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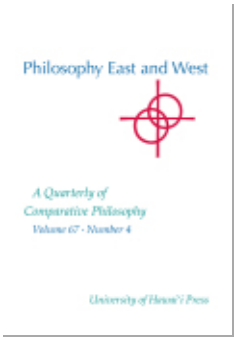

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What is the place of philosophy in today's intellectual culture? What *should* its place be? My intent, ultimately, is to answer this second, and more interesting, question, to show that philosophy should be a truly global dialogue the aim of which is to discover what I shall refer to as natural truths about us and about the world in which we live our lives. But in order to show the place of philosophy in this way, I need to begin by focusing on the place of Western philosophy, in particular analytic philosophy, in today's intellectual culture. If philosophy is to emerge as a truly global dialogue in the intellectual culture, we need explicitly to recognize that philosophy is not and cannot be a science but is instead a humanistic discipline. And we will recognize this only if we understand both why philosophy has come to be seen, at least in most analytic circles, as a science, and why it cannot be one.

In the first two sections an account is sketched of why Western philosophy in general and analytic philosophy in particular tend toward scientism, and as a result have no real interest even in their own histories let alone in cross-cultural engagement. The third section maps out an alternative path forward from the nineteenth century, one that vindicates Bernard Williams' conception of philosophy as a humanistic discipline aimed at understanding our distinctively human being in the world. Philosophy so conceived is constitutively engaged not only with its own history but also with philosophical traditions other than its own. It is inherently global.

I. Western Philosophy and Science: Some History

Since its first founding by the ancient Greeks, philosophy in the West has combined the call for self-knowledge with a vision of a purely rational, non-sensory and non-perspectival, knowledge of reality as it is. Only in the seventeenth century, with the development of, first, Descartes' analytic geometry (1637), and following it Newton's mathematical physics (1687), did it begin to seem that the two projects might be essentially different. And once physics *had* emerged as an autonomous, experimental science, the idea that philosophers might discover substantive truths about reality through reason and reflection—as, for example, Descartes had tried to do—came to seem deeply problematic. How, Kant would ask, can one come to know anything that is at once necessary, that is, a priori, *and* a substantial truth about reality, synthetic? If the truth is substantial then one would think that an empirical investigation would be needed to discover it; but if an empirical investigation *is* required then it cannot be a necessary truth that we have discovered, at least not *as* necessary, because experience can tell us only what is, never what must be. Kant's

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solution to the difficulty is well known: various features of our experience of reality, including its spatial and temporal character as well as its lawfulness, are grounded not in the reality cognized, as we had hitherto assumed, but instead in the cognizing subject. As necessary conditions of our capacity for knowledge, they are at once knowable a priori and real and nontrivial features of the reality that we know. Notoriously, this can work only if the reality known, while empirically real, is transcendentally ideal.

Whether or not he did so self-consciously, Kant clearly aimed to respect the interweaving of self-knowledge with knowledge of reality as it is that is the legacy of ancient Greek philosophy. And such an interweaving is possible for Kant, insofar as it is, because the self that is known is now to be conceived not, following Aristotle, as a kind of animal, the rational one, but instead, following Descartes, as *distinctively* rational, as rational as *contrasted* with animal. As Kant thinks of it, his is "the genuine age of criticism," an age that "demands that reason should take on anew the most difficult of all its tasks, namely that of self-knowledge *[Selbsterkenntnis]*."[1] Kant's self-appointed task was thus to provide a critique of pure reason "by which reason may secure its rightful claim" and thereby to set philosophy on the secure path of a science.[2] In short, for Kant, self-knowledge demands a critique of pure reason, and that critique in turn sets philosophy on the sure path of a science. Philosophy, like mathematics, is henceforth to concern itself with synthetic a priori judgments, as such judgments contrast both with analytic judgments the negations of which are contradictory, and with the a posteriori, synthetic judgments of the empirical sciences, both natural and social, that can be known only on the basis of sense experience.

Kant's conception of Western intellectual culture was and remains today profoundly influential—so much so that often its influence is simply invisible to us.[3] Nevertheless, this conception was fatally compromised when European mathematicians began in the nineteenth century to eschew the practice of constructive algebraic problem solving characteristic of the work of, say, Euler and Gauss, in favor of deductive reasoning directly from concepts. Two paths forward opened up. The first and less radical option was to hold that although Kant had clearly been wrong to think that the practice of mathematics constitutively involves the construction of concepts in pure intuition, he was nonetheless right about logic, right, in particular about the merely explicative power of deduction. The more radical option was to take Kant to have been wrong even about logic, to have been wrong about logic *because* he was wrong about mathematics. On this latter view, what developments in mathematics in the nineteenth century show is that deductive reasoning can after all be ampliative, a real extension of our knowledge. This latter path was not, however, pursued, nor even recognized as a possibility by most practicing philosophers. It was the former path, the idea that Kant was wrong about mathematics but not about logic, that would shape the course of philosophy in the twentieth century, at least in Europe and the English-speaking world. The judgments of mathematics thus came to be conceived not as synthetic a priori, and hence real extensions of our knowledge, as Kant had thought, but as analytic, merely explicative, because known by reason

and logic alone. And with mathematics purged of the synthetic a priori there seemed no good reason to recognize it in philosophy either.

Eschewing the idea of the synthetic a priori, but not the overall Kantian framework, philosophers in Europe and the Americas were left with analytic judgments and a posteriori judgments. And given that the latter are clearly the concern of the empirical sciences, it came to seem that philosophy must then be, as mathematics had come to seem to be, a purely *logical* discipline—in Kant's sense of logic now formalized in an adequate symbolism and extended to the full logic of relations. Thus was born the project of analysis of, for instance, Russell's theory of descriptions and Wittgenstein's *Tractatus*.[4] In this view, philosophical problems arise because we are conceptually confused, bewitched by the surface grammar of our sentences. The task of philosophy is to analyze our claims, uncover our confusions, and bring clarity to our thoughts.[5] Western philosophy had once again risen from the ashes, once again been set on the secure path of a science.

According to Kant, there is no need for mathematicians to analyze their concepts. They need only to synthesize concepts out of mathematical primitives that are, Kant thinks, readily grasped with clarity and distinctness because they are constructible in pure intuition. It is only philosophers who must deal with concepts that are confused and obscure.[6] Already in 1817, Bolzano's proof of the intermediate-value theorem—the starting points of which were provided by his analyses of the concepts of continuity and convergence—showed that this is not so. Like the concepts with which the philosopher is concerned, centrally important concepts of mathematics, at least of the mathematics of Bolzano's day, are not at all clear and distinct. What mathematics needs is not the synthesis of concepts from primitives, and their construction in pure intuition, but instead the careful analysis and definition of mathematical concepts, and deductive reasoning on the basis of the newly defined concepts.[7] Russell's idea that the central task of philosophy is the analysis of our concepts and claims is modeled on just this practice of analysis as it arose in nineteenth-century mathematics. As mathematical analyses of mathematical concepts enable us to replace our intuitive conceptions of mathematical notions with concepts that are mathematically tractable (e.g., the intuitive notion of a limit with Bolzano's epsilon-delta definition), so in philosophy, Russell thinks, our intuitive non-mathematical notions, such as that of a denoting phrase, are to be analyzed and ultimately replaced, in this case by Russell's theory of descriptions. It was thus that, after over two millennia of "glib assertions . . . and equally glib denials," philosophy was to be finally realized as a *rigorous, scientific,* and *fruitful* mode of intellectual inquiry.[8]

II. The Place of Analytic Philosophy Today: Two Views

Early analytic philosophy, as we have just seen, was articulated within a broadly Kantian framework, though without the synthetic a priori. There are, on the one hand, issues of meaning and analyticity to be addressed by the philosopher, and in a different way by the mathematician, and, on the other hand, questions of empirical

fact, the synthetic a posteriori, to be addressed by natural and social scientists. Unfortunately, as Quine famously argues in "Two Dogmas of Empiricism," Kant's analytic/synthetic distinction cannot support a division of our intellectual labors into mathematics and philosophy on the one hand and the empirical sciences on the other.[9] And it cannot because no principled line can be drawn between matters of meaning, intended for the philosopher (and in a different way for the mathematician), and matters of fact to be taken up by empirical scientists. There simply is no truth by virtue of meaning because anything we think we know, even what we (think we) know "by virtue of meaning alone," can be called into question as experience demands and reason sees fit. Everything we think we know thus inextricably combines aspects of meaning *and* answerability to what is. There is *only* a continuum of relative centrality in the whole web of belief. And now it seems that there really is nothing distinctive left for the philosopher to do. Philosophy, if it is to exist at all, must be "naturalized," folded into the empirical sciences. Philosophy is continuous with the empirical sciences, distinctive only in occupying the more abstract and theoretical end of the continuum, that is, the more centrally located portions of the whole web of belief.

In the Quinean view, *all* our intellectual inquiries are more or less empirical, more or less directly answerable to the tribunal of experience. Even mathematical work is contentful, insofar as it is only by virtue of its indispensability to the work of the empirical sciences.[10] Still, it seems clear that mathematics has its own place in the culture overall in a way that philosophy, for Quine, does not—at least not now. And the reason, perhaps, is the fact that over the past four centuries the various natural and social sciences have, one by one, been hived off Western philosophy to become autonomous disciplines, each with its particular subject matter and distinctive mode of inquiry. If we think of the ancient Greek discipline of philosophy as a kind of proto-science (alongside ancient mathematics), each daughter discipline of which eventually achieves sufficient autonomy and maturity to come to occupy its own position in the academy, then it is not at all unreasonable to think that in time all the contents of the proto-science that is philosophy will have been relocated, leaving philosophy with nothing with which to concern itself. The emergence of cognitive science and neuroscience has furthermore seemed to many to *show* that that time has come. If consciousness, the last great mystery of the natural world, is—thanks to recent technological advances, for example, in brain imaging—now amenable to empirical investigation, then perhaps there really is nothing left for the philosopher to do. To this way of thinking, it has turned out that the sort of non-empirical inquiry the philosopher had engaged in had seemed viable as a form of intellectual inquiry only because, and so long as, we did not yet have the resources to engage in properly empirical investigations into the relevant phenomena. Philosophy, it has turned out (to this way of thinking), was nothing more than an incubator for the empirical sciences. Now that all the chicks have been hatched, there is no role left for philosophy to play. Or if there is, that is only because there yet remain questions that the empirical sciences do not yet know how to answer.[11]

The Quinean view is that philosophy is continuous with the empirical sciences. Insofar as it has any place at all in the intellectual culture, it is as a science. Bernard Williams defends a very different view. According to him, philosophy is a humanistic discipline rather than any sort of a science, as is indicated already by the place of the history of philosophy in its practice.

In "Philosophy as a Humanistic Discipline," Williams characterizes philosophy as a "general attempt to make the best sense of our life, and so of our intellectual activities, in this situation in which we find ourselves."[12] And it is clear that by "our life" he means not our life as rational beings, whatever sort of history or culture or body we might also have, but instead our life as the rational animals we actually are, "that is to say, humans as contrasted with other possible beings."[13] Williams does not deny that the sciences play a central and distinctive role in the project of discovering how things are "in themselves," the project of disclosing reality as it is anyway, "independent of the local perspectives or idiosyncrasies of enquirers."[14] What he denies is that it follows that there is no independent and in its way distinctive role to be played by philosophy alongside the sciences. There is an important distinction to be drawn between, on the one hand, the absolute conception of the mature sciences—particularly, I would say, that in fundamental physics that, as purely mathematical, is in principle the same for all rational beings whatever their biological, social, and cultural forms of life—and, on the other hand, more local and perspectival concepts that are rooted in "our more local practices, our culture, and our history." But it does not follow that either is intrinsically superior to the other—either the absolute conception (presumably because it is absolute) or the more local and perspectival (on the grounds, perhaps, that in actuality *all* our knowledge is ineluctably local and perspectival).[15] As Williams urges, the two sorts of concepts instead have very different roles to play in the intellectual culture, the former in coming to know how things are in themselves and the latter in our coming to understand our own lives, including our lives as scientists in pursuit of the absolute conception.

I do think that it should by now—after the rise of modern science, after Kant, after Quine—be *clear* that philosophy is not in the business of disclosing reality as it is in itself. Philosophy is not an empirical discipline as the natural and social sciences are, and because it is not, it is not at all suited to the task of revealing or disclosing things as they are—despite the fact that originally, in ancient Greek philosophy, no such distinction between philosophy and empirical science was discernible. And correspondingly, because the natural and social sciences *are* empirical disciplines concerned with addressing what is as a matter of fact the case, they are likewise not at all suited to address questions about how and why things *ought* to be thus and so. Understanding, for example, the fact that inquiry in mathematics and the natural and social sciences answers to the norm of truth, and also how it is that such inquiry does this, are distinctively philosophical achievements that, just because they concern not only what is but what ought to be, cannot be achieved by appeal to what as a matter of empirical, that is, psychological or sociological, fact such enquirers do on a day-to-day basis. The task of making sense of the activity of

the sciences as *rational,* answerable to the norm of truth, is in the nature of things a task that only the humanistic discipline of philosophy is in a position to tackle.

One important mark of a humanistic, as contrasted with a scientific, discipline is the constitutive place of its history in its practice. As Williams explains, the sciences do not need to address their own histories because they are *vindicatory*: "the later theory, or (more generally) outlook, makes sense of itself, and of the earlier outlook, and of the transition from the earlier to the later, in such terms that both parties (the holder of the earlier outlook, and the holder of the later) have reason to recognize the transition as an improvement."[16] Philosophy is not vindicatory in this way in large part because, in philosophy, developments tend to be as much about what forms of argument *ought* to be dispositive, what *ought* to count as a good reason, as about what we in fact have good reason to hold. It is through the study of the history of philosophy, and only through such study, that we come to understand how certain forms of argument have come to prevail, without their having come to prevail as the result of argument. A striking example is Descartes' *Meditations on First Philosophy.* Given that Descartes' aim in this work is to set aside the testimony of the senses as traditionally conceived, Descartes cannot provide arguments for his conclusions that will be rationally compelling to any and all readers. Because Descartes' aim is radically to alter our most fundamental sense of what makes sense at all, such arguments as he provides cannot be rationally compelling to the Aristotelian. They are compelling only to one who has already become a Cartesian. The arguments and explanations of the *Meditations* are not vindicatory.

It may seem to follow that the findings of philosophy or our own hard-won views are thus without any justification or legitimacy. Williams argues that it does not. We are contingently formed by our history, but it is nevertheless a mistake, one that is akin to scientism, to think that what is needed in philosophy, if it is to have any legitimacy at all, is an absolute justification, one free of all the contingencies of our actual historical perspective. There is, Williams argues, "no inherent conflict among three activities: first, the first-order activities of acting and arguing within the framework of our ideas; second, the philosophical activity of reflecting on those ideas at a more general level and trying to make better sense of them; and third, the historical activity of understanding where they came from."[17] As in any form of intellectual inquiry we must begin where we are, with what we think we know and understand. But in philosophy in particular we need also to understand how we got here if we are to be properly critically reflective about where we are. Analytic philosophers, for example, tend to think that the history of philosophy does not matter to its practice (presumably because philosophy is supposed to be a science), and as a direct result, those analytic philosophers who think that philosophy ought to be conducted as a science often do so without *any* understanding of why they think this. In becoming "scientific," analytic philosophy has become unreflective and uncritical, and as a result is considerably less valuable intellectually than it might be—so much so that it is by now possible legitimately to question whether it has any place at all in the intellectual culture.

Williams claims that the fact that the sciences are in the business of describing reality as it is anyway—the same, as I would put it, for *all* rational beings whatever the contingencies of their biological and sociocultural forms of life—does not entail that philosophy no longer has a distinctive place in the intellectual culture. The task of philosophy is not continuous with that of science; it is to understand, make sense of, our distinctively *human* lives, including our lives as mathematicians, natural scientists, and philosophers. "Why," Williams asks, "should the idea that science and only science describes the world as it is in itself, independent of perspective, mean that there is no independent philosophical enterprise?"[18] According to him, "that would follow only on the assumption that if there is an independent philosophical enterprise, its aim is to describe the world as it is in itself, independent of perspective."[19] Given that that assumption is unfounded, the move from the claim that science describes reality as it is in itself to the claim that there is no independent philosophical enterprise is, Williams thinks, a *non sequitur.* This, however, does not seem to be right, and we will see that it is our own intellectual history that reveals why it is not right.

Williams argues that advances in the sciences are vindicatory. But often they can be that only in the wake of the sorts of transformations in our ways of thinking that are characteristic of philosophy and are not vindicatory. Without Descartes' *Meditations,* Newton's *Principia* could not be seen as vindicatory. And Descartes' *Meditations* were in turn made possible by his advances in mathematics, in particular in analytic geometry, advances that involve, as I show in *Realizing Reason,* a kind of *inversion* of the order Descartes inherits from the tradition, the order that is also the order of our everyday lives. There are a number of aspects to this. Here we focus on two: the inversion in arithmetic and geometry that takes us from ancient Greek conceptions of number and space to modern conceptions, and the inversion in logic from the ancient Aristotelian idea that existence precedes essence to what Descartes describes as "the true logic" in which essence is prior to existence.

According to the ancient Greek conception, a number is a collection of units, from which it follows that zero is not a number, nor are negative and fractional numbers numbers. Indeed, even one is not a number, so it was argued, given that it is the unit out of which collections are formed and not itself a collection. Over time we learn not only about such numbers (even and odd, prime and composite, and so on) but also about the arithmetic relations that these numbers can stand in: twice three is six, eleven and seven is eighteen, the cube root of twenty-seven is three, and so on and on, until eventually one recognizes so many relations among numbers that one can perform a kind of figure/ground gestalt switch. The result is a conception of number as a node in a whole web of arithmetic relations. And now it seems perfectly intelligible that there might be negative and fractional numbers, perfectly intelligible that zero and one are numbers like any others. All are nodes in the web of arithmetic relations.

And something similar can happen with our conception of space. Although we begin with an experiential conception of space formed as we make our way through

the terrain from landmark to landmark, eventually, once we have synthesized all the routes we know from landmark to landmark onto one whole, we can perform another figure/ground switch, understand space not as consisting in the relative locations of landmarks but as an antecedently given whole of possible positions at which landmarks may, but need not, be located. The first conception of space is bottom-up and essentially object involving; the second, derived from and made possible through that first conception, is instead top-down and independent of the existence of any objects. As Descartes himself emphasizes, in his new form of mathematics it is not objects but the relations in which objects can stand that form the subject matter.

As Descartes vividly illustrates through his increasingly powerful stages of doubt in the first Meditation, his new mathematical practice is not dependent on the existence of any objects outside the mind—whether Forms and mathematicials as Plato had thought, or sensory objects considered in a particular way as Aristotle held. Simply by reflecting on innately known ideas of what Descartes describes as "true and immutable natures," the mathematician can make discoveries. It follows directly that the Aristotelians were wrong to hold that existence is prior to essence, that one can know the essence only of what exists. Instead, Descartes came to think, "we must never ask about the existence of anything [never ask *if* it is—*an est*] until we first understand its essence [*what* it is—*quid est*]."[20]

Though not in the same way enacted through a figure/ground gestalt switch, here again we have an inversion or reversal through which the old gives way to the new. But if that is right then there is a profound conceptual difficulty with Williams' idea that *both* vantage points might be viable, each in its own way. There is the way one thought before the inversion or figure/ground switch (the way of everyday experience), and the way one thinks after it (the way of modern science). And given the nature of the inversion or switch, it is senseless to suppose that one might nonetheless embrace both: the correctness of the one *entails* the incorrectness of the other. And this is just what we find in contemporary discussions in analytic philosophy. Either, with neo-Aristotelians such as John McDowell, one embraces the everyday, locating the practice of science within the everyday, as just one activity among many that people go in for, or one embraces the findings of science, demoting our everyday experience of things to a mere appearance caused in one by neuronal activity that is itself due to impacts on one's sense organs. One seems forced in this way to *choose* between reality as it shows up in everyday experience and reality as it is disclosed in the exact sciences. Given the dialectical relationship that the two inherit from the developments that gave birth to modern science, Williams' attempt to have it both ways—both the sciences with their absolute conception of reality and philosophy, the concern of which is our distinctively human perspective—must inevitably fail.

This is not, however, the end of the story. As I show in *Realizing Reason,* the developments in the seventeenth and eighteenth centuries that transformed, first, the practice of mathematics (in 1637 with the publication of Descartes' *Geometry*), then, the practice of physics (Newton's *Principia* in 1687), and finally, the practice of

philosophy (Kant's first *Critique* in 1781/1787) were *only* the first wave. As already noted, the practice of mathematics was again fundamentally transformed over the course of the nineteenth century, and the practice of fundamental physics was similarly revolutionized in the twentieth century. Philosophy, as already noted and as I argue at length in *Realizing Reason,* has not yet had its second revolution but has remained, until now, profoundly Kantian. Already by the end of the nineteenth century key resources needed for the second revolution in philosophy were made available in Frege's work, but that work was not at all understood. Although Frege's work is in fact radically post-Kantian, it was read by Russell and by twentieth-century analytic philosophers following him as in effect a mere extension of Kant.

I show in *Realizing Reason* that a new and more adequate reading of Frege's work grounds in turn a revolutionary new conception not only of the practice of philosophy but also of our cognitive relation to reality. (This is the second path forward from the nineteenth century that is referred to above, in section I.) What recent developments in mathematics and fundamental physics are shown to reveal in the light of Frege's work is that in fact we need both, *both* the everyday experience of reality that is enabled by our acculturation into a natural language such as Chinese or English *and* the view of reality that is enabled by the sort of purely conceptual mathematics that emerged in the nineteenth century together with the twentieth-century advances in fundamental physics that were made possible by that new form of mathematical practice. We do have these two views of reality enabled by these two very different sorts of language, both the natural languages of our everyday lives and the mathematical languages we have developed over millennia and employ in fundamental physics. The early modern mistake, we can see in retrospect, was to take one language to characterize the "inner realm" of meaning and significance, and the other to characterize instead the "outer realm" of brute causes. In fact, as I argue in *Realizing Reason,* natural and mathematical languages provide two radically different but, each in its own way, equally efficacious and viable modes of our cognitive access to reality.

And now we can see, at least in principle, how there can be *both* philosophy, the concern of which is the distinctively human world, that is, reality as it is disclosed in our everyday lives through the medium of the natural languages we speak, *and* the sciences, the concern of which is the absolute conception of reality, reality as it is disclosed to *any* rational being, regardless of its biological and sociocultural form of life, through the medium of the purely rational mathematical languages we have developed over nearly three millennia of first Western but now truly global intellectual history.

III. The Place of Philosophy

Philosophy in the West involved from the beginning what we are now in a position to see as two quite different projects with two very different goals, that of self-knowledge and that of the knowledge of reality as it is anyway. When they were

distinguished with the rise of modern science, and it had become clear that Kant's attempt to salvage philosophy as a science in the wake of that development had failed, it then seemed that we had to choose *either* philosophy and self-knowledge *or* science and knowledge of reality as it is in itself. (And given such a choice it must inevitably come to seem intellectually irresponsible to choose philosophy and self-knowledge over science and knowledge of reality as it is in itself.) But as I have suggested, we do not have to choose, and indeed must not choose. And once we realize this, we can see that Williams is absolutely right: philosophy is not and could not possibly be any sort of science. It is, just as he says, a humanistic discipline the aim of which is "to make the best sense of our life, and so our intellectual activities, in the situation in which we find ourselves."[21] The locus of philosophical inquiry is human life, our lives, in all their multifarious aspects and as we conceive and live them now. We begin, that is, where we are, with all that we think we know and understand, and all that puzzles us.

But we do not aim merely to understand all this, our lives as we conceive and live them now.[22] Philosophy as a discipline aims to get something *right.* The task is *properly* or *correctly* to understand both what it is to be human and the nature of the world in which we live out our lives. And this *is* a uniquely philosophical task, at once something we can get right, or wrong, and a form of knowledge that is in its own way non-empirical or a priori. The aim is self-*knowledge,* as that is henceforth to be contrasted with knowledge of reality as it is in itself, the same for all rational beings. I want now to clarify, if only in a preliminary way, just what this means, what philosophy so conceived is, beginning with the idea that we have two essentially different modes of cognitive access to reality, that of everyday life and that mediated by the language of pure reason, of contemporary mathematics.

In the early modern conception of our being in the world that is superseded by the philosophical developments that are made possible by developments in mathematics in the nineteenth century, causal impacts on our sense organs give rise to the appearances of things that are taken to constitute our everyday experience. The conception is clearly representationalist insofar as our cognitive access to things in the world is taken to be constitutively mediated by these appearances. We are in direct cognitive contact with the appearances and only indirectly, if at all, in cognitive contact with what gives rise to these appearances. According to the new conception made possible by nineteenth-century developments in mathematics, our cognitive access to things is neither merely immediate, as it is according to, say, Aristotle, nor ineluctably mediated by representations as in the early modern view. It is, as Hegel would say, at once an immediacy and essentially mediated. Although I will not try to develop or defend the view here, I think it can be shown that Frege's conception of language in terms of the twin ideas of a sense expressed and a meaning or signification designated is just what is needed to make fully intelligible this notion of mediated immediacy.[23] What I will do is illustrate the basic idea using a very different and much simpler, though I think sufficiently analogous, example: a plant taking in water for nourishment.

Before any living beings emerged on the earth through the processes of biological evolution by natural selection, there was water. Once there emerged living things—plants, say—water likewise emerges as something with the significance of being nourishing for plants. The plant emerges as an instance of some particular form of life, one with its characteristic powers, including the power to be nourished by various stuffs and characteristic patterns of behavior and growth, and correlatively the various bits of water come to be nourishing. As the stuff that is the matter of the plant is now properly described as *alive,* so the matter that is the water is now properly described as *nourishing*. Being nourished—of the plant by the water—is a form of immediacy, but it is an essentially mediated immediacy insofar as one can understand what is happening *as* a case of nourishing and being nourished only relative to the particular form of life of the plant. This is evident given that an individual that is an instance of a different life form could undergo what is biochemically exactly the same event involving the water, but in the life of that individual the event could be an instance not of nourishing and being nourished but instead of poisoning and being poisoned. The chemical event involving the water has this rather than that biological significance only as mediated by the relevant life form.

As a living organism is an instance of a (biologically evolved) form of life and cannot be adequately understood except as such, so a rational animal is an instance of a (socially evolved) rational form of life and cannot be adequately understood except as such. In both cases the form of life provides a kind of model and standard. Consider once more the general case, that of a living organism. In order to understand—indeed, so much as to *identify*—what it is doing, or what its parts are, or are for, one needs to know the *kind* of thing it is, and how things characteristically are for such a kind of thing. It is only in light of such knowledge about the form of life that one can judge of *this* instance that it has, say, wings, though unfortunately they are so deformed in this case that the thing cannot fly as it should. So it is with a rational animal. We need to identify the language that it speaks and, more generally, the rational life form it is, the form of life into which it has been acculturated, and to know as well how things characteristically are for such a life form, for example, what various words and phrases mean in the (socially evolved) language that this life form speaks. And in this case as well, it is only in light of such judgments about the form of life that one can judge of particular instances, say, of the sounds that a particular person now utters, what words they are and what the person is saying thereby.

Both life forms and languages and cultures emerge only through extended evolutionary processes (the one biological, the other social), and only in relation to them can we intelligibly speak of living and thinking things. As Sellars puts the point, "there is no thinking apart from common standards of correctness and relevance, which relate what *I do* think to what *anyone ought to* think. The contrast between *'I'* and '*anyone*' is essential to rational thought."[24] "It is the linguistic community as a self-perpetuating whole which is the minimum unit in terms of which conceptual activity can be understood."[25] And as an animal's environment, with its opportunities and hazards, emerges with the animal, so the world, with its perceptible objects and knowable aspects, emerges with a rational animal. We *are* in direct or immediate

cognitive contact with things in the world, much as the plant is directly or immediately nourished by the water, but in both cases the relationship is at the same time essentially mediated by the form of life involved.

As I show in *Realizing Reason,* the idea that we must choose between our everyday understanding and experience of reality and reality as we have learned to conceive it in the exact sciences—one or the other, but not both—belongs to a stage in our intellectual growth and maturation that we are now in a position to jettison. Once they are adequately understood, developments in mathematics in the nineteenth century *show* that we do not need to choose between the world as it is revealed in everyday experience and the world as it is revealed in fundamental physics. The second suggestion, more positively, is that it is our natural languages that open our eyes to reality as we experience and conceive it in our everyday lives, and it is sufficiently advanced mathematical languages, as they have emerged in the course of nearly three millennia of intellectual inquiry, that in their way open our eyes—more exactly, the eyes of the mind—to that self-same reality in fundamental physics. It is reality as it is made manifest through our most advanced mathematical languages that is the locus of *absolute* truth, truth that is the same for all rational beings whatever their bodily and sociocultural forms of life. But what, then, of reality as it is made manifest in everyday experience, as enabled by our natural languages? Is there also truth with respect to it? Or is it rather the case that everyday experience is *ineluctably* relative to a particular language and culture? Given that, as we well know, our everyday experiences are profoundly shaped by our acculturation, the idea that there might be what we can think of as a *natural truth* that is the same for all *human* beings, that is, for all beings with our sort of body and form of sensibility, can seem simply ludicrous. Cultural relativism seems inevitable. I will suggest that it is not.

The idea of *natural truth*, modeled on the idea of natural goodness in ethics, is the idea that some truths, while not the same for (available to be grasped by) *all* rational beings—as the truths of mathematics and fundamental physics are, at least in principle—are nevertheless valid for (available to) all *human* beings, all rational beings with our sort of body and form of sensibility.[26] Natural truth is incompatible with cultural relativism. If there is natural truth, if all human beings ought to perceive and think about at least some aspects of the sensibly perceptible world in some one, *true* way, then cultural relativism is misplaced. As things stand, people from radically different cultures do perceive and think in very different ways about the perceptible world we live in.[27] The question is: are they *right* to do so, or is there in fact a way that the humanly perceptible world, however we, or they, take it to be, *is* a way we—rational animals that we are—*ought* to take it? Are there natural truths?

One important reason for thinking that there must be natural truths is the fact that, in contrast with matters of taste, one *can* critically reflect on which (if either) of two culturally specific views of things are correct. Consider, first, a question of taste, the fact that, say, you like mango ice cream best while I prefer the taste of green tea ice cream. I can in that case *understand* your liking mango ice cream better than green tea ice cream, but I cannot *experience* what you experience, namely mango ice cream tasting better than green tea ice cream. If I could do that then I *would* like

the taste of mango ice cream better. There is no natural truth about which of the two tastes best; it is *only* a matter of taste. But one and the same person *can* learn to see a thing, say, some fish in a pond, both more (say) atomistically, as someone appropriately acculturated will tend to see it, and also more holistically and relationally, as someone differently acculturated might. And yet the two views are incompatible; they cannot both be right. Or so a student of Aristotle might argue. A student of Nāgārjuna might suggest instead that *both* views are needed if we are fully to account for how things are with the fish. Significantly, both our students can learn to see as the other sees, and can do so without losing thereby her original perceptual skills. And because we can do this, so it would seem, we cannot, as we can—indeed, must—with matters of taste, merely leave each to his or her view of things. The question as to the nature of fish is not a question merely about how things seem to one, as questions of taste are. Nor, obviously, is it merely a matter of convention how things are with the fish, as it is a convention which side of the road one should drive on or which utensil, if any, one should eat with. The question about the fish is a question about how things *are,* how rational animals like us ought rationally to perceive and think about fish. It is a question of natural truth.

If, as I have suggested, the practice of philosophy has not been revolutionized as it ought to have been in the wake of the nineteenth- and twentieth-century revolutions in the practice of mathematics and physics, but remains merely Kantian, then one obvious task for philosophy is to articulate the new mode of inquiry in philosophy that is enabled by these earlier revolutions much as Kant's revolutionary new form of philosophical practice was enabled by the revolutions of the seventeenth century. In *Realizing Reason,* I take up this task (among others), suggesting that if we are to come adequately to understand our being in the world then what is needed in philosophical practice at this particular juncture is a kind of Hegelian narrative of our intellectual growth and maturation, the sort of narrative I provide in *Realizing Reason.* What we need to focus on here is instead the thought that if, in addition to the absolute truths (the same for all rational beings) that it is the aim of the sciences to discover, there are also natural truths, truths about the everyday human world that are the same for all human beings whatever the contingencies of their history, language, and culture, then it is a task for philosophers in particular to discover such truths. Indeed, I would say, the task of discovering the natural truths has always been a principal task of philosophy—though it is only now that we have learned to distinguish natural from absolute truth that we are in a position clearly to see this.

What I am calling natural truths are not empirical truths, truths such as that water nourishes plants or that there are black swans, truths that can be discovered only through an empirical investigation into things. Our question about the fish, whether they should be conceived atomistically or more relationally and holistically, is not an empirical question; although various empirical facts about fish may be relevant to an investigation into the question, such facts will not settle the matter. To answer our question about the fish requires rational reflection, critical inquiry into how, all things considered, it *really* makes sense to understand the fish—not how we most naturally,

given our acculturation, think of the fish, or how it is most prudent or politically correct to think of the fish, but how any human being *ought* to understand fish. And there is no knowing in advance what will be relevant to one's investigation. Perhaps, for example, the atomistic conception is merely an appearance to be explained by appeal to the sociocultural and intellectual forces that were in play already in ancient Greece and would eventually reach their full flowering in early modern science. Perhaps that is a good way to think about fish on the way to realizing modern science, but nonetheless altogether wrong if one wants to understand the nature of the fish themselves. If so, one will discover this only by reflecting on the rise of modern science and its roots in the distinctive intellectual culture that was ancient Greece.[28]

Philosophy, like mathematics, is not an empirical discipline. Both are, as we say, a priori. It is important to be clear about just what this means. First, it does not mean "known with infallible certainty." To say that judgments, paradigmatically judgments in mathematics and philosophy, are a priori is not to say that they are infallible, or unrevisable in principle, or knowable merely by reflecting on what we already have in mind. On this point, as on many others, I think Sellars was absolutely right: *nothing* that we know is infallible, unrevisable in principle, or indubitable; anything that we think that we know might after all be mistaken. Nothing is Given. And yet, it is clear that not all forms of rational inquiry are empirical or a posteriori. What distinguishes a priori forms of inquiry is not that they are somehow immune to error and revision but instead the fact that, in cases of a priori inquiry, one does not need to rely on testimony, either the testimony of one's own senses or the testimony of others, in order to know. One can, at least in principle, see everything for oneself.

Think of the difference between what is required of a reader of an article in a scientific journal and what is required of a reader of an article in a mathematics journal. The former reader is told how the experiment was performed and what the results were, as well as what, according to the authors, the results mean. In order to learn from the article in the scientific journal, a reader must rely on the testimony of the authors, trust that they are telling the truth, that they did what they say they did and that the results were as reported in the paper. Of course, one can, in the case of a scientific finding, aim to do something similar, to reproduce the experiment and the findings. But one's own experiment is a different experiment from the original one, an experiment that one can likewise report but is not the very same experiment, except generically, as the experiment one first read about.

In the case of a reader of a proof in mathematics the situation is very different. Here one *can* engage in the very same course of reasoning as the original author. One can make exactly the same moves—not merely generically, but specifically. One can see for oneself *precisely* what the original author saw—again, not something similar or analogous, but *the very thing*. In the case of a proof written up in an article in a mathematics journal, a reader does not need to rely on the testimony of the author, does not need to trust that the author tells the truth. In mathematics one can, with appropriate effort, *see for oneself* how the reasoning goes, why the theorem

in question is true. And just this is essential as well to the practice of philosophy. There are, in principle, no authorities in philosophy, no expert witnesses, and no testimonies. In philosophy, as in mathematics, one can, in principle, see everything for oneself—and insofar as one can, one should.

Where the practice of philosophy seems to be profoundly *different* from the practice of mathematics is in its dialectical character, the fact that it constitutively involves critically reflecting on and adjudicating between a multiplicity of perspectives that often any particular individual can become familiar with, but only with the help of others. Mathematics is not dialectical in this sense, not constitutively. Certainly it is possible in the case of mathematics that someone else might see a possibility one had not seen, a case one had not considered, a jump in one's reasoning that one had been oblivious to. We see this happening, for example, in the discussions Lakatos rehearses in *Proofs and Refutations*.[29] But such dialectical moments are not constitutive of the very practice of mathematics. The system of internal checks and balances that characterizes mathematical practice ensures that in principle there is no barrier to one's taking into account, all on one's own, the various aspects of an issue in mathematics; in the case of a mathematical problem it is always possible for a single person to see all the sides of a problem, to consider all the relevant cases. Philosophical problems are in this regard essentially different.

Although both philosophy and mathematics are a priori disciplines—disciplines in which one can, in principle, see for oneself what is so, rather than relying on the testimony of either one's own senses or those of another knower—philosophy is unlike mathematics insofar as it is a *humanistic* discipline, a discipline concerned with understanding *our* being in the world. And that means, as we have already seen, that it is constitutively concerned with its past, its own history as a discipline. Given that so many of our ways of thinking are contingent on accidents of our history, we need to understand this history and these contingencies in order to achieve some critical distance from our own ways of thinking. Perhaps our current ways of thinking will survive scrutiny, but perhaps they will not. And for us so much as to begin such scrutiny we must know that we do not know. One way we discover this—that we do not know what we thought we knew, even what had seemed *necessarily* true—is by reflecting on how we got to where we are today, why we think as we think.

But as I have already indicated, the study of one's own past, while necessary, is not sufficient precisely because it is one's own. If we are truly to come to understand what it is to be human and the nature of the world in which we live and have our being, we need to study also the past, and current, conceptions of human beings with whom we do *not* share a culture and a past. The dialogue of philosophy, that is to say, must become genuinely cross-cultural, global. Because we are, each of us, instances of particular socially articulated forms of life—including institutional and academic forms of life—we come with quite contingent ways of understanding things that may not stand up to critically reflective scrutiny. We must come to understand other ways of seeing and understanding on the way to a way of seeing and understanding that

this is the way that, for a rational being with our sort of body and form of sensibility, things *ought* to be seen and understood. And this means that the method of philosophy, unlike that of mathematics, must be dialectical, and truly global. If one genuinely wants to know how things are with us, wants to make the *best* sense of our life, then one must want most of all to identify those of one's ways of thinking that do not stand up to scrutiny. And the way to do that is to study ways of thinking that are different from one's own, the more radically different the better. It is just as Daya Krishna says: "comparative philosophy has the chance to function as a mutual liberator of each philosophical tradition from the limitations imposed on it by its own past."[30]

As we well know, things can seem to make sense when in fact they do not. And this is true in mathematics as much as in philosophy. One strives to make sense of things and in the end one thinks one has done this; one thinks that one sees clearly how things are. But it can always turn out that one was mistaken. Again, there is no certainty; our powers of knowing are fallible. But if we can get it wrong we can equally well get it right. Our philosophical investigations can eventuate in knowledge and understanding. That our mathematical investigations can do this is due to the fact that we are *rational* beings, beings capable (fallibly) of recognizing what is a good reason for what—especially in mathematics, the purely rational concepts of which have sharp boundaries and, except for a handful of primitives, can be precisely defined. That our philosophical investigations can get things right is due to the fact that we are *human* beings, rational animals of a particular sort, a particular biological form of life with particular frailties and a particular form of sensibility. We can have the self-knowledge we seek in philosophy because we are, each one of us, human beings. But we do not know in philosophy *simply* by virtue of being one of us, a human being, as if there were no need for study, and listening, and learning, together with resolute critical reflection on what one has learned, in order to determine whether, and if so how, it really makes sense. But if that is right then it is an especially unfortunate error of analytic philosophy to think that somehow we already know everything we need to know in order to do philosophy, to think that we need only to reflect on what we already know to make the progress we need to make. Nothing could be further from the truth. Truly to make sense of our lives requires first and foremost knowing that and what we do not know, and *that* one has not the least chance of learning if one is convinced that one already knows everything one needs to know in order to do philosophy, that one needs only to reflect on what one already knows. Truly serious philosophical reflection must be not only historically informed but also truly global for just this reason.

IV. Conclusion

Although the requirement of self-knowledge that it is the task of philosophy to fulfill has in the West been intertwined from the beginning with the demand that we know reality as it is in itself, the same for all rational beings, it is now possible (in the wake of the developments in mathematics and fundamental physics over the past two

centuries) to dissociate the two projects. As it is now for the first time possible to see, we do not have to choose, and indeed must not choose, between the absolute conception of reality and that same reality as it shows up in our everyday experience. Philosophy and science are not one, as Quine suggests. But neither are they in any sort of competition. There are empirical questions, questions about the ultimate or absolute nature of reality that it is the task of the scientist (in particular the physicist) to answer. There are mathematical questions, questions about the concepts of pure reason the answers to which are proven a priori by mathematicians. And there are philosophical questions, questions about what it is to be human in the world in which we find ourselves. These questions are not empirical as the scientist's questions are, and their answers cannot be proven a priori as mathematical answers are. And yet they can be answered.

We philosophers begin where we are, with all that we think we know and understand, and all that is available to be learned. What we need to do to make progress is to acquire new ways of thinking and to employ precisely the sorts of rationally reflective criticism and dialectical reasoning that are a hallmark of reason and the special purview of the philosopher on these diverse ways of thinking. We need to *think* about the different ways people in different cultures have come to understand reality, and we need to come to better second thoughts about how things actually are with us and in the world around us. We need to attend to the natural truths. This, we have seen, is something that the philosopher and only the philosopher is in a position to do. A priori and dialectical as it has always been, philosophy, now a truly global philosophy, not only has but can finally also know its place in today's intellectual culture.

Notes

This essay is a much longer and much revised version of the paper of the same title that I presented at the 11th East-West Philosophers' Conference in Honolulu, in May 2016. My thanks to those present for very useful comments and discussion.

1 – Immanuel Kant, *Critique of Pure Reason,* trans. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), A xi. The first (A) edition of the first *Critique* was published in 1781, the second (B) edition in 1787.

2 – Ibid.

3 – As I explain in my *Realizing Reason: A Narrative of Truth and Knowing* (Oxford: Oxford University Press, 2014), this is true in particular of twentieth-century analytic philosophy.

4 – Bertrand Russell's theory of descriptions is first presented in "On Denoting," *Mind* 14 (1905): 479–493. See also Bertrand Russell, *Our Knowledge of the External World as Field for Scientific Method in Philosophy* (London: George Allen and Unwin, 1926), first published in 1914 by Open Court. Also see Ludwig Wittgenstein, *Tractatus Logico-Philosophicus,* trans. D. F. Pears and B. F. McGuinness (London and Henley: Routledge and Kegan Paul, 1961).

5 – Rolf George and Nina Gandhi argue, in "The Politics of Logic," *Croatian Journal of Philosophy* 5, no. 3 (2005): 31–50, that there was also a larger social and political agenda.

6 – Kant is explicit about this already in his "Inquiry Concerning the Distinctness of the Principles of Natural Theology and Morality" (1764), in *Theoretical Philosophy, 1755–1770,* trans. David Walford in collaboration with Ralf Meerbote (Cambridge and New York: Cambridge University Press, 1997). Kant maintains the view throughout his critical period.

7 – See Paul Rusnock, "Bolzano and the Tradition of Analysis," in *Bolzano and Analytic Philosophy,* ed. Wolfgang Künne, Mark Siebel, and Mark Textor, *Grazer Philosophische Studien* 53 (1997): 61–85.

8 – Russell, *Our Knowledge of the External World,* p. 13.

9 – Willard van Ormand Quine, "Two Dogmas of Empiricism," in *From a Logical Point of View* (Cambridge, MA: Harvard University Press, 1953).

10 – This is Quine's well-known indispensability argument for mathematical realism, that is, for the existence of those mathematical entities that are presupposed by our best empirical theories. See Willard van Ormand Quine, "On What There Is," in *From a Logical Point of View.*

11 – See, for example, Carlo Cellucci, "Is Philosophy a Humanistic Discipline?" *Philosophia* 43 (2015): 259–269.

12 – Bernard Williams, "Philosophy as a Humanistic Discipline," *Philosophy* 75, no. 294 (October 2000): 479.

13 – Ibid., p. 484.

14 – Ibid., p. 481.

15 – Ibid., p. 484.

16 – Ibid., p. 486.

17 – Ibid., p. 491.

18 – Ibid, p. 481.

19 – Ibid.

20 – René Descartes, *The Philosophical Writings of Descartes,* trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1984), p. 78.

21 – Williams, "Philosophy as a Humanistic Discipline," p. 479.

22 – Many analytic philosophers seem to suggest that the aim of philosophy is to understand better what we already know. See, for example, Michael Dummett, *The Nature and Future of Philosophy* (New York: Columbia University Press, 2010). Dummett does also suggest that the history of philosophy matters in

some important way to philosophy as a discipline; it is not clear, however, why that might be, in his conception of philosophy.

23 – See Macbeth, *Realizing Reason,* for further details.

24 – Wilfrid Sellars, "Philosophy and the Scientific Image of Man" (1960), in *In the Space of Reasons: Selected Essays of Wilfrid Sellars,* ed. Kevin Scharp and Robert B. Brandom (Cambridge, MA: Harvard University Press, 2007), pp. 384–385.

25 – Wilfrid Sellars, "Language as Thought and Communication" (1969), reprinted in Scharp and Brandom, *In the Space of Reasons,* p. 64.

26 – I first introduced this notion in "Natural Truth," in *Sellars and Contemporary Philosophy,* ed. David Pereplyotchik and Deborah R. Barnbaum (New York: Routledge, 2017).

27 – There do seem to be some cross-cultural invariants, among them everyday conceptions of physics, biology, mechanics, and mind.

28 – This paragraph responds to a question Stephen Darwall asked after my presentation of some of this material at the 11th East-West Philosophers' Conference, Honolulu, May 2016.

29 – Imre Lakatos, *Proofs and Refutations: The Logic of Mathematical Discovery* (Cambridge: Cambridge University Press, 1976).

30 – Daya Krishna, "Comparative Philosophy: What It Is and What It Ought to Be," in *Interpreting across Boundaries: New Essays in Comparative Philosophy,* ed. Gerald James Larson and Eliot Deutsch (Princeton: Princeton University Press, 1988), p. 83; quoted in *Comparative Philosophy without Borders,* ed. Arindam Chakrabarti and Ralph Weber (New York: Bloomsbury Academic, 2016), pp. 228–229.

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