## REPLY TO DAVID MACARTHUR

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David Macarthur raises the question "Why do I want to keep the term 'metaphysics'?". A general answer is that I am interested in questions that are traditionally called "metaphysical questions", including a number that have arisen within science itself, and not only within philosophy. (I recognize that I have changed my position since I wrote some of the statements that David quoted.) I think that, for example, the realism issue is important for science. (I argue this, for instance, in the paper "Science and Philosophy"—forthcoming in a book of papers of mine edited by Mario De Caro and David Macarthur).

For example, whether one is a realist or an instrumentalist makes a difference to the paradigm science of physics itself, and not only to what philosophers *say* about physics. I think that when anti-instrumentalism began to defeat logical positivism, and some physicists—especially J.S. Bell—tried to understand physics realistically, saying "We want to understand quantum mechanics not just as a prediction tool, we want a picture of the world, we want to make sense of a world in which this crazy tool works", a great many good things happened in physics that would not have happened otherwise. Bell was interested in all the foundational approaches—he was interested in Bohm's interpretation, he was interested in GRW's (i.e., Ghirardi, Rimini and Weber's) spontaneous collapse theory. I don't believe that the so-called "Many-Worlds interpretation" of quantum mechanics works. But that attempt did lead to the discovery of the decoherence theorems which certainly are going to be part of any explanation of why the macroscopic world we experience is as it is. And that interpretation was proposed because its inventors, Hugh Everett III and Cecil M. DeWitt, were willing to take seriously the question as to what quantum mechanics actually says about reality. And the list goes on and on.

Thus, if the question of realism and anti-realism is a metaphysical question —and at least since Hume and Berkeley it *has* been a metaphysical question (we did not have the modern kind of anti-realism in the Greek time, but surely that question has been with us for three hundred years—there's a straight line from Hume to Mach, and it entered physics itself with a vengeance)—then this *metaphysical* question is one that cannot simply be dismissed as philosophers' "confusions", "misuse of language", or whatever. And if it isn't a metaphysical question?—but I don't know any other name for that sort of question.

In fact, the very philosophers who denounce metaphysics *always* get entangled with it. Carnap had a *metaphysical* view of mathematics, and it doesn't work. (Here I disagree with my good friend, the late Burton Dreben.) And I think that Wittgenstein himself was deeply in the grip of a metaphysical picture—for example, when he claimed, as he does, on my reading at least, that the only genuine kind of necessity is linguistic necessity. I am afraid the great majority of Wittgenstein's unpublished remarks on the foundations of mathematics are, frankly, junk. (Not, however, the famous remark on Gödel theorems—that's been widely misunderstood.) What finally led me to this harsh verdict was studying his remarks about Dedekind cuts, his remarks about Cantor's proof of the non-denumerability of the real numbers, and his remarks about what it means to say there are infinitely many integers. When Wittgenstein says "I want to deprive set theory of its charm", one naturally thinks that what he wants to give up is just Zermelo Fraenkel set theory. (Not that I would agree, even if that were all he meant.) In fact it turns out that what he includes under "set theory" includes Dedekind cuts (hence the intermediate value theorem of the calculus), includes the standard treatment of the theory of real variables, includes the heart of classical mathematics.

How could a great philosopher, one who urged us constantly to be sensitive to different "forms of life", devote perhaps fifty percent of his unpublished writing to mathematics, without ever seeking to learn anything about what the mathematical form of life is? For Wittgenstein Cantor's Continuum Hypothesis is "metaphysics" in the pejorative sense!—But it seems to me that the *metaphysical* questions "What is going on in mathematics?", "Is it really just 'grammar?", "Are we merely following certain linguistic rules and engaging in certain linguistic practices, or is there an objective truth in mathematics that goes outside of that?" (which is my position), are important and rationally discussable. In my view, whenever somebody sets out to be consistently "anti-metaphysical", he ends up doing bad metaphysics. I believe this is true even of Wittgenstein. This seems to be a very profound piece of evidence that some metaphysical questions are *inescapable*.

The realism question is one of those inescapable questions. And I think also the question of fact and value is an inescapable question. In America we think of Charles Stevenson as the one who introduced the claim that value judgments can't be rationally decided, that they are out of the sphere of objective truth and falsity, but it was raised earlier by the greatest of all European sociologists, Max Weber. What is right and wrong about Weber's fact-value dichotomy is a question for all of the European cultures, and ultimately for all of the world culture. Stevenson thought that the question of fact and value could be simply disposed of, in the way the logical positivists disposed of it. But he was wrong. Such questions which are traditionally called "metaphysical" are questions for which we have no other name. And they are going to stay with us.

To be sure, the way we cut up cultural space into separate fields changes with time. It is well known that questions that were at one time considered to be philosophical questions later became scientific questions. That doesn't mean that all the questions we presently call "philosophical" will eventually be swallowed up by some special science. At least at present, that seems to me a utopian fantasy. But the fact that it is no longer tenable that there exists a special field of metaphysics doesn't mean that questions that were traditionally regarded as metaphysical don't continue to interest us. They interest us even when the metaphysicians are wrong. For example, consider the premise of Kant's philosophy, the idea that the laws of geometry are a priori and unrevisable and yet they refer to objective space, the space in which we live and move and have our being, and not just to an "ideal space". I think he identified a real problem, but the fate of that problem turned out to be very different then he anticipated. Nevertheless, he asked the right questions. When I say there are insights in traditional metaphysics, I mean precisely this.