UNSOLVABLE PROBLEMS AND PHILOSOPHICAL PROGRESS

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ERRATA

Missing epigraph, p. 289: Commitment is not an outcome, but a process. (Cited in Perry 1981b: 5.)

p. 289,	col. 1,	para. 2, L. –4:	‘metaphyhsical’	should be	‘metaphysical’
		L. –2:	‘psuedo-’	should be	‘pseudo-’
	col. 2,	L. –3:	‘÷’	should be	‘×’
		L. 10:	‘miles’	should be	‘feet’
p. 291,	col. 1,	L. –3:	‘define’	should be	‘defend’
p. 294,	col. 1,	L. 3:	‘ontoloico-’	should be	‘ontologico-’
			‘coint’	should be	‘coin’
p. 295,	col. 2,	para. 0, L. –2:	‘superceded’	should be	‘superseded’

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Winning Entry in the 1982 APQ Prize Essay Competition

I. UNSOLVABLE PROBLEMS AND PHILOSOPHICAL PROGRESS

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I. Problems and Solutions

ARE there unsolvable problems? Philosophy has sometimes been characterized as a field whose problems are unsolvable (or, at least, whose important problems are unsolvable), and this, in turn, has often been taken to mean that there can be no progress in philosophy. It might indeed mean this if the only measure of progress in a field (over a period of time) is the number of problems that have been solved (during that period). I shall argue that there *can* be progress in philosophy, but that such "success" is an overly simplistic measure of it.

Let us consider the problem of problems. One kind of unsolvable problem would be unintelligible, poorly stated, nonsensical, or otherwise ill-formed ones; these would be unsolvable in the simple sense that they lack solutions. Of course, it is not always a trivial matter to show that a given problem is of this kind, as a consideration of the logical-positivist attack on the apparent unsolvability of metaphyhsical problems reveals. But, of course, the unsolvability of ill-formed problems does not guarantee the solvability of well-formed ones.

Are there, then, intelligible, clearly stated, sensible, or otherwise well-formed problems ("real" problems, one might say, as opposed to "pseudo-" problems) that are unsolvable? Some philosophers (Benson Mates, for example) have argued that there are, that "the traditional problems of philosophy ... are intelligible enough, but ... absolutely insoluble" (Mates 1981: 3; cf. ix, x).[1] Before examining this position of "solvability skepticism," it will prove worthwhile to consider the nature of solutions.

Just as we need to talk of *real*, not pseudo-, problems, so we must speak of *real* solutions, not merely purported ones, for surely *all* problems, even pseudo-problems, can have *purported* solutions. So: When is a purported solution a real or correct one?

Given a set of purported solutions to a problem, one must first eliminate the clearly wrong or irrelevant ones. But one must still find a way to choose the *correct* one from the remainder. Consider the problem of determining the length of a side of a square plot of land whose area is 4 square miles, so that one might know how much fencing to purchase. The following might be a set of purported answers: {5 feet, 2 feet, -2 feet}. Now, as a simple calculation shows, 5 feet is wrong—*mathematically* wrong. So, for that matter is -2 feet wrong; but it is *physically* wrong (indeed, physically nonsensical), not mathematically so. Of course, it might be objected that it is even mathematically wrong, *if* one *assumes* that the problem was not merely to find the solution(s) to $x^2=4$, but rather to: $x^2=4$ *and* $x>0$. Such assumptions, we shall see, are essential to identifying solutions.

As another example, consider '42' as the answer[2] to "the Ultimate Question of Life, the Universe, and Everything," as in Douglas Adams's *The Hitch-Hiker's Guide to the Galaxy* (1979: 135). Now, of course, the humor of this answer lies in its very inappropriateness, its category-mistakenness. But as Adams cleverly goes on to observe, it may only be an *apparent* inappropriateness, for it may well be the *question* that's at fault. Perhaps *some* ill-formed problems (or questions) can be restated. But a restatement should preserve the intentions of the original problem. Thus, "What is 6 x 7?" would not be an appropriate restatement in this case. Nor, for that matter should "What is 6 ÷ 9?" be—yet '42' *is* accepted in the story as the answer to *that* question (Adams 1980: 184)! And it makes perfect sense (as far as anything can) in the context of that story; i.e., both question and answer—problem and solution—make sense *if* one accepts the *assumptions* of the story. So, to object that a restated problem isn't the *original* problem *may* be as unfair as the attitude of the child who wants to know what the largest number is and whose father says he can't answer that because there is no largest: the child may acquiesce but *still* want to know the answer to the original question. (Of course, such persistence *can* lead to new insights—e.g., the discovery of transfinite or of modular arithmetic—but such an insight is probably not an answer to the intended question as originally stated.)

II. The Solvability Skeptic's Argument

On the surface, solvability skepticism appears to have a point. (A student once told me that he thought that what philosophers did was to give answers to unanswer*able* questions.) Surely, the Free Will problem does not seem to have a solution the way, say, mathematical, or even scientific, problems do. Even as-yet-unsolved mathematical and scientific problems *have* solutions, we like to believe: while we haven't *found* them yet, we believe that (with a few exceptions) we *will* find them, given enough time and more evidence.

The exceptions, though, are not insignificant. Perhaps we will never know the solutions to the problems of the origin of life or of what happened before the Big Bang, simply because the necessary evidence has been destroyed. One tends to feel, however, that that is merely a *practical* limitation—that such problems are not unsolvable *in principle.*[3]

Roughly, a well-formed problem would be unsolvable *in practice* if the procedure for solving it requires either (a) what might be called a virtually infinite amount of resources (time, space, etc.)—e.g., a calculation requiring 10^{100} seconds to perform—or (b) information which once was but is no longer available—e.g., an irretrievably lost document—or (c) information which is exceedingly difficult (impractical) to obtain—e.g., the exact time at which I began writing this sentence. That is, such problems *have* solutions, but we cannot *know* them, for such practical reasons as these. And, *roughly*, a well-formed problem would be unsolvable *in principle* if there *is* no solution for us to know.

Are there, then, well-formed problems which are unsolvable in principle? Well, perhaps the Big Bang problem *is* unsolvable in principle, but that issue is so muddy that it can well serve as an example of both kinds of unsolvable problem. In-principle unsolvable ones do exist, notably in logic and mathematics: the problem of whether the continuum hypothesis is true, for instance. But mathematicians say that that problem, *so stated*, is ill-formed. Restated, the problem becomes: Is the continuum hypothesis logically implied by, or is it inconsistent with, the axioms of (say) ZF set theory? And the answer is: Neither.[4]

But we philosophers can't come up with even an analogous solution to the Free Will problem, *et al.* Philosophical problems, in general, do *seem* to be paradigms of unsolvable problems, while mathematical problems, in general, are taken as paradigms of solvable ones.

This is not to say, of course, that there is *no* solution to the Free Will problem. On the contrary, there are *lots* of (purported) solutions. Why does everybody seem to accept (correct) solutions to mathematical problems, but not everybody agrees on a correct solution to the Free Will problem? The solvability skeptic's point, roughly put, is that there are no solutions to philosophical problems because there are no *generally accepted* solutions:

> What makes ... the philosophical problems so interesting, and what keeps them going, is the fact that, although each possible point of contact [i.e., definition of a term, meaning and truth-value of a premise, step in an argument, etc.] is identified by somebody as the source of the difficulty, each is also exonerated by the great majority; and consequently no purported solution ever comes close to general acceptance. (Mates 1981: 5.)

But being generally accepted is not a sufficient condition for a purported solution to count as a correct solution: a proposition may be generally accepted as being true and as being *the* solution even though (unknown to the accepters) it is either false or true-but-not-the-solution. Nor is general acceptance necessary: a proposition can be true, or a purported solution correct, even if it is not generally accepted, perhaps because of mis- or pre-conceptions (or any number of other accidental circumstances). The history of science is largely the story of such cases: Newtonian physics may serve as an example of the former; the case of Wegener and plate tectonics in geology as an example of the latter.

That there are lots of sources of difficulty in agreeing to accept a particular purported solution as *the* solution—lots of options and choices to make about terms, premises, and logical steps—suggests that the *commitment* to (or acceptance of) a solution depends upon the choices one makes among the options presented by the various "points of contact."

The stucture of Mates's version of the skeptical argument is to show that for each purported solution to a philosophical problem, there are some assumptions we just don't want to make or principles we don't want to give up—that to accept any purported solution, something unacceptable (a definition, a premise, etc.) would also have to be accepted, yet isn't. Hence, the problem is unsolvable. But surely this must mean unsolvable in practice, not unsolvable in principle; and not because of any lack of information, but because of a lack of general acceptability.

Yet, as we have just seen, acceptability is an unacceptable criterion of true solutionhood, being neither necessary nor sufficient therefor. It *is* possible to get a solution, though at the price, perhaps, of a cherished belief. But so what?

Let me illustrate my analysis of the solvability skeptic's argument-structure with a brief consideration of purported solutions to the Free Will problem. In so doing, I wish to define a certain thesis, to which the following is a first approximation:

> Any purported solution, *S*, to a problem, *P*, is really the consequent of an implicit *conditional solution,* $A \rightarrow S$, where *A* is a conjunction of principles which, once accepted, make *S* a correct solution to *P*.

According to this thesis, an in-principle unsolvable problem would be one for which there were *no* principles, *A*, which allowed or entailed a solution.

Following Mates's analysis, there are four possible opening moves to the usual statement of the Free Will problem: (1) Replace the notion of causation by that of a functional relationship, or else (2) deny the principle of universal causation, or else (3) claim that the principle is only statistically true, or else (4) claim that mental events are less caused than physical ones. And there are three possible objections: that (1)-(4) involve (a) ad hoc or (b) untenable distinctions among events, or (c) that (1)-(4) fail to explain why only *some* human actions are free (Mates 1981: 60f).

But such objections can always be met: a distinction is ad hoc (a) only against the background of a given theory; if apparently ad hoc distinctions can be made to work elsewhere, they cease to be (merely) ad hoc. There is no a priori reason why the distinctions made in (1)-(4) could *not* be made to work elsewhere, though at the price—no doubt too great—of reshuffling other well-established categories.

"Untenable" distinctions (b) could refer to merely *incorrect* ones; a purported solution making such a distinction might simply be wrong, period. But 'untenable' really means: incorrect against our background theory; if we are willing to pay the price of giving up our background theory, we can make the distinctions tenable.

And if the explanatory failure (c) is due to lack of insight or ingenuity, then it is a *contingent* failure and possibly reparable. If it is a *necessary* failure, then the solution is either *wrong* or—more likely—the failure is only *relatively* necessary: relative to a background theory which *could* be given up, at a price.

Such replies take the form of further premises or assumptions (which the skeptic rejects) having the following features: (I) They "straighten out" the knot of the problem, thus fitting the solution in with (some) background theory; and (II) they become the focus for the skeptic's next objection—i.e., the knot is moved to a different location, but it's still there. Note that a knot which keeps moving to a different point on an open-ended (or infinite) string eventually disappears; i.e., enough premises can replace (become) the background theory. To continue the metaphor, a problem would be *truly* unsolvable if it could not be unknotted; but (A) the skeptical argument doesn't show that, and (B) such a situation is very likely inconsistent, and the problem ill-formed. (But we *should* be prepared for the possibility that even the ultimate (Peircean) complete theory is inconsistent, i.e., that inconsistency may be a premise we would have to accept in order to gain solutions at all.)

III. Solvability *vs.* Unsolvability

The structure of the dialectic is always this: A problem is posed, and a purported solution is offered; the purported solution comes with strings attached—premises or implications which an objector rejects. (The solvability skeptic is simply the universal objector, finding fault with *all* purported solutions.) But the purported solution *would* work if these further principles were accepted. Indeed, solution proposers claim that these principles *must* be accepted *because* they accept the proposed solution.[5]

The thesis of the last section can now be made more general: it is not merely that solutions are always conditional, but that they are "seeds" which "grow" background theories:

> Any purported solution, *S*, to a problem, *P*, is really part of a *theory*, among whose other parts are the background principles entailing *S* and the further principles (or commitments) entailed by *S*.

According to this thesis, then, an in-principle unsolvable problem would be one for which *no* theory contains a solution. When this is the case, it may be necessary to "dissolve" the problem, e.g., to give up the entire theory which has the problem.[6]

Are there no solutions *simpliciter*, unconditional solutions, non-theory-laden solutions, solutions without commitments? As the skeptic might put it, are there any *solvable* problems? Archetypically, as we've noted, mathematical and (to a lesser degree) scientific problems are solvable. Indeed, Mates (1981: 7f) discusses Zeno's paradoxes as paradigms of solvable problems because they have a unique "locus": a "point of contact" which enables a generally accepted solution to come forth.

But *is* there a locus in Zeno's case? There is, perhaps, a locus enabling a solution that does minimal damage to (and coheres well with) our world-view. But notice: *our* world-view, not necessarily Zeno's! If this is paradigmatic of the difference between solvable and unsolvable problems, then it can be seen that the difference concerns the coherence of the purported solution *and its attendant commitments* with our (current) world-view.

That is, the structure of the problem/solution dialectic is the *same* both for so-called solvable (e.g., mathematical or scientific) and for so-called unsolvable (e.g., philosophical) problems: All solutions are conditional upon certain premises. The solutions of so-called solvable problems have further commitments (e.g., axioms) which are more acceptable (more coherent with our other commitments) than those of philosophical problems; that's the only *real* difference. But even they don't *have* to be accepted; in fact, the more philosophical problems in mathematics and the sciences are usually unsolved precisely because of disagreement over assumptions.

IV. Intellectual Development and Epistemological Progress

A. *Perry's Theory.*

The hardened skeptic may take these observations as support for his position: after all, haven't I been saying that there are no absolute solutions to *any* problems? I think we may get a clearer picture of the solvability skeptic's place in the epistemological scheme of things if we turn for a moment to a striking parallel offered by William G. Perry's theories about college students' attitudes towards knowledge.[7]

Perry describes a sequence of "positions" forming a "scheme of cognitive and ethical development" that college students progress through. You will see how appropriate it is for them; I think it is also appropriate and, at least, illuminating on a larger scale.

Position 1 is Basic Duality: There are right answers to all questions, engraved in tablets in the sky, to which the teacher has access, and to which, through hard work, we (the students) will, too. (Cf. Plato, perhaps.)

Position 2, Dualism, results when we realize that some authorities (notably English teachers, but philosophers will do nicely) disagree on correct answers, while others (mathematics and science teachers) agree. Hence, the former must have clouds over their heads, obscuring their vision of the tablets. But all *is* known; we just have to follow the *right* authorities.

In Position 3, Early Multiplicity, we take the view that only *most* knowledge *is* known, but *all* is know*able*. The answers are there, but we haven't found them all yet. (Positions 2 and 3, by the way, are said to be the positions of most college freshmen.)

In Position 4 (4a, in Perry 1981a), Late Multiplicity, it is felt that "Where Authorities don't know the Right Answers, everyone has a right to his own opinion; no one is wrong" (Perry 1981a: 79). "In some areas we still have certainty about knowedge [e.g., mathematics]. In most areas [e.g., philosophy] we really don't know anything for sure" (Cornfield and Knefelkamp, 1979).

The next position, Contextual Relativism, which is viewed as a more "mature" position, holds that "*All* knowledge is disconnected from any concept of Absolute Truth," though there are standards—"rules of adequacy"—that theories must adhere to (Cornfeld and Knefelkamp 1979; my emphasis).

Progressing to the most "mature" positions, we next find:

Position 6, Commitment Foreseen, in which the seeker of knowledge realizes that he must make *some* commitments among competing theories; this is accomplished in Position 7, Initial Commitment;

Position 8, Orientation in Implications of Commitment, in which one balances the several commitments made in 6 and 7; and

Position 9, Developing Commitment(s), in which it is seen that one must retrace "this whole journey over and over" (Perry 1970, 1981a).

There are, in addition, three paths of "deflections from growth," which tend to occur before Position 5 or 6, of which only one need concern us here:

"*Escape*. Alienation, abandonment of responsibility. Exploitation of Multiplicity and Relativism for avoidance of Commitment" (Perry 1981a: 80, 90).[8]

B. *The Skeptic's Position.*

According to Mates, "traditional skepticism ... held that we can only know how things *seem* to be; knowledge of how things really *are* is impossible.... Hence the skeptic considers that the right attitude towards questions concerning the true nature of things is suspension of judgment...." (Mates 1981: ix). This is somewhere around Position 4, but it is also a form of Escape. According to the Perry scheme, a more "mature" Position would hold that all we can know is how things *would* be *were* we to commit ourselves to certain assumptions, i.e., to hold to a conditional or theory-relative view of solutions to problems.

Solvability skepticism "doubts that [the major problems of [philosophy] ... are solvable or even 'dissolvable'; and ... it argues that the reasons given on both sides of the issues are equally good ..." (Mates 1981: ix). This is more than suspension of judgment; it is clearly to refrain from making a commitment. For if 'judgment' is to be understood as elliptical for "rational judgment," then surely one could suspend *that*, yet make a commitment nonetheless. If, indeed, the "reasons ... on both sides ... are equally good," then it doesn't seem *irrational* to make a commitment in such a case on the basis of, say, the toss of a coint or ontoloico-aesthetic preferences. If it really makes no difference *which* solution and attendant theory we commit ourselves to—because each solution is accompanied by a complete and consistent (or, at worst, equally incomplete and inconsistent) world-view—then it shouldn't matter what method of choice we use.

I would claim that the skeptical position is Perry Position 4a. At best, it is 5; more likely, it is an Escape (which happens at around Position 4; cf. the chart in Perry 1970). The skeptic is correct to a point: there are no right answers. There are only relative (conditional) ones, to some of which, eventually, we *should* commit ourselves, moving to Position 6, and beyond.

My thesis, then, is an anti-skeptical one: there *are* solutions, but they are all theory-laden, hence theory-relative. And this is *not* Position 4, because I *also* claim that we must *commit* ourselves to some theory (thus siding with James's Will to Believe, rather than Clifford's duty to suspend judgment).[9]

Can a philosopher be thus commited? After all, is it not the philosopher's *duty* to question all assumptions, examine all commitments? It would appear that we *are* stuck at Position 4, at Multiplicity. But appearances deceive: Philosophers are *really* at Position 9, which can be mistaken for a false multiplicity. For we *can* (indeed, *must*) question assumptions, while remaining committed to them (at least *pro tempore*), as in Neurath's boat metaphor.

V. Problems, Puzzles, and Paradigms

Let us return to the distinction between philosophy and mathematics, wherein the former is viewed as presenting unsolvable problems, the latter, solvable ones. This, I am suggesting, is a false dichotomy; both philosophical and mathematical problems have solutions, but they are *all* conditional or theory-relative solutions. The distinction, if any, is that the assumptions in the mathematical case are (almost) universally accepted, unlike the philosophical case.

But the assumptions *are* there: At the very least, one *could* say that '2 + 2 = 5' is true *if* one assumed that '5' denoted what '4' ordinarily does. A better example is "the" Law of Non-Contradiction, any formulation of which involves one in commitments to (or assumptions about) the nature of objects, properties, negation, etc.—witness the Russell-Meinong disputes (cf. Rapaport 1978: 165f). But perhaps of most significance is that theorems are virtually always conditional in form—a particular claim (solution to a problem) is true *under certain conditions*. Even apparently "unconditional" theorems are conditional upon axioms and the nature of the underlying logic. And axioms are conditional upon philosophical assumptions about the nature of mathematical objects.

(On the other side, one might claim parity between mathematics and philosophy on the grounds that there are philosophical truths that are assumption-free: such first-person observation reports as "it seems to me that I am now experiencing red," say; but surely this claim is laden with theories about experiences, colors, the nature of "seeming," etc.)

There are, of course, problems in mathematics which lack solutions because of a lack of agreement on assumptions (though, arguably, these are problems in the more philosophical areas of mathematics). The difference between these two kinds of problems may be described by adapting the terminology of Kuhn's distinction between "problems" and "puzzles" (1962, Ch. IV). *Puzzles have* (unique) solutions; *problems* have lots of possible, equally (un-)acceptable, purported solutions. Puzzles are, roughly, what problems become when they are treated within a given "paradigm"; otherwise they are alike, for researchers within a given paradigm have agreed to accept the assumptions which allow the erstwhile problem to have a solution *simpliciter*. Puzzles play the role in "normal" science that problems do in "revolutionary" science.

Thus, the conjunction of all those premises whose acceptance permits problems to become puzzles (i.e., whose acceptance permits problems—as I used the term earlier—to have solutions) is the fundamental axioms, as it were, of a paradigm or of the theory "grown" by the solution—what Rescher (1978) calls a methodological orientation.

Indeed, Rescher's analysis of the structure of philosophical disagreement is in substantial agreement about the conditional structure of solutions and my Perrian analysis:

> A philosophical position thus always has the implicit conditional form: given a certain set of commitments regarding the relevant cognitive values, such and such a position on the question at issue is the appropriate one. (Rescher 1978: 229.)
>
> [A] *locally* optimal (or adequate) solution...is cogent for those committed to a certain probative-value orientation. And given that...[this is the] perspective [which] is apposite, it follows that such "demonstrations" as there are in philosophy...[i]n effect take the form: IF you are prepared to make certain procedural commitments..., THEN you will arive at a particular solution. A rational constraint is clearly at issue here, but it is basis-relative (or orientation-relative), rather than absolute. Yet it is not a matter of "anything goes...." (Rescher 1978: 232f.)

Since "All that one can do in philosophy," or, I would add, in *any* field, "is to view the issues from one or another of a limited number of 'available' methodological orientations" (Rescher 1978: 232), it follows that *truly* to defend solvability skepticism, one would have to show that within *each* methodological orientation, the issue at hand has no resolution—i.e., that within each paradigm, the puzzle *is* unsolvable, that there are *no* non-question-begging assumptions that entail the solution *simpliciter*. And this is impossible, for there is no way to know that we have considered *every* orientation, paradigm, or set of assumptions.[10]

This suggests, by the way, that there might be some a priori limitations on Hector-Neri Castañeda's program of "dia-philosophy": It suggests but does not *entail* this because his program does not assume that *all* theories be considered. According to Castañeda,

> *Sym-philosophical* activity consists in the development of philosophical theories, i.e., systematic hypotheses about the general structure of the world and of experience.... The ultimate aim is the comparative study of maximal theories in order to establish, through isomorphisms among them, a system of invariences. Such comparisons and the establishment of such isomorphisms and invariences is *dia-philosophy*. (1980: 14f.)

Thus, Castañeda also sees the task of philosophy as constructing theories which, then, can yield theory-relative solutions to problems. Varying theories must all be developed more or less simultaneously, each susceptible to major criticism only when completed (1980: 20). And he agrees with the Perrian view that, as he calls it, the "Carnapian principle of tolerance: Let everybody work in the system of his choice" must be superceded, "if," that is, "dia-philosophy turns out, empirically, to be feasible" (1980: 21).

It *is* thus feasible, in a simple fashion, as soon as there are a finite number of completed (or nearly completed) theories. But if one wants *complete* dia-philosophical results, then the reasons I have given for the skeptic's failure to show that philosophical problems are unsolvable—and hence to show that there cannot be even one philosophical theory—are *also* reasons for thinking that such complete dia-philosophical results cannot be forthcoming.

VI. On Progress in Philosophy

There is a potential objection to my discussion—that I have missed the solvability skeptic's point. Possibly, the thesis is merely that there are philosophical problems which *don't*, or will *never*, admit of *generally accepted* solutions, with no further implications about unsolv*ability* intended. Surely this *does* bode ill for the hopes of "success" or progress in philosophy, and supports the distinctions between philosophy and mathematics. But this thesis is not as astounding as, e.g., Mates's claims about absolute insolubility (1981: ix-x); and "don't" seems too parochial, while "never" is surely too pessimistic, though closer to Mates's position: "there does not appear to have been one iota of progress toward a generally acceptable solution" of any major philosophical problem (Mates 1981: 7).

Can there be progress in philosophy? If so, why does philosophy not *appear* to progress, and why *do* mathematics and science appear to?

There is a simple reason in the case of science. There is a sense of "progress" according to which it is viewed to be "progress" to replace one paradigm, etc., by another. Science, though, tends to be more revolutionary than philosophy, thus lending support to the belief that science "progresses" while philosophy doesn't.

Mathematics, at its lower levels, is a Perry Position-2 discipline—its "problems" are really all "puzzles"—because of the assumptions *pro tempore* at the higher levels. Thus, all solutions are *really* conditional or theory-relative at the lower level, though they do not *appear* to be:

> [G]iven the lengths of the sides of a rectangle, how does one find its area? A...better problem is, does every plane rectangle have associated with it a numerical quantity which can meaningfully be called an area?...[T]he previous problem cannot be solved unless the answer to this one is yes. Yet very little emphasis is put upon this last question in elementary mathematics. Its answer seems obvious: it is taken for granted.... [M]athematicians have become extremely wary of taking anything at all for granted. Accepting something as 'obviously true' has led them astray too often. (Ogilvy 1972: 5.)

At its higher levels, mathematics is as "open-ended" as philosophy: "As usually happens when mathematics makes a great advance, new insights are achieved regarding concepts which had long been taken for granted" (Wilder 1973: 175).

On the other hand, philosophy, by its self-conscious, constantly questioning nature, is "open-ended" at *all* its levels. This makes it seem as if philosophy cannot progress because all attempts at progress are immediately blocked; but the *process* of "doing philosophy"—of constantly challenging and questioning—is the very essence of progress. Thus, the *illusion* of there being progress in mathematics while there is none in philosophy is due both to a too-narrow view of the nature of mathematics and to the refusal to consider progress as other than "success."

There can be (and is) progress in philosophy, for *the central stumbling block*—viz., the apparent unsolvability of philosophical problems—*is illusory*. Surely, there can be a trivial, or non-negative, sort of progress: an out-and-out error can be found in someone's theory, or one can correct one's own earlier writings. (Of course, the earlier work might have been better!) In a more positive sense, philosophy progresses whenever anyone builds upon or extends one's own work or the work of others. True, this may ultimately turn out to have been a wild-goose chase, but until that is known, it counts as progress: "the philosopher who refines the Kantian imperative contributes to progress, if only to that of the group that shares his premises" (Kuhn 1962: 161). And even if it has been a wild-goose chase, there may have been progress in the senses that we understand the problem better and that we may have gotten interesting and useful by-products from our study of it.

Finally, there is progress even if the only sense in which we understand the problem better is the important one that we know what *won't* work;[11] consider what was learned about Hilbert's formalistic program in mathematics from Gödel's incompleteness theorem. But there is progress especially if we learn as a result what premises we have to accept if we want a solution.[12]

For to know what *won't* work is to know what *would* work *if* we were willing to accept those principles whose rejection forestalls a solution. Accepting such principles allows problems to be solved (thus allowing the number of solutions to be a measure of progress).

Knowing what our commitments must be for us to have solutions is progress, for philosophy is such that its problems are only solvable in the conditional or theory-relative sense, not in any absolute sense. But philosophy is not alone in this; in any discipline where there is progress—in science, in mathematics, as well as in philosophy—solutions are theory-relative, and so all "progress" in the same way, namely, *within* the framework of a methodological orientation, a paradigm, or a commonly held set of commitments.[13]

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NOTES

1. I shall not distinguish between "unsolvable" and "insoluble," though possibly a useful distinction could be made. Cf. the *OED* articles: "insoluble," "insolvable," "unsolvable;" and Fowler 1965: 272f, 666 (on "in- and un-," esp. p. 273; and "unsolvable," resp.).

2. Nor shall I distinguish between either "solution" and "answer" or "problem" and "question." Here, no doubt, there are interesting distinctions (e.g., "problem" as "research project," rather than a mere "question"; cf. Ogilvy 1972: 3, 5), but I shall assume that there is a natural correspondence between problems and questions (inducing one between solutions and answers) which makes these distinctions unimportant for the present purpose.

3. For an interesting twist on the unsolvability of the former problem, see Stent 1981: 36.

4. Alternatively, some "mathematical problems have different answers, depending on the model used for set theory" (MacLane 1981: 470): solutions depend upon or are determined by assumptions or background theory.

5. As Wesley Salmon has put it, one man's *MT* is another man's *MP*onens.

6. E.g., the revised Meinongian theory of Rapaport 1978 appears to be inconsistent. The problem of eliminating the apparent inconsistency can (I believe) be solved by adopting a principle to the effect that not all well-formed open sentences correspond to properties (cf. Rapaport 1981), together with any other principles entailed by this one either separately or in conjunction with further principles of the revised Meinongian theory. But suppose that *no* such principle could solve the problem. In this case, the problem could be "dissolved" by rejecting the principles that there are two (distinct) modes of predication which are such that a single property can be predicated of a single (Meinongian) object in two (distinct) ways. This would be to give up an essential feature of the theory and, hence, it would be to give up the theory itself, and—along with the theory—the problem it spawned. (There being two modes of predication which do *not* permit the predication of a given property to a given item in *both* ways does not of itself lead to inconsistency; cf. the two modes of predication discussed in Dicker 1981 or, more relevantly, those discussed in Castañeda 1972.

7. The *locus classicus* is Perry 1970, but I shall refer mainly to the more accessible versions in Perry 1981a and Cornfeld and Knefelkamp 1979.

8. There are also Transitions between the Positions, which, while essential to the scheme, I have omitted for ease of exposition.

9. As Randall Dipert pointed out to me.

10. Even if there *were* some way to ensure that all theories had been considered, it might still be impossible if one accepts inconsistent orientations, paradigms, or assumptions—plus *classical* logic!

11. As Morton Schagrin has often pointed out to me.

12. To paraphrase the famous financier's question, "Do you sincerely want to be rich?", we may ask: Do you sincerely want a solution?

13. The idea for this paper arose from discussions during my participation in an NEH Pilot Grant at Fredonia on the "Humanistic Component of General-Liberal Education" (Summer 1981). An earlier draft was presented at the Fredonia Philosophy Department Staff Symposium in December 1981; I am grateful to Carol Brownson, Randall Dipert, Stephen Knaster, Marvin Kohl, Kenneth Lucey, Tibor Machan, David Palmer, and Morton Schagrin for their comments.

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