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# Philosophy's Future as a Problem-Solving Discipline: The Promise of Experimental Philosophy

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## Abstract

Scientists often reach provisional agreement solutions to problems central to their disciplines, whereas philosophers do not. Although philosophy has been practiced by outstanding intellects for over two thousand years, philosophers have not reached agreement, provisional or otherwise, on the solution or dissolution of any central philosophical problem by philosophical methods. What about philosophy's future? Until about 1970, philosophers were generally optimistic. Some pinned their hopes on revolution in methodology, others on reform of practice. The case for gradual reform still finds articulate advocates in philosophers like Michael Dummett and Timothy Williamson, but many philosophers today suspect that perennial disagreement may be inescapable. I consider three explanations for the inescapability of perennial disagreement—Richard Rorty's relativism, Colin McGinn's skepticism, and Nicholas Rescher's pluralism—and find each wanting. I argue that a better explanation is the resistance of philosophers to commit, as scientists do, to formulating testable theories and collecting data to help decide between competing theories. I close by proposing that experimental philosophy, a movement still in its infancy, holds the promise of reuniting philosophy with science and moving philosophers closer to agreement on the solution of its central problems.

## 1. The Enigma of Philosophical Disagreement

A striking difference between science and philosophy is that scientists, especially natural scientists, often reach provisional agreement on the solution to problems that are central to their disciplines, whereas philosophers do not. One would be hard pressed to find astrophysicists today who do not rely on general relativity to help explain the large scale features of the universe, particle physicists who do not use quantum mechanics to make predictions about subatomic events, or biologists who do not believe that DNA (and, in some cases, RNA) are the basis for life on Earth.<sup>1</sup> To be sure, scientific agreement *is* provisional: established theories have been overthrown in the past, and

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many more are likely to be overthrown in the future. But new scientific theories do not topple established paradigms unless working scientists find them better at explaining and predicting relevant data. Whether scientific revolutions lead us ever-closer to a true account of reality is a topic of philosophical debate, but there is abundant evidence that they lead to more rather than fewer agreed-upon solutions. As Thomas Kuhn noted: “The scientific community is a supremely efficient instrument for maximizing the number and precision of the problems solved through paradigm change.”<sup>2</sup>

Not so with philosophy. Although philosophy has been practiced by outstanding intellects for over two thousand years, philosophers have not reached agreement, provisional or otherwise, on the solution or dissolution of any central philosophical problem by philosophical methods. Hellenistic philosophers spoke of three cardinal questions: What is there? What can I know? What ought I to do? Kant added a fourth: “What may I hope?” Philosophers today seem no closer at reaching consensus on the answers to these (or other central) problems than previous generations of philosophers. Yet philosophers have not been willing to give up the quest. Wittgenstein’s vision of philosophy as “a battle against the bewitchment of our intelligence by means of language,”<sup>3</sup> inspired some of his followers to try to dissolve (rather than solve) philosophical problems by breaking the hold of misleading pictures and category mistakes. But they were no more successful at establishing consensus on dissolutions than their colleagues had been with solutions.

In speaking of philosophers’ failure to reach agreement on the solution or dissolution of philosophical problems I add the qualification *by philosophical methods*. I do this because some problems that were once considered central to philosophy were eventually solved in whole or part by scientific or mathematical methods. These problems include centuries of philosophical debate over the reality of the vacuum, whether life depends on vital forces (souls, entelechies, etc.), and the epistemic basis for the (supposedly) necessary truths of Euclidean geometry. In the last case, the development of non-Euclidean geometries in 19th century revealed that the theorems of Euclidean geometry were necessarily true (logically entailed) within a particular axiom system but left open the question of whether space was in fact Euclidian (flat) or non-Euclidean (curved). In February 2003, measurements of the microwave background by the Wilkinson MAP satellite provided substantial evidence that, taken at a single instant, the observable universe is Euclidean—spatially flat rather than positively or negatively curved. Whether future observations will substantiate this contingent truth about the spatial character of the universe remains to be seen, but mathematics and science have clarified the basis for our knowledge of cosmic geometry.

Have philosophers reached agreement on any *non-central* problems? Perhaps they have. Michael Dummett points to advancements in logic as evidence of “assured

results.” He says: “Scholastic logicians had great trouble explaining the significance of the words expressed in English by ‘any’ and ‘every.’ That philosophy does make progress, and even achieve assured results, is shown by the fact that what perplexed medieval logicians is now a five finger exercise for beginners.”<sup>4</sup> If problems of logical formulation in philosophy can count as philosophical problems, then Dummett may be right in suggesting that philosophers have achieved agreement on some philosophical problems. And the same might be said about the formulation of philosophical problems themselves. Hume’s formulations of the problems of induction, causal nexus, and the is-ought barrier posed challenges to previous thinking about these topics that all (or nearly all) philosophers acknowledge must be answered. In short, philosophers often achieve at least provisional agreement on what is philosophically problematic and what distinctions are useful for formulating proposed solutions. Although I find it awkward to describe these points of agreement as “*solutions* to philosophical problems,” it seems to me innocuous as long as one avoids flouting established usage by calling them “solutions to *central* philosophical problems,”

My contention that philosophers have not reached agreement, provisional or otherwise, on the solution or dissolution of any central philosophical problem by philosophical methods is a claim about philosophy’s past. What about philosophy’s future? Prior to about 1970, philosophers were generally optimistic that the future of philosophy as a problem-solving discipline could be different from its past. Some pinned their hopes on revolution in methodology, others on reform of practice. Revolutionaries like Descartes, Hume, and Kant, believed that their methods and strategies had the power to secure fairly rapid agreement among philosophers by separating what could be resolved from what could not. Although they did not succeed in establishing consensus, the spirit of revolution continued to stir hopes well into the 20th century. In the Preface to the *Tractatus*, Wittgenstein wrote:

The book deals with the problems of philosophy, and shows, I believe, that the reason why these problems are posed is that the logic of our language is misunderstood. The whole sense of the book might be summed up in the following words: what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence . . . the truth of the thoughts that are here communicated seems to me unassailable and definitive. I therefore believe myself to have found, on all essential points, the final solution of the problems.<sup>5</sup>

Reformers are more modest. They hope for growing consensus through gradual improvements in the standards and practice of philosophy rather than mass conversion on the heels of a methodological breakthrough. In *Principia Ethica* (1903), Moore suggests that philosophical disagreements are “mainly due to a very simple cause: namely to the attempt to answer questions, without first discovering precisely what question it is which you desire to answer.”<sup>6</sup> He thinks that if philosophers tried

resolutely to avoid this error “many of the most glaring difficulties and disagreements in philosophy would disappear.”<sup>7</sup> Michael Dummett and Timothy Williamson are reformers of our own time. According to Dummett: “Philosophical progress unquestionably occurs, but it is exceedingly slow. The progress consists in establishing that certain lines of argument fail, showing how they can be strengthened, drawing previously unperceived distinctions. By such means philosophy inches along a winding path. The path constantly twists back on itself, so the direction it faces at one stage is a virtually worthless clue to the direction in which the eventual solution lies; but as in a maze, the only way of reaching the center—the eventual solution or dissolution of the problem—is to advance along that twisting path.”<sup>8</sup> Williamson thinks fundamental disagreements in philosophy can be blamed to a large extent on deficient standards of rigor, precision, discipline, and clarity. His recipe for achieving higher standards is: “collective hard work and self-discipline.”<sup>9</sup> Although he anticipates no revelations and scoffs at experimental philosophy, he believes “small improvements in accepted standards of reasoning may enable the philosophical community to reach knowledgeable agreement on the status of many more arguments.”<sup>10</sup>

## 2. Explanations for the Alleged Inescapability of Philosophical Disagreement

Unlike Dummett and Williamson, many philosophers today seem resigned to the likelihood that philosophy’s future as a problem-solving discipline will be as contentious as its past, yet few have well-developed views on why philosophers can’t agree or what this impasse signifies for the practice of philosophy. Some console themselves with upbeat reflections like Thomas Nagel’s surmise “unsolvable problems are not for that reason unreal,”<sup>11</sup> or Stanley Cavell’s observation that even if philosophical problems cannot be solved “there are better and worse ways of thinking about them”<sup>12</sup> or Hector-Neri Castañeda’s cheerful comparison of philosophers to players in a symphony where: “we are all sym-philosophers: playing our varied instruments in the production of the dia-philosophical symphony”<sup>13</sup> But very few philosophers who have lost confidence in eventual agreement have tried to get to the bottom of what it is about philosophy—its problems, methods, or practitioners—that bars the way to agreement.

Three who *have* tried are, Richard Rorty, Nicholas Rescher, and Colin McGinn. Each represents a major tradition in metaphilosophy and each relies on epistemological strategies and arguments to make his case. Rorty represents relativism, or, as he prefers to call it, historicism, Rescher metaphilosophical pluralism, and McGinn skepticism. While I cannot do justice to the richness of their work in the space of this essay, I believe I can point out weak links in their attempts to account for the inescapability of philosophical disagreement.

Rorty speaks with two voices. The first is the voice of pragmatism in the manner of James and Dewey. It tell us that truth should be understood in terms of warranted assertibility or what is good in the way of belief rather than mirror-like correspondence between mind or language on one side and the world on the other. The second is the voice of historicism. It tells us that truth and objectivity should be understood in terms of solidarity or intersubjective agreement. He seems not to notice that these voices sometimes speak at cross purposes.

Rorty relies chiefly on the second voice to explain why scientists succeed in agreeing on solutions to their problems while philosophers do not. He claims that what differentiates superior from inferior ideas in any area of culture, including the natural sciences, is that the former catch on and the latter do not. He says, for example: “The difference between genius and fantasy is not the difference between impresses which lock on to something universal, some antecedent reality out there in the world or deep within the self, and others do not. Rather, it is the difference between idiosyncrasies which just happen to catch on with other people, and others which do not.”<sup>14</sup> In particular, he wants to debunk the belief that superior ideas in science (especially natural science) gain ascendancy because they give a truer account of the world.

The challenge for Rorty is to explain why science is so good at maximizing agreement on its problems without giving the world a say in the process. He acknowledges that “great scientists invent descriptions of the world which are useful for purposes of predicting and controlling what happens”<sup>15</sup> but not that prediction and control are critical for the formation and reformation of scientific agreement—much less that they are constitutive of truth as James and Dewey argued. Rather he appeals to the solidarity-fostering organization of the natural sciences. He says: [T]he only sense in which science is exemplary is that it is a model of human solidarity. We should think of institutions and practices which make up various scientific communities as providing suggestions about the way in which the rest of culture might organize itself. But . . . we shall not explain this explain this better order by thinking of the scientists as having a ‘method’ which the rest of the world would do well to imitate nor as benefiting from the desirable hardness of their subjects . . . If we say that sociology or literary criticism ‘is not a science,’ we shall mean merely that the amount of agreement among sociologists or literary critics on what counts as significant work . . . is less than among, say, microbiologists.<sup>16</sup>

By suggesting that what demarcates science from non-science are not differences in method but merely “the amount of agreement,” Rorty shifts the explanation for *why* scientists are able to agree from the influences of shared epistemic commitments to the happenstances of cultural convention. In so doing, he makes it harder to distinguish science’s organizational practices from those that guard orthodoxy in organized religions. As Kuhn notes, the education of scientists is “a narrow and rigid education

probably more so than any other except perhaps orthodox theology.”<sup>17</sup> Since Rorty is hostile to religion and a champion of unfettered openness in thought and communication, it is not clear why he recommends that “the rest of culture might organize itself” along similar lines. Most philosophers and nearly all scientists believe that what protects science from dogmatism are its commitments to empirical testability and repeatability as ways of letting the world overrule the decisions of would-be authorities. Moreover, empirical testability and repeatability are the basis for many of the practices (e.g. double blind experiments or the calibration of instruments) that foster solidarity among scientists. Rorty dismisses this outlook as mind-world dualism and insists that when we compare: “the jargon of Newton versus that of Aristotle . . . it is difficult to think of the world as making one of these better than another, of the world deciding between them”<sup>18</sup> Yet he is unable to explain why one scientific theory is better at predicting and controlling phenomena than another. The superiority of Newtonian over Aristotelian physics is not just a cultural convention: it is part of what makes it possible to build and pilot airplanes that can fly and land safely. If there are relativists at any 30,000 feet, we had better hope they are not in the cockpit.

Rorty also fails to explain why philosophers have not adopted the solidarity-fostering organizational practices of science (or religion) at any point in their long history. If he is right in praising these practices as “a model of human solidarity” and treating them as a fundamental reason for the success of the natural sciences, then it is natural to ask why philosophers have never adopted them. Although Rorty does not address this question directly, he views with consternation the possibility that a day might come when we read in the *New York Times* “philosophers, in convention assembled, have unanimously agreed that values are objective, science rational, truth a matter of correspondence with reality, and so on.”<sup>19</sup> He trusts that the public would be wise enough to reject this upsurge of solidarity, demanding, “Who on earth do these philosophers think they are?”<sup>20</sup> He then adds: “It is one of the best things about the intellectual life we Western liberals lead that this *would* be our reaction. No matter how much we moan about the disorder and confusion of the current philosophical scene . . . we do not really want things any other way.”<sup>21</sup> His point seems to be that Western liberal societies expect philosophers to play a role akin to that of poets and literary critics. For Rorty their role is and ought to be that of capturing our imagination with clever and engaging ways of talking about philosophical problems, not the role of solving those problems—not even provisionally. But since this is not the way most philosophers have understood their role as would-be problem solvers, it does not explain why *they* have not adopted the solidarity-fostering organizational practices of science. It explains why Rorty is glad they have not done so.

Furthermore, Rorty gives a puzzling answer to his own question: “Why are philosophers now, as in Cicero’s day, still arguing inconclusively, tramping round and round the same dialectical circles, never convincing each other . . . ?”<sup>22</sup> His answer is:

The vocabulary in which the traditional problems of Western philosophy were formulated was useful at one time but is no longer so useful. . . . Our ancestors have climbed up a ladder which we are now in a position to throw away. We can throw it away not because we have reached a final resting place, but because we have different problems to solve than those which perplexed our ancestors.<sup>23</sup>

There is a non-sequitur here. Although philosophers today have new problems to solve, they are still perplexed, as Rorty concedes, by the old problems. What we want to know is *why* philosophers have neither jettisoned the old problems nor reached consensus on their solutions. What Rorty tells us is they *should* jettison the old problems. Rorty sounds like a parent who responds to a child's question "Why is it wrong to tell a lie?" by admonishing the child not to lie. That kind of response is neither good parenting nor good philosophy.

McGinn's explanation for the inescapability of philosophical disagreement appeals to a selective form of skepticism rather than to relativism. He claims that most, if not all, basic philosophical problems are unsolvable for human beings because our minds (or brains) lack the capacity to solve them. "It is not, he says, "that we have not *tried* hard enough with philosophy, or that we insist on posing pseudo-questions to ourselves, or that philosophy deals with an especially elevated region of reality. It is just that our brains are not cut out to handle questions of this class."<sup>24</sup> As natural creatures, we are limited in many ways and solving philosophical problems is just one of them. "The explanation of the hardness of philosophy is thus of the same general category as the explanation for why a blind person cannot form concepts for colours, or why human beings cannot fly, or why dogs have no musical appreciation."<sup>25</sup>

McGinn takes up with enthusiasm the challenge of explaining why the natural sciences have produced "a steady advance of human knowledge" while philosophy has not. Indeed, he remarks "metaphilosophies can be evaluated according to their ability to explain this lack of steady advance."<sup>26</sup> But he has difficulty formulating a consistent view on what differentiates philosophical from scientific problems. In *Problems in Philosophy* (1993) he examines a small number of problems connected with the mind-body debate and says: "When I speak of 'philosophy,' then I should be understood as referring to this batch of questions, and possibly any other of the same type," but two pages later, he says in a footnote: "'science' is the simply the name we apply to questions that fit our theoretical faculties, while 'philosophy' denotes questions that do not."<sup>27</sup> In *Ethics, Evil, and Fiction* (1997), he defends the thesis that "humans enjoy a natural, spontaneous knowledge of ethical truth which is part of their innate endowment,"<sup>28</sup> thus implying that some ethical or metaethical problems are not beyond the range of human capabilities. In *The Mysterious Flame* (1999) he returns to the



demarcation: “what we call ‘philosophy’ is a scientific problem we are constitutionally unequipped to solve.”<sup>29</sup> These inconsistencies are troubling. It is not clear whether McGinn’s explanation is intended to cover the full range of problems on whose solutions philosophers have tired and failed to reach agreement or a subset of those problems. His tactic of defining ‘philosophical problems’ as problems that fit his explanation opens him to charges of circularity.

McGinn’s main argument turns on an analogy. Speaking of his favorite example of a philosophical problem, he says:

The question of the relationship of mind and body is perfectly genuine, but our minds are not equipped to solve it, rather as the cat’s mind is not up to discovering relativity theory or evolution by natural selection. I suggest that the history of human inquiry, with its areas of success and failure, is confirmation of this thesis.<sup>30</sup>

His point is that humanity’s ancient but unavailing struggle to solve philosophical problems is best explained by the supposition that human beings are as deficient in the mental powers needed to do this job as cats (elsewhere he mentions children and intellectually disabled adults) are deficient in the powers needed to solve problems in science.

Yet this analogy fails in two ways. First, when animals, children, and intellectually disabled adults are confronted with a problem that is well beyond their mental capacities, they not only fail to *solve* the problem, they fail to *appreciate* why the problem is a problem, to see what could count as a right answer, or to grasp how someone else might arrive at a different answer. Philosophers, in contrast, are ingenious at understanding and formulating philosophical problems. They are skilled at explaining what could count as a right answer and good at comparing alternative answers. There may be problems that are as opaque to the human mind as calculus is to a cat, but these problems for which we have no names, much less ingenious debates over proposed solutions. Second, progress in science has been fed by growth in collective intelligence. However, smart Euclid may have been he was not able to invent the calculus, given the state of mathematics in his own time, and Newton who *was* able to invent the calculus was not able to invent the special and general theories of relativity. Unlike animals, children, and intellectually disabled adults, adults with average or above average cognitive skills are able to pool their brainpower in ways that multiply what they, collectively, can discover and understand.

Rescher’s explanation for the inescapability of philosophical disagreement appeals to pluralism rather than relativism or skepticism. He claims that, “philosophers disagree because differences regarding cognitive values lead them to different standards of

cogency and different criteria of acceptability.”<sup>31</sup> He thinks the hallmark of a philosophical problem is that it elicits an “aporetic” (i.e. impassibly incompatible) cluster of answers. He argues that cognitive values rooted in experience are the bedrock on which every philosophy is built. A philosopher cannot build a philosophy without a foundation of this kind, but neither can she defend it without relying on it as the foundation of her defense. In other words, there is no non-circular way of supporting, defending, or justifying the cognitive values on which one’s philosophy must rely. He calls this theory “orientational pluralism.”<sup>32</sup>

Rescher wavers on how successful he thinks science is at achieving consensus but tries to explain its relatively greater success at garnering agreement by appealing to an asymmetry between science and philosophy. He argues:

[T]he standards one uses in scientific reasoning . . . are seen as mandatory; to reject them then and there is to reject science. . . . But in philosophy . . . to propose abandoning the prevailing standards is not to withdraw from philosophy but to practice it—at any rate as long as the abandonment is supported by reasons. Unlike the situation in science, there is no point at which further value disagreement carries one outside the boundaries of the field.”<sup>33</sup>

This is an interesting point, but it is neither as tight and nor as instructive as Rescher takes it to be. Economists and sociologists can and do mount reasoned challenges to prevailing standards in their field without rejecting those fields,<sup>34</sup> and philosophers may find themselves castigated as unphilosophical for insisting that empirical methods are indispensable to grappling with and, possibly, solving philosophical problems. (I will say more about this in the next section.) Besides, there is overlap between the mandatory standards of science and those of philosophy. Both are bound by ground rules that prohibit resting conclusions on authority, wishful thinking, or errors in logic or mathematics. Philosophers may have greater latitude in tweaking these standards than scientists, but if they violate them flagrantly they will be seen by peers as ceasing to practice philosophy.

Rescher is vague about what counts as “cognitive values” in philosophy but he offers a description that could be applied to scientists as well as philosophers:

For some, sense experience is fundamental; for others, whose experience with theorizing is more favorable, some theoretical mechanism acquires weight. . . . The variable course of their experience—their different views of what is plausible or bizarre, natural or outlandish, normal or weird—provides philosophers with the orienting perspective regarding ‘good argumentation’ through which their position can be developed and consolidated.”<sup>35</sup>

Drop the word ‘philosophers,’ and this description could fit Einstein’s confidence in thought experiments, or Heisenberg’s trust in abstract mathematical models, or the “shut-up and calculate” experimentalism of Nobel laureate William Phillips. Scientists working in the same field (e.g. quantum physics) can be wedded to different cognitive values, and testing standards and strategies often vary considerably from one science to another. The common denominator in science is that a theory be formulated, in so far as possible, to yield (in conjunction with other agreed-on facts and theories) testable predictions that could serve as a measure of its relative effectiveness in solving a problem. This commitment to testability helps scientists reach provisional agreement on the solution to problems *in spite of* their preference for different cognitive values.

Why does Rescher believe that pluralism based on cognitive values is inescapable in philosophy? His consistent answer to this question is expressed in six little words: “It is a fact of life.” This answer is given at least five times in *The Strife of Systems*, at least once in *Pluralism*, at least three times in volume III of *A System of Pragmatic Idealism*.<sup>36</sup> In some iterations he adds the adjective ‘inevitable’ or ‘unavoidable,’ to emphasize that pluralism is not a temporary condition from which philosophy might somehow escape, but a condition inseparable from the practice of philosophy. Yet he does not explain why this is so. Aging and death are facts of life, but they are not inexplicable.

Might some other form of pluralism succeed where Rescher’s has failed? It might indeed, if it could identify a fundamental feature of philosophy that explained why philosophers, unlike natural scientists, always fall short of reaching agreement on the solution of their problems. Of course, we would want to know whether this feature is inseparable from the practice of philosophy, as most pluralists claim, or whether it is something philosophers could collectively modify. I argue in the next section that there is such a feature and that it is not inseparable from the practice of philosophy.

### 3. Empirical Testability and the Promise of Experimental Philosophy

As historians and philosophers of science often remind us, the ways in which empirical data get factored into the competition among scientific theories are varied and complex. Yet data are always a principal factor in the victory—albeit provisional—over its rivals. For this to be possible, scientists must be held accountable for squeezing testable predictions out of their theories. Some theories, such as the existence of black holes are debated for years before scientists figure out a way to test them, others such as the Higgs boson are being pursued for observable traces in the belly of the Large Hadron Collider at CERN, while others such as parallel universes may defy all attempts at empirical detection, but scientists (especially natural scientists) accept as a ground rule that no theory, however elegant, gains full status as a scientific theory until it can be

tested. Arguably, the most elegant theory on the scientific market today is M-theory, a “theory of everything” that unifies ten-dimensional string theories with eleven-dimensional supergravity. Although the “strings” it postulates are so small that they may forever defy direct detection, some of the predictions made by this theory may eventually become testable in a collider such as CERN’s. As Lisa Randall explains:

One of the most exciting properties of some of the extra-dimensional models I’ve described is that they have experimental consequences. I can’t overemphasize the significance of this remarkable fact. Extra dimensional models—with new features that we might have thought were either impossible or invisible—could have consequences that we might see. And from these consequences [such as the detection of Kaluza-Klein particles or disappearance of energy] we might be able to deduce the existence of extra dimensions. If we do, our vision of the universe will be irrevocably altered.<sup>37</sup>

The case with philosophical theories is different. Although philosophers often take pains to explain how their theories entail the revision or rejection of rival theories and sometimes appeal to readers’ or auditors’ intuitions to defend the superiority of their claims, they neither hold themselves accountable for squeezing testable predictions out of their theories nor expect empirical data to be a principal factor in deciding between competing theories. Philosophy according to Dummett is “a discipline that makes no observations, conducts no experiments, and needs no input from experience: an armchair subject, requiring only thought.”<sup>38</sup> Thus, despite aspirations to be science-like in point of rigor, philosophers today generally deny themselves the benefits that scientists have reaped from commitment to testability. Why do they this? For many, the answer seems axiomatic: to do otherwise would be practice science instead of philosophy. “I would suggest,” says Richard Fumerton, “that if you can’t answer a question from the armchair it isn’t philosophical.”<sup>39</sup>

As Anthony Appiah has pointed out, defining philosophy “by what it is *not* (psychology, physics, anthropology, etc.)”<sup>40</sup> has gained plausibility from selective forgetting about philosophy’s past.” Few philosophers today recall that Descartes dissected animal carcasses to study the operations of their nervous systems; that Boyle, the arch-experimentalist, published essays on moral philosophy; that Hume wrote more history than philosophy; that Mill was a leading economist of his day; and (my example) that James’s *Principles of Psychology* was read as a textbook in both psychology and philosophy courses.

In 1916, Arthur O. Lovejoy used his presidential address to the American Philosophical Association to reproach the philosophical community for its willingness to tolerate or, worse yet, to celebrate philosophy’s failure to reach any common conclusions. He notes

that one cannot be a philosopher without arguing and asks: “If agreement, and as much of it as possible, is not our aim, why argue?”<sup>41</sup> He mocks the reply that philosophical arguments are vehicles of self-expression and edification. “Yet for this purpose poetry is surely a happier medium. As a fixed form of verse, the syllogism seems lacking in charm.”<sup>42</sup> He rejects the conviction of his colleagues that sound doctrine will eventually win out as the triumph of hope over two thousand years of experience. He sees no objective reason to believe that philosophers will be more successful in the future, unless they recognize that there is “nothing in the generic nature of our procedure which is not, at bottom, analogous to the procedures of the other sciences”<sup>43</sup> and reform the way that philosophy is practiced. Among the reforms he advocates is collective inquiry through organized cooperation modeled on the (solidarity-fostering) organizational practices of the sciences.

Lovejoy did not prevail. Although most philosophers over the past century have been deferential to science and many have aspired to scientific-like rigor, few have been willing to forego the ease of the armchair to seek reunion with science. There are advocates today for the naturalization of ethics and epistemology, and some interest in the naturalization of other areas of philosophy as well. But advocates of naturalization differ on whether naturalization aims at the replacement philosophy by science or greater cooperation between the two. They also differ on their reasons for advocating it. For some, the point of departure is the metaphysical conviction “that everything is part of the natural world, and should be studied as such.”<sup>44</sup> For others, it is the pragmatic expectation that emerging fields in science like cognitive and moral psychology are better equipped than philosophical epistemology and ethics to relate evidence to theory. For many, it is merely the recognition that philosophy’s long-standing practice of not treading on the toes of science needs to be supplemented by closer attention to where those toes are. In other words, philosophers need to keep up with developments in areas of science that overlap their interests.

A bolder form of naturalism is being practiced by a small but growing number of philosophers (some quite young) who believe that empirical methods are indispensable to grappling with and, possibly, solving philosophical problems. Jesse Prinz in *The Emotional Construction of Morals* (2007) describes his own methodological commitments as follows:

My most obvious commitment is to methodological naturalism, because I will draw on empirical findings throughout, including findings from neuroscience, psychology, psychiatry, anthropology, cultural history, and ethnology. I believe enduring philosophical questions can be illuminated by empirical results, and, indeed, they might not endure so long if we use the resources of science. That said, I do not reject traditional methods, such as conceptual analysis. Indeed, I think that conceptual analysis is an empirical method in some sense: a kind of

lexical semantics achieved by means of careful introspection. I think that method often bears fruit, but sometimes introspections clash or fail to reveal the real structure of our concepts. So it is helpful to find other methods to help adjudicate between competing philosophical theories<sup>45</sup>

Prinz's vision is broad enough to cover both what he calls "empirical philosophy" and experimental philosophy in its narrower form. Empirical philosophers usually mine data collected by others while experimental philosophers usually collect their own data.<sup>46</sup> Empirical philosophers tend to be interested in general features of human mental life: they try to discover the nature or mechanisms behind classes of mental states, such as concepts, emotion, desire, or moral judgment. Experimental philosophers, on the other hand, tend to be interested in specific concepts of ordinary people. This is nicely illustrated by the early work of Joshua Knobe.<sup>47</sup> Knobe began his studies on how non-philosophers (called "folk") understand the concept of acting intentionally by stopping people in Washington Square Park and asking for their responses to stories about corporate board chairmen who authorize programs they have reason to believe will hurt or help the environment but are only interested in profit. Knobe discovered that people are more likely to call the chairman's action intentional if the chairman believes it will hurt the environment (and it does) than if he believes it will help the environment (and it does). This tendency to treat the moral valence of an action as relevant to the intentionality of the agent who does it is now called "the Knobe effect," though later studies have shown that factors other than moral valence can influence attributions of intentionality.<sup>48</sup> Despite these methodological differences, empirical and experimental philosophy share common a commitment to testing the merits of competing philosophical theories against relevant data gathered by experiments. For this reason, and because the expression 'empirical philosophy' has had multiple uses over the years, I prefer to use 'experimental philosophy' as a covering term for both.

Experimental philosophy, the new kid on the block, has drawn more jeers than cheers from the philosophical community. Some of its critics protest that there is nothing new about experimental philosophy. They see it as a rehash of old and outdated philosophy. Others view it as a radical departure from established practices and ask why, if it offers any real hope of solving philosophical problems, it has been so late in coming. Some object that it is merely a return to logical positivism. Others complain that it isn't philosophy at all, merely psychology. Some reproach its impatience with philosophy's progress (if any) in reaching agreement on the solution or dissolution of philosophical problems by philosophical means over the past 2500 years. Others challenge experimental philosophy to prove its worth by making substantial progress in solving philosophical problems within the decade. Many critics, including some from within the movement itself, raise questions about *whose* intuitions (e.g. folk, professionals, or ideal observers) are relevant to the resolution of philosophical problems and *why* those intuitions matter.

It is impossible to respond fully to all of these challenges in an article of this length, but here is the sketch of an answer. Experimental philosophy is both old and new. Socrates roamed the *agora* interrogating “young and old, citizen and stranger”<sup>49</sup> about their ideas on virtue and asking them to compare those ideas with their intuitions about particular cases. In the *Republic*, for example, we see Socrates challenging the generalization that justice is “speaking the truth and repaying what one has borrowed” by offering the example of “a sane man who lends weapons to a friend and then ask for them back when he is out of his mind.”<sup>50</sup> Socrates and his interlocutors agree that returning weapons under these circumstances would not be justice and, therefore, that the generalization is not true in all cases. How do they know this act would not be justice? They don’t infer it from the proposition under consideration, but neither do they appeal to a contrary principle or observe it perceptually. It *seems* to them that this act would not be justice, and they are confident enough of these seemings to judge the generalization to be false. The name philosophers give to such intellectual seemings (intellectual as opposed to sensory) is intuitions. There is an unmistakable resemblance between Socrates inquiries in the *agora* and Joshua Knobe asking passersby in Washington Square Park whether a Board Chair who approves a new product believing it will harm the environment harms the environment intentionally, but there are differences as well. One difference is that Knobe kept a written tally, whereas Socrates kept it all in his head. Another is that Knobe is more skeptical about the reliability of the intuitions his questions elicit. A third is that Knobe has at his disposal techniques and a growing body of relevant research from cognitive psychology that was not available to philosophers in earlier generations.

The comparison with logical positivism (or logical empiricism) is less convincing. Experimental philosophy shares with logical positivism a deep conviction in the power of experimental methods, but the logical positivists did not approve of philosophers using those methods. The work of philosophy is logical and linguistic analysis, not empirical inquiry, and especially not psychological research. As A. J. Ayer explains:

[T]he function of the philosopher is not to devise speculative theories which require to be validated in experience, but elicit the consequences of our linguistic usage. That is to say, the questions with which philosophy is concerned are purely logical question; and although people do in fact dispute about logical questions, they are always unwarranted. For they either involve the denial a proposition which is necessarily true, or the assertion of a proposition which is necessarily false.<sup>51</sup>

Although this narrow conception of philosophy gained few adherents outside the ranks of logical positivism and was gradually broadened by the positivists themselves, one normative feature of this conception proved influential. The logical positivists treated

philosophy as an autonomous discipline, respectful of science and interested in scientific findings, but self-reliant in the practice of its own non-empirical methodology. That feature still lingers today and is antithetical to experimental philosophy.

The allegation that experimental philosophy is “merely psychology” is one to which many experimental philosophers could plead guilty without embarrassment as long it were stipulated that this is psychology applied to the elucidation of philosophically interesting concepts and questions. Appeals to intuition have been a mainstay of armchair philosophy over the past fifty years. Gettier cases, Frankfurt-type cases, and many of Kripke’s examples consist of thought experiment designed to pump certain intuitions. Kripke is particularly forthright in acknowledging the reliance of his own arguments on intuition: “I think it is very heavy evidence in favor of anything, myself. I really don’t know, in a way, what more conclusive evidence one can have about anything, ultimately speaking.”<sup>52</sup> Yet, oddly enough, the very philosophers who appeal to intuition to substantiate their claims make no effort to find out how many of their readers have the intuitions they think they ought to have. They are apt to use phrases like “It is clear that . . .” or “As all will agree . . .” What they don’t present are quantified data. They do not say, “60% people agreed with A” and “35% agreed with B.” Neither do they pay much attention to factors that may explain the genesis and reveal the reliability of the intuitions that they themselves and like-minded philosophers have.

Experimental philosophers, by contrast, are primarily interested in the intuitions of people who are not professional philosophers and, therefore, are not already wedded to one philosophical theory or another. These people may be the proverbial man or woman on the street, though for reasons of convenience and economy they are usually undergraduate college students at the institutions where experimental philosophers teach. Experimental philosophers do not assume that intuitions—their own or anybody else’s—are reliable guides either to the way world is or to the ways in which we must or should conceptualize the world. They do recognize, however, that intuitions can be a reliable guide to how people with certain attributes in common (e.g. well-educated Westerners) do in fact conceptualize some aspects of the world (e.g. knowledge or responsibility).<sup>53</sup> Thus, they run surveys to find out how widely intuitions are shared and with what factors (e.g. gender, education, socioeconomic status, cultural heritage) they are correlated. The findings they report are quantified and follow statistical methods common in the social and behavioral science.<sup>54</sup> As Knobe and Shaun Nichols explain: “What we really want to know is *why* people have the intuitions they do.”<sup>55</sup>

Although experimental philosophers concentrate primarily on folk intuitions, the same methods can be used to study expert intuitions.<sup>56</sup> Consider, for example, the question “What is art?” Philosophers since Plato and Aristotle have endeavored to answer by



offering definitions and theories—including the theory that no definition is possible. How do we adjudicate the competing claims of these definitions and theories about the demarcation between what is and is not art? According to the distinguished aesthetician Noël Carroll:

One does not settle it by taking polls, running experiments, or making observations. One settles the issue conceptually, by reflecting on the idea of art. . . . testing it intellectually against what we believe to be established applications of the concept, and even using thought-experiments . . . to see whether proposed reconstructions of the category of art mesh with our considered intuitions.<sup>57</sup>

The catch in this advice is that Carroll's armchair orthodoxy points directly to the need for experimental methodology. We may know what the "established applications" are in cases of where art professionals agree—particularly in cases of typical and prototypical artworks. But what about atypical works like Duchamp's *Fountain* or John Cage's *4' 33"*? What about bridges, crate labels, amateurish paintings of Elvis on black velvet, and animal "art"? In 2009 I ran an online survey aimed primarily at collecting the relevant intuitions of art professionals. My results support two conclusions: First, none of the principal theories of art advanced since the mid-1950s are fully successful at tracking the intuitions of art professional (or others) about what is or is not art. Second, it suggests that the concept of art has been stretched beyond the breaking point. The center still holds—most things we call art are not in dispute—but the fringes are tattered.<sup>58</sup>

Of course, a single survey of this kind cannot settle the classificatory question "What is art?" but it can foreshadow a partnership between armchair reflection and empirical inquiry that might narrow disagreement among competing theories. A person's concept of art (and by extension a group's concept of art) has at least four layers. First, there is observable behavior, whether words or deeds, that identify some objects or kinds of objects as art and others as not-art. This is the layer at which my 2009 surveys were aimed. Second, there are the thought processes involved in cases that require conscious deliberation. This layer can be studied by introspection and by surveys designed to reveal *why* or *how* subjects identify some objects and others as not-art. Third, there are one's beliefs about art in general and various sub-categories of art. This layer overlaps with the second and can be studied by asking people (including ourselves) about such beliefs. Fourth, there are unconscious processes, such as the operations of the brain that lie behind art-identifying behavior, conscious deliberations, and beliefs about art. The latter can be studied by neuroimaging, though research of this kind is still in a formative stage.<sup>59</sup>

The contrast I have drawn between armchair orthodoxy and experimental/empirical philosophy may suggest that they stand on an equal footing in contemporary philosophy. This is not the case. Although experimental philosophy has grown considerably in less than a decade, it is still an upstart movement with comparatively few practitioners.<sup>60</sup> Many traditional philosophers are barely aware of its existence, and many others dismiss it as a passing fad. Experimental philosophers, for their part, often stress the compatibility of their studies with traditional methods such as conceptual analysis. Although they use a burning armchair as the symbol of their movement, they tend to see themselves as providers of new and sharper tools for dealing with philosophy's established problems. Most are more interested in debating with each other about the adequacy or significance of this or that survey than they are in grappling with historical or metaphilosophical questions.

Thus, the task of putting experimental philosophy in historical and metaphilosophical perspective has scarcely begun. It is my contention that experimental philosophy offers the best hope we have of reaching agreement on the solution or dissolution of philosophical problems. Far from being a passing fad, or even one more ongoing movement to add to philosophy's long register of ongoing movements, it is, I believe, a revolution, still in its infancy, that holds out the promise of reuniting philosophy with science and moving philosophers closer to agreement on the solution of its central problems. I do not know whether this promise will be fulfilled, but, if it is, it will probably be achieved by gradual convergence on provisional solutions to some central philosophical problems hammered out through the give-and-take of data-driven studies conducted over decades. It will make the kind of slow and piecemeal progress that one sees in cognitive psychology. But progress in this direction, though slow and piecemeal, would still be an extraordinary achievement.

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<sup>1</sup> RNA-viruses and viroids have genomes composed of RNA. Speculation about life based on other molecules has yet to be confirmed. A media advisory released by NASA on December 2, 2011 announced: "NASA-funded astrobiology research has changed the fundamental knowledge about what comprises all known life on Earth. NASA-funded astrobiology research has changed the fundamental knowledge about what comprises all known life on Earth." In fact, the online research paper published on the same day in *Science Express* reported a considerably more modest discovery. The paper itself describes DNA-based bacteria from Mono Lake in California that survived after being coaxed in a laboratory into substituting arsenic for phosphorous in their phosphate bonds. See: "A Bacterium That Can Grow by Using Arsenic Instead of Phosphorus," by [Felisa Wolfe-Simon](#), et. al., *Science* DOI: 10.1126/science.1197258

<sup>2</sup> Thomas Kuhn, *The Structure of Scientific Revolutions*, 2<sup>nd</sup> edition (Chicago: University of

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Chicago Press, p. 169.

<sup>3</sup> Ludwig Wittgenstein, *Philosophical Investigations*, translated by G.E.M. Anscombe, (New York: Macmillan, 1953), p. 47<sup>e</sup>.

<sup>4</sup> Michael Dummett, *The Nature and Future of Philosophy* (New York: Columbia University Press, 2010), p. 14.

<sup>5</sup> *Ibid.*, pp. 35.

<sup>6</sup> G. E. Moore, *Principia Ethica* (Cambridge: Cambridge University Press), p.7

<sup>7</sup> *Ibid.*

<sup>8</sup> Dummett, p. 22.

<sup>9</sup> Timothy Williamson, *The Philosophy of Philosophy* (Malden Mass.: Blackwell Publishing, 2007), p. 8.

<sup>10</sup> *Ibid.* p. 8

<sup>11</sup> Thomas Nagel, *Mortal Questions* (Cambridge: University of Cambridge Press, 1979), xii.

<sup>12</sup> Hilary Putnam, *Realism with a Human Face*, edited by James Conant (Cambridge, Mass.: Harvard University Press, 1992) p. 9.

<sup>13</sup> Hector-Neri Castañeda, "Philosophy as a Science and as a Worldview," p. 45.

<sup>14</sup> Richard Rorty, *Contingency, Irony, and Solidarity* (Cambridge: Cambridge University Press, 1989), p. 37.

<sup>15</sup> *Ibid.*, p. 4.

<sup>16</sup> Richard Rorty, "Science as Solidarity" in *Objectivity, Relativism, and Truth: Philosophical Papers, Volume I* (Cambridge, Cambridge University Press, 1991), pp. 39-40.

<sup>17</sup> Kuhn, *The Structure of Scientific Revolutions*, p. 166.

<sup>18</sup> Rorty, *Contingency, Irony, and Solidarity*, p. 5.

<sup>19</sup> Rorty, "Science as Solidarity," p. 43.

<sup>20</sup> *Ibid.*, p. 44.

<sup>21</sup> *Ibid.*

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<sup>22</sup> Richard Rorty, in Nižnik, Jóef and Sanders, John T., eds. *Debating the State of Philosophy: Habermas, Rorty, and Kolakowski* (Westport, Connecticut: C. T. Prager, 1996), p.16.

<sup>23</sup> *Ibid.*, p. 18.

<sup>24</sup> Colin McGinn, *The Mysterious Flame: Conscious Minds in a Material World I* (New York: Basic Books, 1999), p. 214.

<sup>25</sup> Colin McGinn, *Problems in Philosophy: The Limits of Inquiry* (Oxford: Blackwell, 1993), p. 150.

<sup>26</sup> *Ibid.*, p.12.

<sup>27</sup> *Ibid.* p. 25.

<sup>28</sup> Colin McGinn, *Ethics, Evil, and Fiction* (Oxford: Oxford University Press, 1997), p. 45.

<sup>29</sup> Colin McGinn, *The Mysterious Flame : Conscious Minds in a Material World* (New York: Basic Books, 1999), p. 212.

<sup>30</sup> *Ibid.*

<sup>31</sup> Nicholas Rescher, *The Strife of Systems: An Essay on the Ground and Implications of Philosophical Diversity*, (Pittsburgh: University of Pittsburgh Press, 1985), p. 137.

<sup>32</sup> Although ‘orientational pluralism’ is the name he uses most often, he also refers to it at times as ‘perspectival rationalism,’ ‘contextualism,’ ‘contextualistic pluralism,’ ‘experiential pluralism,’ ‘cognitive-value perspectivism,’ and ‘perspectival pluralism’ and ‘pluralistic philosophical perspectivism.’

<sup>33</sup> Rescher, *The Strife of Systems*, p.214.

<sup>34</sup> An interesting example is Zygmunt Bauman’s *Modernity and the Holocaust* (Ithaca, New York: Cornell University Press, 2000).

<sup>35</sup> Nicholas Rescher, *A System of Pragmatic Idealism*, vol. 3, *Metaphysical Inquiries* (Princeton: Princeton University Press, 1994), p.121.

<sup>36</sup> Rescher, *The Strife of Systems*, pp. 8, 16, 31, 42, 150; *Pluralism*, p. 122; *A System of Pragmatic Idealism*, pp. 129, 131, 156.

<sup>37</sup> Lisa Randall, *Warped Passages: Unraveling the Mysteries of the Universe’s Hidden*

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*Dimensions* (New York: Harper-Collins, 2005), p. 456.

<sup>38</sup> Dummett, p. 4.

<sup>39</sup> Richard Fumerton, “Render Unto Philosophy that Which Is Philosophy’s” in Peter A. French and Howard K. etstein, *Midwest Studies in Philosophy, Volume XXXI, Philosophy and the Empirical* (Malden, MA: Blackwell Publishers, 2000).

<sup>40</sup> Kwame Anthony Appiah, *Experiments in Ethics* (Cambridge, Mass: Harvard University Press, 2008), p. 6.

<sup>41</sup> Arthur O. Lovejoy, “On Some Conditions of Progress in Philosophical Inquiry,” *Philosophical Review* Number 2, Volume XXVI (March 1917), p. 131.

<sup>42</sup> *Ibid.*

<sup>43</sup> *Ibid.*, p. 142.

<sup>44</sup> Timothy Williamson, “Past the Linguistic Turn,” in *The Future for Philosophy*, edited by Brian Leiter (Oxford: Clarendon Press, 2004), p. 108.

<sup>45</sup> Jesse J. Prinz, *The Emotional Construction of Morals* (Oxford: Oxford University Press, 2007), p. 9.

<sup>46</sup> Jesse J. Prinz, “Empirical Philosophy and Experimental Philosophy” in Knobe and Nichols, *Experimental Philosophy*, pp. 196-200.

<sup>47</sup> Joshua Knobe, “The Concept of Intentional Action: A Case Study in the Uses of Folk Psychology,” *Philosophical Studies* (2006), 130, 203-231, reprinted with some revisions in Knobe and Nichols, *Experimental Philosophy*, 129-147.

<sup>48</sup> See for example: Edouard Machery, “The Folk Concept of Intetnional Action,” *Mind and Action, Volume 23, Issue 2*, pp. 165-18

<sup>49</sup> Plato, The Apology in *Plato: Five Dialogues*, translated by G. M.A. Grube, revised by John M. Cooper (Indianapolis: Hackett, 2002), p. 34, 30<sup>a</sup>.

<sup>50</sup> Plato, *Republic*, translated by G, M.A. Grube and revised by C. D. C. Reeve (Indianapolis: Hackett Publishing, 1992), 331<sup>c-e</sup>, p. 6.

<sup>51</sup> A. J. Ayer, *Language, Truth, and Logic* (New York: Dover, n.d.), p. 133.

<sup>52</sup> Saul Kripke, *Naming and Necessity* (Cambridge, Mass: Harvard University Press, 1972), 42.

<sup>53</sup> See, for, example: Jonathan M. Weinberg, Shaun Nichols, and Stephen Stich, “Normativity

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and Epistemic Intuitions” in Knobe and Nichols *Experimental Philosophy*, pp. 17-45.

<sup>54</sup> Kripke’s appeals to intuition to demonstrate the correctness of his causal-historical theory of reference over descriptive theories of reference are put to the test in Edouard Machery, Ron Mallon, Shaun Nichols and Stephen Stich, “Semantics Cross-Cultural Style” in Knobe and Nichols *Experimental Philosophy*, pp. 47-58.

<sup>55</sup> Joshua Knobe and Shaun Nichols, “An Experimental Philosophy Manifesto,” in Knobe and Nichols *Experimental Philosophy*, p. 6.

<sup>56</sup> See, for example: Karola Stoltz, Paul E. Griffiths, and Rob Knight, “How Biologists Conceptualize Genes: An Empirical Study,” *Studies in History and Philosophy of Biological and Biomedical Sciences*, 35 (2004) 647-673.

<sup>57</sup> Noël Carroll, *Philosophy of Art: A Contemporary Introduction* (New York: Routledge, 1999), p. 11.

<sup>58</sup> Richard Kamber, “Experimental Philosophy of Art” forthcoming in *The Journal of Aesthetics and Art Criticism*.

<sup>59</sup> See, for example, Camilo J. Cela-Conde, Gisèle Marty, \* Fernando Maestú, Tomás Ortiz, Enric Munar, Alberto Fernández, Miquel Roca, Jaume Rosselló, and Felipe Quesney, “Activation of the Prefrontal Cortex in the Human Visual Aesthetic Perception,” *Proc Natl Acad Sci U S A*. 2004 April 20; 101(16): 6321–6325. Published online 2004 April 12. doi: [10.1073/pnas.0401427101](https://doi.org/10.1073/pnas.0401427101).  
URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC395967/> Visited on September 17, 2010.

<sup>60</sup> The “Experimental Philosophy” blog coordinated by Thomas Nadelhoffer is an electronic mecca for experimental philosophers. As of January 30, 2011, it listed just over a hundred contributors.