



Introduction

Philosophy in the trenches: from naturalized to experimental philosophy (of science)

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ABSTRACT

Recent years have seen the development of an approach both to general philosophy and philosophy of science often referred to as 'experimental philosophy' or just 'X-Phi'. Philosophers often make or presuppose empirical claims about how people would react to hypothetical cases, but their evidence for claims about what 'we' would say is usually very limited indeed. Philosophers of science have largely relied on their more or less intimate knowledge of their field of study to draw hypothetical conclusions about the state of scientific concepts and the nature of conceptual change in science. What they are lacking is some more objective quantitative data supporting their hypotheses. A growing number of philosophers (of science), along with a few psychologists and anthropologists, have tried to remedy this situation by designing experiments aimed at systematically exploring people's reactions to philosophically important thought experiments or scientists' use of their scientific concepts. Many of the results have been surprising and some of the conclusions drawn from them have been more than a bit provocative. This symposium attempts to provide a window into this new field of philosophical inquiry and to show how experimental philosophy provides crucial tools for the philosopher and encourages two-way interactions between scientists and philosophers.

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It is open to us to regard philosophy and science not as radically distinct modes of inquiry but rather as aspects of a single inquiry focused in somewhat differing ways, distinguished by their intellectual aims, and not truly by any restrictions on their 'proper' methods. A central locus of this continuity thesis within philosophy is in philosophy of science, where the drive to know a science intimately—in order to theorize it responsibly—plays a major role. Think of the way in which current philosophers of physics study QM or current philosophers of biology interact with important thinkers in the fields of population biology, ecology, development and molecular biology, to name just a few. Clearly this approach leads its practitioners to appreciate just how closely related philosophy and the science it applies to are. This constitutes a 'natural history' style approach to continuity: individual theorists pay exquisite care to a particular part of the scientific landscape in order to explicate it faithfully. Note, however, that this short introduction does not aim to sum up all other possible attitudes to

the relation between science and the philosophy of science. Both the papers by Weinberg and Crowley and by Stotz discuss this topic in more depth, and see especially a recent special issue of the *Quarterly Review of Biology*, for example (Pigliucci, 2008, in particular the paper by Stotz & Griffiths, 2008).

Having embraced continuity, why has this segment of the philosophical community stopped at the level of the natural historical approach? Why restrict our interaction with science to exchanges based on only qualitative information—why not investigate the possibility of acquiring quantitative information as well? One might speculate about two reasons. First, we were afraid that if we adopted a more seriously continuous approach we'd lose our identity and become sociologists or historians—what would the difference be between a sociologist of science and a philosopher of science doing ethnographies? Worse still, we'd only qualify as exceedingly poor sociologists at that. This is no idle worry, for philosophers are inclined to conduct 'research', when they do, in an

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extremely sloppy fashion. Frank Jackson's (1998) observation that his intuitions about Gettier cases are confirmed by asking his students about their intuitions is a case in point (see Stich & Weinberg, 2001, for a 'continuist' critique along those lines). But it also points the way forward—since philosophers have more seriously begun doing this sort of thing why not do it well?

Recent years have seen the development of an approach both to general philosophy and philosophy of science which a number of people have been calling 'experimental philosophy', or 'X-Phi' for short. Philosophers often follow their intuition to make or presuppose empirical claims about how people would react to hypothetical cases and thought experiments. But their evidence for claims about what 'we' would say is usually very limited indeed. A growing number of philosophers, along with a few psychologists and anthropologists, have tried to remedy this situation by designing experiments aimed at systematically exploring people's reactions to philosophically important thought experiments. In a similar vain philosophers of science have gathered empirical data on how key scientific concepts are understood by particular scientific communities, or have compared the vernacular understanding of certain popular-scientific concepts between laymen and scientists (e.g. Griffiths & Stotz, 2008). Many of the results have been surprising and some of the conclusions drawn from them have been more than a bit provocative.

Topics of recent work in this field are free will, compatibilism and responsibility, the identity of objects, the nature of conceptual change in science, the vernacular understanding of the concept innateness, the role of scientific concepts in the reception and dissemination of scientific results, the application of scientific concepts to social situations (e.g. the naturalistic fallacy), the reference of proper names, moral realism and fundamental moral disagreement, epistemic norms and the concept of knowledge, and the role of appeals to intuition in philosophy.

Experimental philosophy then is the natural response to both of these earlier concerns. Its practitioners do not appear to have lost their identity as philosophers nor are they displaying fatal disregard for the methodological niceties of well conducted empirical research (though there is still a learning curve here to be navigated). The early flourishing of this way of doing philosophy suggests that we philosophers will benefit if we are willing to pursue continuity more seriously; it is in just those places where the line between philosophy and science is most blurred (e.g. cognitive science or the philosophy of biology) that much of the most exciting work in philosophy is occurring.

So how, then, does X-Phi exemplify this continuity between philosophy and science? First, X-Phi provides philosophers with scientific tools relevant to their own recognizably philosophical inquiries. Some of this work has been mostly methodological, issuing an empirically-based critique of philosophy in the 'separate but equal' tradition (Machery et al., 2004; Weinberg et al., 2001). But other work has been philosophically positive as well, ranging from explicating the role of affect in our moral psychology (Nichols & Knobe, 2007) or the moral/conventional distinction (Kelly et al., 2007) to attempts to adjudicate burdens-of-proof issues in free will

(Nadelhoffer et al., 2005). Second, X-Phi exemplifies the new philosophy–science continuity by expanding the set of tools available to those philosophers of the sciences who seek a more active, engaged discourse with their target disciplines. Stotz and Griffiths's research, in collaboration with a large international group of philosophers and scientists, actively surveying the uses of 'gene', and more recently 'innateness', in different subdisciplines of the biosciences suggests an unprecedented level of quantitative, experimental interaction between biologists and the philosophers who study them. Moreover, the interaction runs in both directions: they do not merely analyze the biologists' 'gene' concepts, but make proposals as to how researchers can avoid confusion and fruitless misunderstandings by recognizing the variety of such concepts on offer. We would suggest that good candidates for a similar experimental treatment would include 'mental representation' in cognitive science, and indeed 'intuition' in philosophy.

While none of the participants argue that X-Phi is the method for approaching traditional philosophical questions, or even the method for a naturalistically-committed philosophy, it is, importantly, a method for both, and its successes illuminate the interpenetrating relationship between philosophy and the sciences. The three papers present a representative window into this new field: Weinberg and Crowley analyze the status of X-Phi as a mode of philosophical inquiry and critically reflect on the virtues and vices of experimental philosophy and epistemology. Stotz presents a hybrid paper (partly research report, partly meta-reflection) about the 'Representing Genes' study that discusses the broader epistemological framework within which that research was conducted, and reflects on the relationship between science, history and philosophy of science, and society. The last paper presents a research report: Knobe presents data from some recent experiments showing how people's causal judgments are affected by moral considerations and offers an explanation for this phenomenon.

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