might have a true semantic content (because a premiss is false or the conclusion is true), but it is in Searle's terminology 'defective' (Searle, 1970, p. 54). In such a situation, the inference-claim is true but the conclusion does not follow from the premiss(es).

This position seems bizarre. What is an argument's inference-claim except the claim that its conclusion follows from the premiss(es) offered in its support? Further, not all authors of arguments assert their premisses. Someone can argue dialectically, from the commitments of an opponent that the arguer does not share, as when a freethinker draws from the belief of a Christian fundamentalist that the Bible should be the foundation of our belief system the conclusion that men should not "mar the corners" of their beards (Leviticus 19:27). The freethinker can explicitly state that she regards fundamentalism as

false, but nevertheless infer from it the rule about men's beards, as a *reductio ad absurdum* of Christian fundamentalism. Also, people can make simplifying assumptions, admitted to be false, and can draw inferences from those assumptions, as when the calculation of a satellite's orbit assumes that only bodies in the solar system exert gravitational force on the satellite. Thus authors of arguments do not always make their inference-claim in circumstances where they assert the argument's premiss(es).

Statements like 'If you are the president, then I'm the queen of France' raise a serious difficulty for my position that a singular indicative conditional means that its consequent follows from its antecedent. For such absurd conditionals are regularly used to implicate that the antecedent is false, via the recognition that the consequent is false—an implication that requires taking the conditional to be true. For the implicature to work, it is necessary not only that the consequent is obviously false but also that the antecedent is irrelevant to the conclusion. The conditional 'If you are the president, then your mother is the president's mother' cannot be used to implicate that the antecedent is false, even if the consequent is obviously false, because it looks like the registering of an inference. My inclination is therefore to retract my claim about the meaning of the indicative conditional, but to retain the view that the inference-claim of an argument is that some generalization of its associated material conditional is non-trivially true.

The crucial issue in appraising an argument's inference is whether its conclusion follows from its premiss(es). If Bermejo-Luque intends to develop her position, she needs to tell us more about the properties of a "causal, legal, moral, or formal, etc. consequence relationship between reason and conclusion" (Bermejo-Luque, p. 3). The two examples in her footnote 3 both fit my claim that a conclusion follows if and only if some generalization of its associated material conditional is non-trivially true, since particular formal and conceptual truths are always instances of general formal and conceptual truths; indeed, showing that a particular claim is a formal or conceptual truth involves appealing to its general features. I claim that any consequence relationship between the premiss(es) and conclusion of an argument either is or implies or is grounded on a covering generalization of the argument's material conditional. It would be interesting to see if Bermejo-Luque, or anybody else, can produce a counter-example to this claim.

I presented my paper earlier at the 2007 annual congress of the Canadian Philosophical Association. My commentator at that conference, Tim Kenyon, agreed with me that 'so' expresses more than truth-value covariation, but thought that the existence of a non-trivially true covering generalization seems more like part of an idealized analysis of the commitments of the arguer than part of the meaning of 'so'. I can accept his characterization, as long as the "idealized analysis" is taken to be a conventional rather than a conversational implicature.

In an attempt to fit my proposal into the familiar missing premiss approach to reconstructing arguments, Kenyon made the following suggestion: "The linguistic meaning of 'P, so Q' includes that P is sufficient grounds to rationally conclude that Q. Because utterances of this sentence are typically ostentatiously false, such an utterance leads a hearer to pragmatically seek a contextually appropriate implicative gap-filler. Hitchcock's existential proposition is a materially adequate expression of the commitment to settling on such a gap-filler that does provide rationally sufficient grounds to conclude that Q. The existential formulation on its own under-describes what is assumed by a speaker, and what is understood by an audience that successfully

understands the speaker's argument. I haven't understood your reasoning if all I understand you to say is that some generalized conditional or other licenses your inference. But that's an implicit commitment that sends the audience off looking for a generalized material conditional."

To this suggestion, I reply that utterances of the sentence 'P is sufficient grounds to rationally conclude that Q' are not typically ostentatiously false for ordinary-language arguments 'P, so Q'. The temptation to think so is due to a narrow conception of what can count as sufficient grounds, i.e. a narrow conception of consequence as formal logical consequence (and perhaps also "material", i.e. semantic or conceptual, consequence). On the broader conception that I have defended, that Socrates is human is sufficient grounds by itself to rationally conclude that Socrates is mortal, because the latter follows from the former. There is no need to articulate a specific generalized conditional in order to understand the argument 'Socrates is mortal, so Socrates is human', just as there is no need to articulate a specific generalized conditional in order to understand a formally valid argument like 'It's either raining or it's snowing, and it's not snowing, so it must be raining'. Determining that an argument has a non-trivially true covering generalization is part of the evaluation of the argument, not part of its analysis.

Articulating a particular generalized conditional may be part of understanding the speaker's reasoning, as opposed to the speaker's argument. In this case, we are engaged in a psychological task of trying to understand how the speaker thinks the argument's conclusion follows from its premiss(es). But this is part of trying to understand the arguer, not part of trying to understand the argument.

In presenting the paper 'So' at the two conferences, I used as an example of an argument that is obviously invalid, even though it has a true associated negajunction, the argument '8 is divisible by 2, so 8 is divisible by 4'. In discussion, Karl Pfeifer asserted that this argument was in fact valid. Challenged to show how you could deduce the conclusion from the premiss through a step-by-step deduction, he produced the following proof:

1. 8 is divisible by 2. (premiss)
2. There exists a natural number n such that $8 = 2n$. (from 1)
3. 8 is divisible by n. (from 2)
4. $n = 4$. (from 2)
5. 8 is divisible by 4. (from 3 and 4)

This proof is convincing, although step 4 imports an additional piece of arithmetical information. It was easy to change the example so as to find another argument that was obviously invalid but had a true associated negajunction. The more difficult question was whether my account of an argument's inference-claim could explain why '8 is divisible by 2, so 8 is divisible by 4' was a valid argument. What non-trivially true covering generalization could license us to draw its conclusion from its premiss? The solution is to recognize that the number 4 in the conclusion is identical to 8/2. If we add this fact as an unstated implicit premiss, then we get the argument '8 is divisible by 2 and 8/2 = 4, so 8 is divisible by 4.' And this argument has a true covering generalization: For any natural numbers x, y and z, if x is divisible by y and x/y=z, then x is divisible by z. The reason why the validity of the original argument was not recognized is that one needs to import an additional premiss to get the conclusion to follow. So my account of inference seems to have met this challenge.

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