Five Answers[1]

1. Why were you initially drawn to philosophy of mind?

I began the Ph.D. program in Philosophy at Princeton in the Fall of 1964, thinking that I would probably focus on philosophy of science. Carl Hempel was one of the best known people in the Princeton Philosophy Department at that time, and as an undergraduate I had been much impressed by his work and the work of other logical positivists (or "logical empiricists," to use the term that Hempel preferred). During the spring of my first year at Princeton, I was invited to attend a series of six lectures – the Christian Gauss Lectures – by Noam Chomsky. Why I was invited has long been something of a puzzle to me, since I knew next to nothing about linguistics. Perhaps the invitation was just a clerical error. If so, it was an error that refocused my intellectual life.

Though Chomsky covered a lot of ground in the Gauss lectures, it was his discussion of rationalism and empiricism that I found most remarkable. There is no philosophical topic more venerable than the debate over the existence and nature of innate ideas and innate knowledge. And in those days, at least at Princeton, it was widely assumed that the empiricists had won the debate. Rationalism, we all believed, was a quaint and implausible view that was of interest only to those who studied the history of philosophy. However, Chomsky maintained that the philosophical arguments advanced in favor of the empiricist account of the mind were unconvincing, and that the issue could be settled by appeal to empirical evidence about the nature of natural languages and the limited data available to children who mastered them. Moreover, he argued that this evidence strongly favored a *rationalist* account of the mind, an account which posited a rich store of innate ideas and innate knowledge. It was a truly extraordinary performance. Chomsky's understated, matter-of-fact style contrasted sharply with his radical conclusions, and the revolutionary empirical methodology he was using to tackle a problem that had been at the center of philosophical discussion since Plato.

I was hooked! *That* was the way I wanted to do philosophy. And since the questions that could be most readily addressed with Chomsky's trail blazing methodology were questions about the nature of language and the nature of the mind, those were the issues on which I decided to focus. I abandoned any thought of writing my thesis on a traditional issue in the philosophy of science like confirmation or explanation, and decided to focus instead on clarifying the methodology of was then called "transformational grammar."[2] The term "cognitive science" had not yet been invented when I began work on my thesis. But about a dozen years later, when I was on the faculty at the University of Michigan, I briefly posted a sign on my office door that said "Ten years ago I couldn't even spell 'cognitive scientist' and now I are one."

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[2] The thesis, submitted in 1968, was called "Grammars, Psychological Theories and Turing Machines." Stich (1972) is a revised version of one chapter.

2. What is the proper role of philosophy in relation to psychology, artificial intelligence, and the neurosciences?

Chomsky's work on the rationalism *vs.* empiricism debate provided the model for how I wanted to do philosophy, and the existence proof that empirically engaged work of this sort could be exiting and productive. But was it really *philosophy*? The question was of more than theoretical interest, as I learned at my first job talk. "That's all very interesting, Mr. Stich," the first questioner said in an annoyed tone of voice, "but what does it have to do with philosophy?" Fortunately, by then I had read Quine and he had quickly become a second major influence on my early career. Quine provides what I thought – and still think – is exactly the right way to respond to questions about the relation between philosophy and the sciences.

To explain Quine's answer, and mine, I'll begin with a bit of background. One of the main themes of logical positivism, which emerged in the politically and socially tumultuous period between the two World Wars, was that things had gone very wrong in many parts of the intellectual world. Many philosophers, psychologists, theologians and political theorists were talking nonsense, and far too often it was dangerous nonsense. To expose and undercut this nonsense the positivists proposed an account of meaningfulness: To be meaningful a sentence had to be analytic (or contradictory), like the sentences in math and logic, or verifiable by experience, like the sentences in well-behaved empirical sciences such as physics and chemistry. Everything else was nonsense – "*metaphysical nonsense*" as undergraduates of my generation often said dismissively.

But there was an obvious embarrassment for philosophers who advocated this doctrine – it threatened to undermine their own livelihood. Since only a few philosophers proved theorems and fewer still did experiments or gathered empirical facts, how could they avoid the accusation that they themselves were talking nonsense? The solution, for much of the English speaking philosophical world, was to locate legitimate philosophy squarely on the analytic side of the positivist dichotomy. Meaningful philosophy was analytic, and the principle job of philosophers was conceptual analysis.

Now, famously, Quine's critique of analyticity and sentence by sentence reductionism helped to demolish the verificationist account of meaningfulness. But unlike many other critics of verificationism, Quine also offered a new job description for philosophy – a new vision of the honest work that philosophers could do in a post-positivist world where the analytic / synthetic distinction (and thus analytic conceptual analysis) could no longer be taken seriously. Philosophy, Quine maintained, was *continuous* with the sciences. What philosophers could contribute to the sciences was typically toward the more theoretical or conceptual end of the scientific spectrum. And philosophers, more often than their colleagues in the science departments, could afford the luxury of taking a broader view and reflecting on how theories in different disciplines fit together. But while the emphasis and the level of theoretical abstraction might distinguish this sort of philosophical work from the work typically produced by scientists,

there was no difference in status between the sciences and this kind of philosophy; philosophy, done well, Quine insisted, just *is* science.[3]

Some philosophers, I am sure, found this to be a threatening idea; many still do. For if philosophy is continuous with the more theoretical reaches of the sciences, if there is nothing special and distinctive for philosophers to do, then philosophy as an autonomous discipline disappears. But others found this idea wonderfully liberating and exhilarating. And out of that sense of exhilaration a new way of being a philosopher has gradually emerged.

In looking at the sciences, philosophers in the Quinean tradition did not have to restrict themselves to clarifying concepts or evaluating arguments or working out the logic of confirmation – though all of these are worthwhile endeavors that Quine took to be part of science broadly construed. Rather, they could develop new concepts and new theories – empirical theories – and test these theories in just the way that scientists themselves did, by seeing how well they comport with the empirical facts that other researchers have reported.

During the last forty years, the sort of naturalistic, scientifically engaged approach that Quine advocated has had a profound impact in many areas of philosophy, including the philosophy of physics, the philosophy of language and linguistics and the philosophy of biology. But nowhere has Quine's vision of philosophy made more of an impact than in the philosophy of psychology and the philosophy of mind. In that area people who took up Quine's call to integrate philosophy into the sciences – people like Jerry Fodor and Dan Dennett – have inspired a whole generation of younger philosophers whose work is so thoroughly interdisciplinary that they collaborate comfortably with colleagues in science departments and publish their work in science journals, or in the new genre of "interdisciplinary" journals like *Mind and Language*, *Behavioral and Brain Sciences, and Cognition*. The existence of this work, and the existence of the journals that publish it, are an extraordinary testament to Quine's vision.

Of course Quine realized that this "new" way of being a philosopher is actually a very *old* way that had simply been pushed out of the main stream by the logical positivists and the practitioners of "ordinary language" philosophy, with a little help from Kant. Descartes was an important contributor to the scientific debates of his day, Berkeley made important contributions to what today would be called perceptual psychology, and William James was simultaneously one of America's greatest philosophers and one of the most important figures in the history of psychology.

On my view there are some notable (and ironic) parallels between Quine and Descartes. Both of them played an important role in changing the way philosophy was done; both of them attempted to contribute to the sciences and – here is the irony – both of them bet on the wrong horse in the scientific sweepstakes of their day. Quine's contributions to psychology and psycholinguistics, in *Word and Object* and elsewhere,

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[3] Though I enthusiastically endorse the central idea in Quine's account of the relation between philosophy and the sciences, I do have some concerns about the details. For more on this, see Stich (1993).

were very much embedded in the behaviorist tradition, and that tradition, it has become increasingly clear, is not a productive one. In some distant possible world in which Quine would agree with what I have just written, he would, no doubt, also remind us that betting on the wrong horse is always a risk in doing science. And that risk is one of the things that makes doing philosophy in Quine's way both challenging and exciting.

A few years ago, the photographer Steve Pyke asked me for a brief statement of my view of philosophy to accompany one of his famously edgy photos.[4] The paragraph I wrote will serve as a summary of my Quinean answer to the question about the relation between philosophy and the sciences.

> The idea that philosophy could be kept apart from the sciences would have been dismissed out of hand by most of the great philosophers of the 17th and 18th centuries. But many contemporary philosophers believe they can practice their craft without knowing what is going on in the natural and social sciences. If facts are needed, they rely on their "intuition", or they simply invent them. The results of philosophy done in this way are typically sterile and often silly. There are no proprietary philosophical questions that are worth answering, nor is there any productive philosophical method that does not engage the sciences. But there are lots of deeply important (and fascinating and frustrating) questions about minds, morals, language, culture and more. To make progress on them we need to use anything that science can tell us, and any method that works.

3. What do you consider your most important contributions to the field?

For much of my academic career, I have been singularly fortunate in having the opportunity to work with exceptionally gifted and enthusiastic young philosophers. Most of them were graduate students at the universities where I taught; others were visiting students or visiting scholars at my university or at nearby schools. In each case, I learned at least as much from them as they learned from me. But in one respect my relationships with these young philosophers could not be reciprocal. While I had a good job at a good university, they were just launching their careers and were in need of advice and support of various kinds. Mentoring these younger philosophers was a great privilege, and a responsibility I took very seriously. Since almost all of the people I worked with shared my Quinean conviction that philosophy done well is continuous with science, helping them launch their careers was often quite a challenge. Much of the mainstream philosophical world was skeptical about our empirically engaged approach to philosophy, and more than a few people were (and are) openly hostile to it. So I spent countless hours helping my students sharpen their arguments and shape their projects to make clear why their work was relevant to traditional philosophical concerns. I also invested a great deal of time trying to prepare students for the job market by being sure they had engaging, highly polished job talks and well practiced strategies for dealing with the

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[4] That photo, and many other examples of Pyke's remarkable work, are available on line at: http://www.pyke-eye.com/philosophers_II.html .

inevitable barbed questions about their empirically oriented approach. Whenever possible, I tried to send them out into the job market with several publications already in the pipeline. The process always required hard work and long hours from both me and the students. (In one memorable case, I did about a dozen mock interviews with a student about to go on the market!) But I am delighted to say that we were always successful. I have never had a student who didn't get a good job, and all of them who have reached the appropriate stage in their careers now have tenure. By far my most important contribution to the field has been the help I provided in launching the careers of these remarkable young scholars.

From the late 1960s until the closing years of the 20th century, philosophers who adopted an empirically engaged approach to philosophy were almost always *consumers* of empirical research. We read the work of our colleagues in science departments and tried to draw out the implications of that work for issues that were important in philosophy. But as the 20th century drew to a close, some philosophers, including me and a number of my former students, became impatient with this approach. There are a number of disciplines that produce evidence relevant to issues in the philosophy of mind, including psychology, linguistics, neuroscience, anthropology and evolutionary biology. But each of these disciplines has a life of its own – a history and sociology that influences the questions researchers are most likely to ask and the studies they are inclined to undertake. Sometimes the findings of those studies are just what philosophers need; but sometimes they aren't. Rather than waiting around for the data that philosophers need, or trying to cajole our empirical colleagues to run the relevant experiments, my former students and I, along with a growing group of other philosophers, decided to take matters in our own hands – learning the relevant methods and running the experiments ourselves. This gave rise to a loosely knit new movement that has become known as *experimental philosophy*. Some, including my collaborators and I, have used the techniques of experimental social psychology to explore cross-cultural differences in philosophically important intuitions or to probe the processes underlying judgments about morality, intention, free will and consciousness.[5] Others, most notably Joshua Greene and his associates, have used fMRI technology to study the processes underlying moral judgment.[6] And as I write this, a team of experimentally inclined anthropologists, organized by philosopher Stephen Laurence, are heading to research sites all over the globe to perform a battery of studies on folk psychology and folk epistemology designed in collaboration with philosophers and psychologists.[7] It remains to be seen how much of an impact this work will have on more mainstream discussions in the philosophy of mind and in other areas of philosophy. But if the passionate debates in the blogosphere – and in more and more mainline journals – is any indication, the experimental philosophy movement will have an important influence on the way philosophy is done in the 21st century. My role in the movement has been relatively modest. I've helped to design and

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[5] For an excellent collection of papers, see Knobe and Nichols (2008).

[6] The pioneering paper is Greene et al. (2001). That paper and many more recent studies are available on line at: http://www.wjh.harvard.edu/~jgreene/ .

[7] The Culture and the Mind Project that Laurence directs maintains a useful and informative website: http://www.philosophy.dept.shef.ac.uk/culture&mind/ .

run some studies and have co-authored a handful of papers. I've also had a hand in organizing a number of interdisciplinary groups and projects. But mostly I've been a mentor, facilitator and gadfly. If thing go as I predict they will, this too may be reckoned as a valuable contribution.

4. Is a science of consciousness possible?

Yes. Not a terribly informative answer, I realize, but I have done no significant work on consciousness. The arguments I've seen aimed at showing that a science of consciousness is *not* possible strike me as unconvincing.

5. What are the most important open problems in contemporary philosophy of mind? What are the most promising prospects?

Since I don't think there is any interesting or principled distinction to be drawn between philosophy of mind and cognitive science, I couldn't possibly answer these questions in a few paragraphs. There are scores of important open problems in the cognitive sciences and dozens of promising prospects. What I'll do instead is focus on one area where I think remarkable progress has been made in the last decade – that area is moral psychology.

Moral psychology has been a central part of moral theory since antiquity, and moral theorists have made claims about a wide range of psychological issues including:

- the role of character in fostering moral behavior
- the role of reason in moral judgment
- the role of emotion in moral judgment
- the nature of moral motivation
- the sources of moral disagreement, and the prospects for resolving moral disagreement
- the extent to which moral knowledge is innate
- the extent to which genuinely altruistic behavior is possible

and a host of others. In support of these claims, the great moral theorists of the past used the only sources of evidence available to them: introspection, history and careful observation of human behavior. But, not surprisingly, these sources of evidence were not adequate to establish or refute the claims made in moral psychology, and thus most debates over issues in moral psychology remained unresolved.

In the late 19th & early 20th century, psychology became an experimental science, and by the last decade of the 20th century, experimental psychology and the various branches of neuroscience had developed quite sophisticated techniques for testing hypotheses about the mind. But, as late as 1990, this work had made almost no impact on moral theory. The reasons for this are many and complex. One important factor was the

behaviorist orientation of much experimental psychology until the early 1970s. Since talk about mental states was taboo in the behaviorist literature, philosophers could find little in this literature that addressed the questions they were interested in. Also playing a role were views and arguments, variously attributed to Kant, Frege, G.E. Moore, logical positivism, and even Hume, which suggested that moral theory, or philosophy more generally, is (or should be) an *a priori* discipline that is independent of the sciences.[8] In my darker moments, I suspect that philosophers' arrogance and laziness also played an important role. But arrogance and laziness are traditional character traits, and John Doris and Gil Harman have argued that there are no traditional character traits. So my darker suspicions must be mistaken. It is also the case that some of the most visible psychologists, biologists, anthropologists and neuroscientists who have written about morality have had only the most superficial understanding of the philosophical issues about which they were writing. So it is hardly surprising that moral philosophers who dipped into that literature decided it could safely be ignored.

All this began to change in the 1990s when a small, but growing group of psychologically sophisticated philosophers and philosophically sophisticated psychologists began to use the data and the methods of experimental psychology, neuroscience, cognitive anthropology and evolutionary biology in an attempt to sharpen and resolve traditional issues in moral philosophy.[9] This work has led to renewed interest, lively debate and, I would argue, remarkable progress on just about every issue that I listed at the beginning of this section.[10] No doubt there are many philosophers would disagree with this sanguine assessment, and even among those who think that substantial progress has been made, opinions will differ on where we have made the most progress. My favorite candidate is work aimed at resolving the debate between psychological egoism and psychological altruism, a debate which has played an important role in moral philosophy since Hobbes – some would say since Plato. The social psychologist, Daniel Batson, is one of the real pioneers in philosophically sophisticated empirically driven moral psychology, and Batson is a conspicuous exception to my suggestion, at the beginning of this paragraph, that this sort of work began in the 1990s. Since the late 1970s, he has been exploring the case for psychological altruism in a series of carefully designed experiments, though it was only in the 1990s that philosophers began paying careful attention to his work. This is not the place to attempt a review of Batson's achievement. However, in a long paper in which we try to provide an overview and assessment of Batson's work, Doris, Roedder and I conclude that "Batson and his associates have made more progress in the last three decades than philosophers using the

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[8] For a useful discussion, see Rachels, (2000).

[9] In 2003, I played a role in organizing the Moral Psychology Research Group (http://www.moralpsychology.net/group/). Meetings of the group have become an important venue for interdisciplinary discussions in this area.

[10] For an excellent sampling of this work see Sinnott-Armstrong (2008).

traditional philosophical methodology of a priori arguments buttressed by anecdote and intuition have made in the previous two millennia."[11]

At this point, I can imagine someone who tuned in late protesting that I haven't answered the questions posed at the beginning of this section, because this work, whatever it's virtues, isn't philosophy of mind at all. Anyone inclined to raise *that* objection should go back and read my responses to questions 1 and 2.

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[11] Stich, Doris and Roedder (forthcoming). Good summaries of Batson's work are available in Batson (1991) and (1998).

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