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Response to Moran and Jacquette

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I am grateful for several independent reasons to have a chance to respond to the comments of Professors Moran and Jacquette. One reason is to thank them for their thoughtful and instructive reactions to my sketchy remarks. Another reason is to try to clarify and to improve my admittedly incomplete survey.

One thing I obviously failed to make clear is the agenda of my essay. I was not comparing individual philosophers or philosophical movements to assess the methodological approaches of different kinds of philosophy in their own right as to what promise these approaches have for the future of philosophical thought. Whatever criticisms and recommendations I offered were not intended to be comparative but internal to the various traditions. I am not advocating a "return" to logical positivism, whatever that might mean, but I am pointing out the folly of those critics of logical positivism who rejected the use of logical tools in philosophy. This has little to do with different schools and "dogmas." I might have criticized much more such overrated philosophers as Quine and Davidson who have paid lip-service to logic but failed to appreciate the true power of logical ideas in philosophical inquiry. I was not criticizing (or praising) Tarski or Frege tout *court*, but pointing out the crucial presuppositions that affect the philosophical significance of their work. I do not object in the least to Heidegger's use of non-discursive language to articulate textual meaning. But I do object to Heidegger's declaring all discursive thinking powerless to do so. This is not a mere matter of expositional technique. It concerns Heidegger's most central tenets, including (as Martin Kusch has shown) his relationship with Husserl. This point has nothing to do with relativity or belief in absolute facts in history. So much the better for everybody if some hermeneutical philosophers do not reject logic (which is not what I claimed). But logic is not of any help to their hermeneutical enterprise until they come out of the closet and consciously reject Heidegger's methodological stance.

Likewise Professor Moran is of course right in suggesting that many phenomenologists have sometimes already followed the strategy I am recommending and analyzed the outputs of our unconscious cognitive processes and not only tried to trace them back to their presumed unedited inputs. So much the better for phenomenology. But I was not criticizing the followers of Husserl for not doing so, but pointing to what the methodological canon of Husserlian phenomenology says with its reductions to the immediately given. If phenomenological redirections do not do it, what methods do?

I am also glad to have an opportunity to re-iterate the reality and depth of the crisis which my commentators do not seem to think of as very serious. Here my own recent and ongoing research provides a striking confirmation of my diagnosis, most directly in the case of the methodology of analytic philosophers. Ever since Frege, the working logic of practically all philosophers has been the received theory of quantification alias "traditional" first-order logic. It is the logic that is

supposed to be used in mathematical theories, especially in set theory; it is the extensional core of virtually all modal logics whose richness Professor Jacquette exults. It is the logic assumed to be used in the celebrated incompleteness and unprovability results of Gödel and Tarski. It is typically assumed to be the logic of quantifiers in natural language.

This logic turns out to be flawed. Mathematicians were at Frege's time routinely using an essentially richer logic in their reasoning. Even though they did not formalize it, it was employed explicitly and with clear rules. Frege failed to understand it; in particular he failed to grasp the function of quantifiers in expressing dependencies and independencies between variables. As a result, the traditional logic of quantifiers which he launched and which has been used by virtually all philosophers ever since, is seriously defective.

It is of course not a fallacy to use an unnecessarily poor logic. But the way of thinking that misled Frege, including a belief in the exhaustiveness of the received first-order logic, has had disastrous consequences. It is what caused the paradoxes of set theory and thereby the entire *Grundlagenkrisis*. The incompleteness results of Gödel and Tarski are to a large extent merely symptoms of the poverty of the logic Frege started and they in effect chose to follow. They are only in a narrow technical perspective trophies of logical research, but in reality results of philosophyris in order.

A crisis is even more acute in the foundations of mathematics. For some eighty years, set theory has been approached primarily as a first-order axiomatic theory. This is little better than a misuse of the axiomatic method. The purpose of this method is to study a class of structures by capturing them as models of the axioms. Now the models of a first-order theory are structures of particular objects, not structures of sets, which is what set theory is supposed to examine. How the study of the former can yield an adequate theory of the latter has never been explained and in fact can be shown to be impossible.

The present methodological conundrum is less clear-cut in the less sharply conceptualized areas of philosophical studies, but is nevertheless clear. The misuse of intuitions is a case in point.

It is hard to avoid the suspicion that the crisis is, partly a moral one, a failure of professional ethic. This failure is twofold. For one thing, it is not difficult to tell what Wittgenstein's deepest objection to much of contemporary philosophizing would be: lack of any strong sense of the significance and importance of the questions they are asking. The theory of truth mentioned in my survey and by my commentators provides an illustration. Much of the recent and ongoing discussion is predicated on the assumption that Tarski's results about the undefinability of truth are the last word on the subject. This is simply and plainly false. Professor Moran says that "Hintikka believes, contra Tarski, that truth can be defined for each level of discourse." Not, the issues here are not matters of belief. I *know* in the fullest possible sense that truth can be defined—no, has been defined—for the kind of discourse that Tarski was dealing with and that philosophers are considering it a central part of our own conceptual scheme. This definability does not show that any of the so-called theories of truth is right or wrong but it forces us to reconsider all of them. Yet philosophers have simply ignored the new situation. Why? Is there any reason other than the inconvenience of having to rethink the foundation of one's pet ideas? One is easily led to ask whether philosophers have really seriously been trying to find out whether truth is definable or not.

Another moral failure is perhaps most clearly in evidence also in fields related to philosophy. One of the famous Millennium Problems in mathematics is the P vs NP problem in the theory of computability that is essentially a logical problem. Recently I asked a prominent logician who happened to be the president of a mathematical society: "What would happen if your society announced a lecture offering a solution to this problem?" Without a trace of hesitation, he answered, "Nobody would come." Researchers have lost the faith in their own possibilities of solving such problems. They are left to organized or informal teams of experts. Individuals who attack problems alone are considered frauds or cranks.

In philosophy, problems are not as clear-cut. But suppose someone seriously claimed to have given a definitive interpretation of Aristotle's metaphysics or Kant's philosophy of mathematics. Would other scholars' response be to re-evaluate the entire hermeneutical problem or to file away the evaluation as "just another interpretation" and continue to produce "readings" of the texts as if nothing had changed? I think my readers can supply the answer.