

**Original citation:**

Sorell, Tom. (2017) Experimental philosophy and the history of philosophy. British Journal for the History of Philosophy.

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**Publisher's statement:**

"This is an Accepted Manuscript of an article published by Taylor & Francis in British Journal for the History of Philosophy. on 18/05/2017 available online:

<https://doi.org/10.1080/09608788.2017.1320971>

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## Experimental Philosophy and History of Philosophy<sup>1</sup>

Tom Sorell

Is experimental philosophy a kind of philosophy? Since it involves techniques that experimental philosophers themselves admit are not typical of current academic philosophy, and since some of these techniques are borrowed from psychology and other social sciences, it is at least arguable that, despite calling itself 'philosophy', experimental philosophy is better classified as psychology or some other social science. Some experimental philosophers think that they can resist this conclusion with an argument from the history of philosophy. They claim that certain historical figures who no-one would deny are philosophers pursued empirical enquiry, and that experimental philosophy stands in the same tradition. According to them, if contemporary academic philosophy is in tension with experimental philosophy, that is because contemporary academic philosophy has lost touch with its roots, not because experimental philosophy is actually psychology or some other social science in disguise.

I claim that this sort of argument from the history of philosophy is weak. I first suggest that different versions of this argument are question-begging or open to counter-example. More precisely, there is the following dilemma. Either the argument from the history of philosophy sets the threshold too low for counting as philosophy in the modern sense of the term, so that Renaissance physics or

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<sup>1</sup> I am grateful to Alberto Vanzo for valuable comments on an earlier draft. Work on this chapter was supported by the Arts and Humanities Research Council Xphi project, grant AH/L014998/1.

psychology counts as philosophy; or else it sets the threshold for counting as experimental philosophy too low, counting a willingness merely to make use of empirical results sufficient, rather than an attachment to special sorts of psychological evidence – nearly always based on surveys that elicit intuitions.<sup>2</sup> A willingness to use empirical results certainly connects early modern and earlier philosophy with some sorts of philosophy being done today –with a broadly naturalizing sort of philosophy—but the status of broadly naturalizing philosophy as philosophy is hardly ever questioned, whereas the status of experimental philosophy as philosophy is regularly doubted or disputed.

It is the methodological distinctiveness of experimental philosophy —its characteristic adherence to survey techniques—that both obstructs its claim to count as philosophy *and* its claim to reach back to Renaissance physics and earlier forms of empirical enquiry that were once called philosophy . Or so I argue in the second section by reference to the cases of Descartes and Hobbes . Toward the end of the paper I address the claim —due to Anstey and Vanzo-- that current experimental philosophy has something in common not with most past forms of Western philosophy, or even all early modern philosophy, but with a movement in the 17<sup>th</sup> century associated especially with Boyle that was labeled “experimental philosophy”. I treat even this more careful claim with some scepticism.

I

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<sup>2</sup> At times, but not often, experimental philosophy uses evidence other than survey evidence—eye-movement tracking results, for example.

The versions of the argument from the history of philosophy that I am going to consider come from three sources: the Introduction to the 2007 edition by Joshua Knobe and Shaun Nichols (2007) of *Experimental Philosophy*, a paper by Joshua Knobe (2007), and a new textbook by Justin Sytsma and Jonathan Livengood (2016).

The Knobe and Nichols Introduction is called 'An experimental philosophy manifesto', and it opens as follows:

It used to be a commonplace that the discipline of philosophy was deeply concerned with questions about the human condition. Philosophers thought about human beings and how their minds worked. They took an interest in reason and passion, culture and innate ideas, the origins of people's moral and religious beliefs. On this traditional conception, it wasn't particularly important to keep philosophy clearly distinct from psychology, history, or political science. Philosophers were concerned, in a very general way, with questions about how everything fit together.

The new movement of experimental philosophy seeks a return to this traditional vision. Like philosophers of centuries past, we are concerned with questions about how human beings actually happen to be. We recognize that such an inquiry will involve us in the study of phenomena that are messy, contingent, and highly variable across times and places, but we do not see how that fact is supposed to make the inquiry any less genuinely philosophical. On the contrary, we think that many of the deepest questions

of philosophy can only be properly addressed by immersing oneself in the messy, contingent, highly variable truths about how human beings really are.

But there is also an important respect in which experimental philosophers depart from this earlier tradition. Unlike the philosophers of centuries past, we think that a critical method for figuring out how human beings think is to go out and actually run systematic empirical studies. Hence, experimental philosophers proceed by conducting experimental investigations of the psychological processes underlying people's intuitions about central philosophical issues. (Knobe and Nichols 2007, 3)

This is a particularly schematic version of the argument from the history of philosophy. No philosophers from the past are mentioned by name, and no specific temporal frame of reference is given.

The background for the argument is the prevalence today, or at least in 2007, of a certain mainstream conception of philosophy, according to which philosophy is conceptual analysis, where analyses are statements of necessary and sufficient conditions for the application of concepts like knowledge, perception, causation, and intentional action. Proposed analyses are sometimes tested by means of counter-examples intended to show that proposed necessary and sufficient conditions can hold *without* someone's knowing something, without someone's perceiving something or without an agent's acting intentionally. Counter-examples are supposed to engage with intuitions –unreflective judgements made by competent

users of the concepts under analysis. These competent users are often professional philosophers or their students speaking for all other users of the concepts.

Experimental philosophers characteristically test philosophers' claims by sampling the intuitions of competent users of concepts who are *not* philosophers. By administering questionnaires to lay people, experimental philosophers try to find out whether lay people attribute knowledge or credit people with intentional action in cases where analytic philosophers would. Compiling survey evidence is what makes experimental philosophy methodologically distinctive and also what makes it seem to some in the profession to be a non-philosophical practice. Experimental philosophers often claim to find on the basis of their surveys that lay users of concepts do *not* agree with professional philosophers, that their cultural backgrounds influence the way that they distinguish between e.g. knowledge and non-knowledge, and that different orderings of examples produce different verdicts among philosophers *and* non-philosophers.

This survey approach to analysis is typical of a lot of experimental philosophy, but Knobe parts company with these philosophers by being hostile to conceptual analysis itself (Knobe 2007), even when pursued with systematic surveys of the intuitions of non-philosophers. For him people's intuitive reactions to different examples are not of interest because they form an evidence base for proposals of necessary and sufficient conditions; instead they are a basis for inference to mechanisms that underlie beliefs about different subject-matters. For example, on the basis of survey evidence of lay reactions to different kinds of thought experiments

about deterministic and non-deterministic worlds, Knobe claims that people's moral beliefs underlie attributions of responsibility in unexpected ways (Nichols and Knobe 2007). What ties together Knobe's surveys with those of people who simply work in a more empirical way on conceptual analysis is a repudiation of pronouncements on intuitions from the armchair. And precisely this stance brings experimental philosophers into conflict with those who think that philosophy is conceptual analysis, that conceptual analysis is properly conducted *without* surveys (Sosa 2006; Kauppinen, 2007), and that evidence of departures in the wider population from philosophical intuitions is disputable (Sosa 2006).

Which brings us to Knobe's claiming to stand in a tradition in relation to which linguistic philosophy in general and conceptual analysis in particular are aberrations. To go back to the passage, philosophy is rightly said to be concerned with the human mind, and the philosophy of the past is rightly said to be concerned with the causes of beliefs. But it seems to be assumed that disciplinary boundaries within philosophy used to exist, and that philosophers in the past were less reluctant to cross them than philosophers today. This begs the question of whether experimental philosophy lies outside what is *now* called philosophy, since 'philosophy' used to mean, but no longer means, something like 'systematic, methodical enquiry into causes' and would have included the mind as its subject matter. The question begged is whether, if 'philosophy' now means something narrower than 'philosophy' used to mean, that is because of an unphilosophical intellectual narrowness on the part of current practitioners – a narrowness out of keeping with the long view of what doing

philosophy amounts to— or a genuine shift in what experts in the field now mostly agree is its subject matter, e.g. away from any concern with causes.

In 'Experimental Philosophy and Philosophical Significance', Knobe (2007) claims that the methods of experimental philosophers are more relevant than those of the analytic tradition to studying the mechanisms underlying various theoretical and practical capacities of human beings. What is more, still according to him, the attempt to understand these mechanisms is more characteristic of the long-term history of philosophy, and thus might have a stronger claim to be *authentic* philosophical research, than work in the analytic tradition. Knobe concedes that experimental philosophy may not have lasting relevance for the "analytic project," except as a negative programme intended to deflate some of the claims that analytic philosophers have based on intuition, but he suggests that questions about human nature and cognition and more generally the mechanisms underlying intentionality, cognition and morality have been of interest in Western philosophy since Plato and Aristotle, and that philosophers as different from one another as Nietzsche and Hume have carried on this tradition.

Here is Knobe sketching the relevant line of thought:

[Experimental philosophers] focus on questions about the *internal psychological processes* underlying people's intuitions. That is to say, they are not primarily about the external properties and relations that people's concepts pick out but rather about the internal processes that lead people to



have the intuitions that they do. By studying these processes, experimental philosophers take themselves to be getting at certain fundamental issues about the way people ordinarily understand their world... Perhaps the claim [from analytic philosophers] is that research on the most fundamental concepts people use to understand themselves and their world doesn't really count as "philosophy." But this claim seems a bit hopeless and bizarre. It is not as though experimental philosophers are involved in some sort of radical departure from the traditional problems of philosophy. In fact the chronology is just the opposite. For most of the history of philosophy, questions about human nature and the nature of cognition were absolutely central. Then, for a comparatively brief period, many philosophers forsook these problems in favor of problems that had a more technical character. Experimental philosophy now seeks a return to the traditional problems of philosophy, the problems that played such a prominent role in the work of Plato, Aristotle and so many of their successors. (Knobe 2007, 89-91)

This argument from the history of philosophy is questionable on at least two grounds. First, and most obviously, it equivocates on the word 'philosophy.' It is true that 'philosophy' used to mean science in general, and included a whole range of systematic empirical enquiries, such as biology, physics, medicine, the study of the mind, morals, politics and many other things. If Knobe's complaint were that philosophy more narrowly conceived has only recently broken away from the main body of science, and that there is still a place for the empirical study of human nature and the nature of cognition, it would be uncontroversial, indeed

incontrovertible. But what is at issue is not whether there is room for such empirical study, but whether there is room for it now as a branch of *philosophy*: as I have already claimed, it begs the question to argue from a description of the history of philosophy in which 'philosophy' mostly means systematic enquiry into causes. That description begs the question because the meaning of the term 'philosophy' has changed. On the other hand, If Knobe were merely arguing that "experimental philosophy" in his sense is intellectually respectable whether it is philosophy or not, no question would be begged, and I for one would be far less inclined to take issue.

The second ground for questioning Knobe's argument from the history of philosophy is that, while it improves on 'Manifesto' by mentioning names, it is very poor history of philosophy. First, it homogenizes into one tradition the work of pre-analytic philosophers operating over millennia in very different places. Second, and more specifically, it posits a kind of smooth progress for this body of work up to the point at which, as Knobe thinks, a regrettable and decisive intellectual detour occurred – with the development of early analytic philosophy. Neither the homogenizing interpretation nor the claim that the birth of the analytic tradition is a crucial aberration is very credible. To take the homogenizing interpretation first, it seems to imply that before the start of the analytic project there was a kind of continuity in philosophy from Plato to Nietzsche. This reckons without the radical reinterpretation of Aristotelian methods of philosophy that started around the time of Descartes and continued through Hume. It also reckons without the difference made to the post-Humean understanding of nature by Kant, and through Kant, to the understanding of nature in Nietzsche. Though it may be true that there is a sustained interest from

Plato to Hume to Nietzsche in empirical questions, the existence of that very low common denominator does not mean that there is a uniform, or even a relatively unitary, understanding of the empirical from ancient to pre-analytic philosophy. On the contrary, there is reason to think that Aristotle was much more geared to preserving pre-philosophical opinion or 'appearances' in natural philosophy than either Plato before him or the post-Cartesians. Indeed, the concept of '*scientia*,' which on the surface appears to be shared by ancients and moderns, is in fact radically reinterpreted, starting with Descartes (Sorell, Rogers and Krave 2012). As for the supposed status of the analytic tradition as anti-empirical turning point in philosophy, this fails to take into account Descartes's insistence on a first philosophy that is prior to and conceptually independent of the concepts (extension and motion) required for physics. It also reckons without Kant's non-empirically realized conceptual apparatus for natural science.

Knobe's argument from the history of philosophy not only suggests that authentic philosophy is science, but that current physiology, chemistry, or theoretical physics is in fact philosophy, because each has emerged from the study of underlying human *and* non-human mechanisms that people called "philosophers" used to engage in. On the same grounds as Knobe argues in effect for suppression of the science/philosophy distinction, one could argue for the suppression of the philosophy/physiology distinction and the philosophy/physics distinction: both physiology and physics grew out of a much more 'interdisciplinary' kind of science than we have today, the same science that is hard, according to Knobe, to disentangle from philosophy. So psychology and physics could just as well be called philosophy, and indeed might have more of a claim to count as philosophy than the

analytic tradition. Certainly this looks like a conclusion Knobe is committed to. But there is no wishing or stipulating away the conceptual change that has made 'physiology,' 'physics' and 'philosophy' all mean different things. And although its motivation is no different from that for saying that 'philosophy' really means a broad kind of science, the claim that 'physics' really means 'philosophy' seems neither plausible nor interesting.

Systema and Livengood improve on Knobe and Nichols. In their introduction they take the case of Descartes. In some of his work, they say, he was the armchair philosopher *par excellence*, and so the nemesis of some contemporary experimental philosophers. On the other hand,

even Descartes did not philosophize exclusively from the armchair. In fact, he did a good deal of empirical work, and such work is, in our opinion, as much a part of Descartes's philosophical legacy as are his meditations. For example, in the *Optics* he offers an account of visual perception, calling on a number of empirical observations in doing so... [In the *Optics*] Descartes discusses an empirical investigation that he conducted –he went out and carefully dissected the eye of an ox to learn something about how the eye functions. Further, this investigation, amongst others, played an important role in Descartes's account of visual perception, and he took himself to be doing philosophy in putting his account forward.

Experimental philosophy is part of a long tradition. While much of Western philosophy has been done from the metaphorical armchair, much of it has

also been done in the field or in the laboratory. Consequently, we do not think of the contemporary incarnation of experimental philosophy –the *new* experimental philosophy as we will call it– as either breaking with or being contemptuous of traditional philosophy. (Sytsma and Livengood 2016, xxviii-xxix)

This passage, too, is question-begging. The fact that *Descartes* saw his work in optics as philosophy does not establish that philosophy in his sense is the same as philosophy in the sense of most current practitioners of the subject. On the contrary, as has already been pointed out repeatedly, ‘philosophy’ used to mean ‘science’. Again, although philosophers working today undoubtedly count *Descartes* as a philosopher in their sense, it does not follow that what makes *Descartes* a philosopher in the modern sense is his theory of visual perception in general or his experiment on the eye of the ox in particular: for all the passage shows, the continuity might be due entirely or overwhelmingly to the place of the *Meditations* in the canon. As is well known, the *Meditations* starts out by calling into question whole classes of empirical beliefs, including those from pre-modern sciences, and only proceeds later to vindicating a criterion of truth for very restricted classes of empirical beliefs. Its methods and results are thus very different from those of the *Optics* or his suppressed physics. What is more, they are out of keeping with experimental philosophy, since *Descartes* simply assumes that what he finds undeniable and perfectly certain –that God exists and is no deceiver, that matter is extended --all his readers will find impossible to doubt as well.

Sytsma and Livengood use the methods of experimental philosophy to fix a meaning for “experimental philosophy”. This involves a survey of philosophy teachers and graduate students from a range of philosophy departments in the English-speaking world, the respondents being divided into those who self-identified either as experimental philosophers or non-experimental philosophers. A questionnaire was administered, which got a 15 per cent response rate involving 370 respondents. This showed that philosophers in general, and self-identifying experimental philosophers in particular, were disinclined to tie experimental philosophy to a distinctive subject-matter it is often tied to: the folk-intuitions elicited to test theses about the meanings of philosophically important vocabulary such as ‘knows’, ‘causes’, ‘refers to’, ‘is permissible’, and ‘is obligatory’. On the basis of this disinclination, Sytsma and Livengood conclude that

It is at least as reasonable for us to adopt a broad conception of experimental philosophy as a narrow conception for the purposes of this book. And that is what we will do: we will treat experimental philosophy as involving the systematic collection and analysis of empirical data to help answer philosophical questions or solve philosophical problems, whether or not the data directly concern intuitions (Sytsma and Livengood 2016, 18)

From the angle of our concerns in this paper, the decision about whether to adopt a broad or narrow definition is important. If experimental philosophy *were* tied to linguistic intuitions, then there would be no prospect of bearing out Sytsma’s and Livengood’s claim that experimental philosophy belongs to a tradition also involving Descartes’s work in the *Optics*: on the other hand, the *less* restrictive the definition,

the more likely experimental philosophy can be said to have historical precedents, other things equal.

There is still the question of what 'philosophy' means. If the meaning varies over time, as it plainly does, the continuity claim will once again be in danger of being undermined. To their credit, Systma and Livengood actually do devote a great deal of attention to what is reasonably understood by 'philosophical question' in their definition of experimental philosophy. They tie the philosophical to (a) the capacity to produce wonderment relative to a historical context; (b) the search for norms for human practices; (c) the necessary use of the apriori in reaching a philosophical answer; (d) making use of certain kinds of modal claims, and (e) applying a method for achieving conceptual clarity. On any of these understandings of the distinctively philosophical, they say, 'there is an experimental turn' (Sytma and Livengood 2016, 44). But the most they seem to me to show is that questions prompting an experiment (usually in the form of a survey of how people's intuitions lie) are *askable* starting with any of (a) to (e), not that those questions, when asked even in the context of (a) to (e), are philosophical.<sup>3</sup>

So we have two sources of worry about the Systma-Livengood definition of experimental philosophy. First, they may define it unduly widely. Their claim that 'experimental philosophy' means *more* than surveys of intuitions is not univocally recommended by their survey evidence, and the survey evidence comes from

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<sup>3</sup> I do not have space to consider whether enquiries starting from (a) to (e) all can be called 'philosophy' without begging the question: one of the anonymous referees has convinced me there is unfinished business here.

relatively few philosophers. Crucially from the angle of this paper, the wide definition tends to prejudice the question of the existence of a tradition of experimental philosophy. Second, for all the survey evidence shows, the different approaches for distinguishing philosophical from non-philosophical questions at most *permit* experimental approaches: they do not require them. So the *need* to pursue philosophy by experimental methods is not convincingly established, and the conjecture that experiment is at most optional remains open.

## II

In a recent paper (Sorell 2016), I have queried what I call the “do-it-yourself” approach of experimental philosophy. Why do *philosophers* have to survey the evidence for people having certain linguistic intuitions, for example. Or to take a different sort of experimental interest, why do *philosophers* have to find out if moral philosophers are better than others at returning or not stealing library books? (Schwitzgebel 2009) If investigations of linguistic intuitions could be done by sociolinguists, or if the borrowing habits of moral philosophers could be studied by sociologists, then philosophy could be influenced by sociology without itself being experimental. In that case there would be no strained disciplinary classifications and no need for tendentious history of philosophy. Philosophy that took account of the results would be open to the description of “empirically informed” philosophy, with the empirical work being carried out by non-philosophers. This approach is very common in the non-experimental philosophy of mind, the philosophy of psychiatry



and even applied ethics, when philosophers collaborate with psychologists, psychiatrists and practitioners who face ethical challenges in a host of contexts.

By contrast with experimental *philosophy*, what we might have here is something irreducibly *interdisciplinary*, classifiable either as philosophically-informed psychology or as psychologically-informed philosophy. Or we might have something immediately recognizable as philosophy, with accretions of other disciplines.

Empirically informed philosophy of mind—philosophy of mind discussing some of the disorders written about by Oliver Sacks—or proposals about logical form informed by Chomskyan work on deep grammar, or work in ethics containing load-bearing elements taken from Darwin—these are already familiar specimens of mainstream philosophy, not philosophy requiring a manifesto.

I draw attention to this kind of non-experimental but still empirically informed philosophy because it has some of the same motivation as experimental philosophy without making any strong claim to be a methodologically distinctive kind of philosophy. It, too, is motivated by antipathy to the armchair. It, too, contributes to a history of philosophy in which systematic, analytic, non-empirical work combines with systematic empirical work. It is true that the combination may not take the form of co-operation on a single research project. It may be a matter instead of philosophy appropriating results reported or arrived at for purposes internal to specialized, natural sciences such as neurophysiology or evolutionary biology. But the status of the finished result as philosophy seems never to be questioned: experimental philosophy is not in the same position.

This seems to be a crucial point. Either experimental philosophy is distinctive or it is not. It seems to proclaim and value distinctiveness. This distinctiveness seems to consist mainly<sup>4</sup> in the application by philosophers of survey methods, including the construction of questionnaires, the identification and recruitment of research subjects, and the processing of results under constraints of achieving statistical significance. Either it uses these methods and is distinctive, in which case its status as philosophy is likely to be questioned, or it is less than distinctive and doesn't deserve or sustain a manifesto. The illustrations already given of what I have called empirically informed philosophy belong to this less than distinctive sort of philosophy. Though they leave the armchair, they do not have to be critical of conceptual analysis understood as necessary and sufficient conditions, and they do not have to be contemptuous of philosophers' intuitions. The work of Alvin Goldman, for example, is empirically informed –broadly naturalistic even --and connected with the analytic project. Other illustrations of philosophy that leave the armchair without resorting to surveys can be drawn from normative moral philosophy (Sorell 2016).

Returning now to history of philosophy, it is far more plausible to claim that there is a long tradition of empirically informed philosophy, including naturalistic philosophy, or cross-disciplinary empirical work with self consciously conceptualizing components, than that there is a long history of work culminating in philosophy that conducts its own experiments and surveys of differences between the intuitions of

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<sup>4</sup> See footnote 2.

philosophers and laypeople. In other words, it is possible to see experimental philosophy as part of a long tradition that starts in interdisciplinary or cross-disciplinary research and continues in our own day, including a lot more philosophy than experimental philosophy. For example, it is plausible to say that there is a route from at least 17<sup>th</sup> century early modern philosophy to a broadly *naturalist* philosophy that includes Quine, Dennett and Ruse—all *non*-experimental philosophers influenced by scientific findings; it is *more* plausible to say this than to say there is a route that leads just to, or leads primarily to, Knobe, Nichols, Stich and Machery and their survey-based methodology.

To defend this suggestion, we can begin by recalling Systma's and Livengood's suggestion that experimental philosophy departs from 20<sup>th</sup> and 21<sup>st</sup> century armchair philosophy in something like the way that Descartes's *Optics* departs from Descartes's *Meditations*. If all they mean is that once upon a time—in the first four decades of the 17<sup>th</sup> century in Western Europe—one and the same person—Descartes—could do armchair philosophy and optics without being conscious of a change of subject, then, as we shall see, they are wrong about Descartes. More generally, it is far from clear that early modern philosophy is where to look for the pre-history of 21<sup>st</sup> century experimental philosophy. In this section and the next, I take the cases of Descartes<sup>5</sup> and Hobbes,<sup>6</sup> and argue that their philosophies do *not* look forward specifically to 21<sup>st</sup> century experimental philosophy with its

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5       References are to the standard Adam and Tannery edition (Descartes 1964-1976) followed by volume and page number and *The Philosophical Writings of Descartes* (Descartes 1985) followed by volume and page number.

6       References are either by volume and page of the Molesworth edition of Hobbes's *English Works* (Hobbes 1839-1843) followed by volume and page number or to specific modern editions of individual works.

methodological distinctiveness. At best, they look forward to empirically informed, including broadly naturalistic, philosophy.

Why Descartes and Hobbes? Descartes is chosen because Systma and Livengood identify him as a precursor of the experimental philosophers of the 21<sup>st</sup> century. Hobbes is chosen because, like Descartes, he is a recognized figure in both the history of philosophy and science, albeit, in the case of science, a much less significant figure than Descartes. He is also an important proposer of explanatory mechanisms underlying agency, cognition and social behavior, which might qualify him to be a forerunner of experimental philosophy in the form Knobe embraces it.<sup>7</sup> There are also reasons for looking at Hobbes and Descartes together. They were contemporaries, interlocutors, and belonged to some of the same networks of philosopher/scientists. More substantially, they each promoted and illustrated a systematic alternative to Aristotelian natural philosophy. This means that their respective solutions to problems in optics are not just attempts to account empirically for the behavior of light in different media, but attempts to account for it in terms of the sizes, shapes and positions of the media and the motion generated by a light source – *rather than* Aristotelian forms and substances. Each of them worked on a philosophy of science that would count broadly mechanistic work in natural philosophy as science, and that would count Aristotelian appeals to forms, especially substantial forms, as non-science.

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<sup>7</sup> Hobbes is recommended on the leading X-Phi blog to an undergraduate wanting to take further his interest in moral universals and other X-Phi topics in metaethics:  
<http://philosophycommons.typepad.com/xphi/2010/04/are-there-any-moral-universals.html?cid=6a01901e204628970b019104332b70970c#comment-6a01901e204628970b019104332b70970c>

### III

Let us begin with the suggestion that Descartes combines the armchair *and* the experimental approaches that Systema and Livengood think can co-exist in 21<sup>st</sup> century philosophy. According to Systema and Livengood, metaphysics in Descartes is done from an armchair, but optics is not: optics depends on getting an eye of an ox and trying to investigate how it works. Both metaphysics and optics are philosophy, and, again according to Systema and Livengood, Descartes found it easy to move from one to the other without thinking he had to traverse a discipline boundary.

Up to a point this account is correct. After all, the passage about the eye of the ox comes in the *Optics*, which is one of the Essays introduced by the *Discourse on Method*. Part Four of the *Discourse* runs through the main reflections of Descartes's metaphysics. How could these reflections have appeared in the same book as Descartes's optical hypotheses –the *Discourse and Essays*– if Descartes had not thought them closely connected?

The answer is that he *did* think they were connected. He believed that optics depended upon metaphysics for some purposes, but also that his proposals in optics had their own simplicity and coherence, which a reader undistracted by theology but familiar with problems in optics would recognize.<sup>8</sup> Descartes's proposals in optics did

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<sup>8</sup> 'Should anyone be shocked at first by some of the statements I make at the beginning of the *Optics* and the *Meteorology* because I call them "suppositions" and do not seem to care about proving them, let him have the patience to read the whole book attentively, and I trust that he will be

not have to be approached via metaphysics in order to be understood and accepted as solutions to optical problems. But the *Optics* was supposed to be an illustration of a self-consciously novel sort of philosophy, supposedly conducted according to the new “method” indicated in the *Discourse on Method*, and metaphysics was required to show that the human faculties required by the new sort of philosophy were reliable sources of truth. The “armchair” nature of this metaphysics—its being able to be conducted without reference to empirical results—was in fact crucial to its showing, without begging the question, that human faculties were up to the task of finding the formal and efficient causes of phenomena treated in optics in particular and physics in general.

Metaphysics, however, plays a double role in Descartes’s philosophy. It is a sort of proof that human faculties and the conceptual apparatus employed in Cartesian physical explanation—the apparatus of extension and motion—are epistemically reliable to the highest degree. But it is also, by implication, a proof that explanation built on the contents of the senses is *not* reliable—and Aristotelian physical explanation depended wholly on content extracted from the senses. Descartes enlarges on the negative role of his metaphysics in a letter to Mersenne from 28 January 1641. Referring to the full-scale presentation of his metaphysics in the

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satisfied. For I take my reasonings to be so closely interconnected that just as the last are proved by the first, which are their causes, so the first are proved by the last, which are their effects. It must not be supposed that I am here committing the fallacy that the logicians call “arguing in a circle”. For as experience makes most of these effects quite certain, the causes from which I deduce them serve not so much to prove them as to explain them; indeed, quite to the contrary, it is the causes which are proved by the effects. And I have called them “suppositions” simply to make it known that I think I can deduce them from the primary truths I have expounded above; but I have deliberately avoided carrying out these deductions in order to prevent certain ingenious persons from taking the opportunity to construct, on what they believe to be my principles, some extravagant philosophy for which I shall be blamed.’(Descartes 1985, 150) (Descartes 1964-1976 Vol. 2, 76)

*Meditations*, he explains his selection of the titles of each of the six Meditations. The titles are devices for focusing attention on certain things—the ones that would please theologians—and distracting attention from others:

These [topics given in the section titles] are the things that I want people mainly to notice. But I think I included many things besides; and I may tell you, between ourselves, that these six Meditations contain all the foundations for my physics. But please do not tell people, for that might make it harder for supporters of Aristotle to approve them. I hope that readers will gradually get used to my principles, and recognize their truth, before they notice that they destroy the principles of Aristotle. (Descartes 1985, Vol. 3, 172-3) (Descartes 1964-1976 Vol. 3, 297-8)

It is true that, for Descartes, metaphysics, optics, and astrophysics were all ‘philosophy’, but this does not mean that ‘philosophy’ as a whole was a seamless, flat web of theory with no important differences of subject matter. Quite the opposite. In the 1647 Preface to *The Principles of Philosophy*, he compared philosophy to a tree whose roots are metaphysics, whose trunk is physics and whose branches are the other sciences (Descartes 1964-1976 Vol.9B, 14). The tree metaphor conveys not only unity but stratification, and the stratification strains any comparison between, on the one hand, the armchair and non-armchair components of Cartesian philosophy and, on the other hand, the armchair and non-armchair components of current philosophy as conceived by Systema and Livengood. Metaphysics and physics do *not* co-exist in Descartes as Gettier’s armchair work on

the concept of knowledge (Gettier 1963) and Machery's experimental work (Machery 2011) co-exist in current epistemology.

When Descartes describes the tree of philosophy, he is describing a philosophy that for a long time he thought he could supply more or less single-handed (Descartes 1985 Vol. 1, 188) (Descartes 1964-76 Vol. 9B, 17). The physics growing out of metaphysics was *his* physics, developed before the *Discourse and Essays* and suppressed because of its denial of the Aristotelian idea that the earth was the fixed centre of the universe. The medicine, mechanics and morals that were supported by physics were *his* medicine, mechanics and morals, with accretions of Harvey's theory of the circulation of the blood. Medicine and morals were theories of the management of the union of mind and body, and therefore directly influenced by the substantial dualism propounded by the *Meditations*. The tree of philosophy, then, is (between the lines) the tree of Descartes's philosophy.

There is a difference here between Descartes and Hobbes. Hobbes also took philosophy to be a single system, and a system in which metaphysics or first philosophy precedes physics and morals. Unlike Descartes, however, he took it to be a system with elements contributed by *several* of the new philosophers: himself in optics and politics, Copernicus and Kepler in astrophysics, Galileo in terrestrial physics. (Hobbes [1650] 1839-1843 Vol. 1, vii-xii) His articulation of that system, in the three-volume *Elements of Philosophy*, was divided into a long book on body, a short book on man, and a third volume, again relatively short, on the citizen. *De corpore* states foundations for science in general and then articulates Hobbes's



mechanics and physics. *De homine* contains optics and material on human passions and cognition. *De cive* contains a version of Hobbes's politics. The three books did not appear in order. The last (*De cive*) came out first, in 1642; the first (*De corpore*) appeared second in 1650, and the middle volume (*De homine*) was published last, in 1658.

Does the system of *The Elements of Philosophy* contain armchair philosophy? Yes and No. If 'armchair philosophy' means 'philosophy that can be done without empirical investigation', then the largely definitional branch of 'philosophy' Hobbes calls 'first philosophy' may qualify as armchair philosophy (Hobbes [1651] 1839-1843 Vol. 3, 671) (Hobbes [1656] 1839-1843 Vol. 7, 225-6). But if 'armchair' philosophy means 'philosophy' conducted solo –possibly in a stove heated room—the answer is 'No'. For according to Hobbes, definitional work is for teaching others –understood by Hobbes as presenting demonstrations of truths for an audience of people who want to learn– and the definitional work of first philosophy is for teaching the whole system of philosophy from the elements to others. The definitional part fixes the meanings of the relevant terms so that the audience of the subsequent demonstrations does not understand the relevant definienda differently from the demonstrator. First philosophy sets the stage for running through the constructions and demonstrations in geometry and mechanics. Then comes physics and psychology, ending up with morals and politics. As demonstrations to do with body are prior to demonstrations concerning man and citizen, according to Hobbes, the definitions of first philosophy are definitions of the most universal names: 'body', 'time', 'place', 'matter', 'motion' and so on. Communicating these to others who

want to learn philosophy in general is the first step in the work of teaching philosophy from the elements.

If armchair philosophy at its most authentic is philosophy done solo in one's head away from external influences, then perhaps not even Descartes' metaphysics is out and out armchair philosophy, since, as is well known, it consists not only of a series of reflections about dreams, demons and doubt which Descartes asks the reader to go through with him, but also Descartes's replies to objections to Meditation One. The methodology of seeking questions and criticisms and absorbing them into one's broadly philosophical reflections was followed in connection not only with the *Meditations* but with the *Discourse and Essays*. This method may be too social to count as armchair philosophy in the sense of Systma and Livengood.

Hobbes, too, relied on networks of other philosophers. He not only read the works of other celebrity practitioners of the new philosophy; while on Grand Tours in the 1630s, he met several scientists and observed experiments some of them performed (Malcolm 1996, 24). He was a member of circles of scientifically-minded aristocrats in England, and, when he lived in Paris in the 1640s, frequently attended meetings of an "academy", as he calls it in *Dialogus Physicus* (Shapin and Schaffer 2011, 351), at the premises of the Minim friars. Here mathematicians, natural scientists and other savants could hear one another present findings and get responses (Shapin and Schaffer 2011, 29).

Unsurprisingly, then, there are respects in which the elements of Hobbes and Descartes that are nearest to the armchair are *also* empirically informed --in the sense of being informed by the first-person practice of science or having scientific results demonstrated to them. Hobbes worked backward from his reading of works by Euclid, Galileo, Copernicus and Harvey to inferring the fundamental concepts of the sciences: body, place, motion and so on. This is working back from highly empirical writings to the definienda of first philosophy, making the armchair philosophy that results empirically informed. Descartes's armchair philosophy is comparable. It, too, works backward from physics --Descartes's physics in the suppressed treatise, *The World*-- to an identification and vindication of its preferred conceptual apparatus. The fundamental concept in physics was extension --three dimensional spatial lay-out --understood alongside the laws of nature or motion.

Because the philosophy closest to armchair philosophy in the writings of both philosophers described the materials for explanations for approved anti-Aristotelian sciences, and because the content of those sciences was not dreamt up a priori, but inferred from explananda recognized by both Aristotelian and "new" science, even armchair philosophy had sources outside the armchair.

It is true that both Hobbes and Descartes are heavily invested in a broadly similar framework of explanation --roughly mechanistic explanation -- that they independently argue is superior to the Aristotelian scholastic approach. Hobbes accuses Aristotle and the scholastics of clutching at the unintelligible in their so-called explanations (Hobbes [1651] 1839-1843 Vol. 3, 664-88). Descartes complains

of the complication of Aristotelian physics and its habit of explaining things ad hoc, comparing it unfavourably with the simplicity and uniformity of the corresponding Cartesian hypotheses.<sup>9</sup> Granted that these claims are not based on conducting experiments, it is hard to see how claims about the relative economy or intelligibility of favoured explanations are unacceptably speculative. They reach the threshold for being empirically informed, even if not the 17<sup>th</sup> century experimental philosophy threshold for being appropriately empirically informed, i.e. through the personal compilation of natural histories and the conduct of experiments.

#### IV

At this point we encounter an important discontinuity between both Descartes and Hobbes on the one hand, and the modern experimental philosophers on the other. The point of disagreement is over do-it-yourself empirical investigation. Recall the relevant passage from *Systema* and *Livengood* already quoted:

we will treat experimental philosophy as involving the systematic collection and analysis of empirical data to help answer philosophical questions or solve philosophical problems, whether or not the data directly concern intuitions.

(*Systema* and *Livengood* 2016, ...)

Both Descartes and Hobbes think they can rely on already recorded observations and experiments conducted by others. Both rely on Harvey for observations and

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9 'You must remember that in the whole history of Physics people have only tried to imagine some causes to explain the phenomena of nature, without hardly ever having succeeded. Compare my hypotheses with the hypotheses of others. Compare all their real qualities, their substantial forms, their elements and their other countless hypotheses with my single hypothesis that all bodies are composed of parts' (Descartes 1964-76 Vol. 2, 196).

hypotheses about the circulation of the blood, for example. In Hobbes's case, even theoretical explanations can be borrowed, at any rate from the likes of Copernicus, Kepler, Galileo and Harvey. Neither Descartes nor Hobbes, in other words, always or even characteristically adopts the do-it-yourself approach when it comes to the collection of data and the generation of phenomena through experiment.

Perhaps this unsuits Descartes and Hobbes for the role of 17<sup>th</sup> century ancestors of 21<sup>st</sup> century experimental philosophy. Perhaps the true ancestors are not early modern philosophical defenders of mechanistic explanation, such as Hobbes and Descartes, but philosophers from later in the 17<sup>th</sup> century who self-identified as "experimental philosophers" or philosophers like Hume who sometimes also described his approach as experimental. Systma and Livengood themselves mention the possible link with 17<sup>th</sup> century "experimental" philosophy (Systma and Livengood 2016, 19), basing themselves on a paper by Anstey and Vanzo that directly addresses the question of the relation between the two experimental philosophies (Anstey and Vanzo 2016).<sup>10</sup>

What is striking about 17<sup>th</sup> century experimental philosophy is that it illustrates the onset of a kind of reaction to the early philosophers of the scientific revolution, which consisted of lumping them together with the philosophers *they* reacted against. Hobbes and Descartes were decried as "speculative" philosophers *alongside* the scholastics they both criticized. What does 'speculative' mean? Does it mean

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10 Anstey and Vanzo say only that contemporary experimental philosophers are 'historically distant relatives within the family of movements that give pride of place to observation and experiment'

that Hobbes and Descartes arrived at sweeping hypotheses without acquainting themselves with any empirical data? Does it mean that they simply *imposed* the hypotheses on whatever data they did find? Not exactly. Hobbes and Descartes could be dismissed as speculative because they did not themselves go out and collect data for natural histories, but instead relied on common opinions and textual sources for their explananda. What is more, they did not favour hypotheses only because the data pointed that way. They could also be regarded as “speculative” because they committed themselves to a framework of explanation on account of its economy and simplicity and intelligibility in comparison with Aristotelian explanations of the same thing.

Boyle’s experiments with the air pump, by contrast, were not simple exercises in making any old reported explananda yield to some hypothesis involving the local displacement of different kinds of matter. Anstey and Vanzo summarize the distinctive features of 17<sup>th</sup> century experimental philosophy in general and Boyle’s in particular:

First, each experimenter built upon the work and discoveries of their predecessors. Second, instruments and the creation of phenomena that do not naturally occur in nature played a central role. Third, the experiments allowed Boyle (a) personally to experience (b) singular events, which happened at a specific time and place. The experience of these events was relied upon as (c) evidence for a general claim concerning the relation between pressure and volume of the air. This differs from traditional

natural philosophers' references to experience, which were mostly (a') based on common opinions, textual sources, or thought experiments about what happens (b') not in specific circumstances, but always or for the most part, and which (c') illustrated, rather than confirmed, general claims. (Anstey and Vanzo 2016, 7)

The methodological importance for Boyle of personal experience of discrete results of empirical investigation *does* align him with experimental philosophy in the sense of Systma and Livengood. Boyle's personal involvement in generating the airpump data corresponds to the do-it-yourself character of experimental philosophy as Systma and Livengood define it. But it also raises a question of the coherence of a research programme geared to natural histories as opposed to common opinions and textual sources. If personal observation of phenomena, including experimental results, is supposed to contribute to a written record of natural phenomena that others subsequently rely on, then the natural histories of the experimental philosophers contribute to second-hand explananda just as much as textbook results. They may be more specific, and more reliably described, second-hand explananda than those derived from textual sources with no explicit conception of the dependence of natural philosophy on natural history, but they are second-hand all the same.<sup>11</sup> In other words, the more natural history is compiled and relied on,

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<sup>11</sup> Admittedly, the most thoroughgoing experimental philosophers would have supported checking of facts from natural histories and replicating experiments. On the other hand, they allowed for reliance on testimony: Boyle, for instance, approves the reliance of experimental philosophers on the testimony of "Shepherds, Plowmen, Smiths, Fowlers, &c.," who "are conversant with the Works of Nature" (Boyle 2000, 281–327 & 313), and the reliance of "the most rational physicians" on the testimony of their patients and earlier physicians (Boyle 2000, 308). I am grateful to Alberto Vanzo for these quotations.

the less conditions (a) and (b) of the passage above are satisfied, and the more first-hand natural historiography feeds merely empirically-informed philosophy. Empirically-informed as opposed to experimental philosophy and natural history compilation *in propria persona*.

A second problem with viewing Boyle as the precursor to experimental philosophers like Knobe, Nichols and Stich is that the problems of air pressure are not, and not similar to, any of the kinds of philosophical problem that Systma and Livengood associate with 21<sup>st</sup> century experimental philosophy. What, then, might the connecting link or links be? Anstey and Vanzo suggest two:

First, current-day experimental philosophy emerged as an attempt to replace assumptions about the content of people's linguistic intuitions with the results of empirical inquiries on the content of those intuitions. Similarly, early modern experimental philosophy emerged as an attempt to replace natural philosophical systems derived from untested general principles with systems built on substantial observational and experimental foundations.

Second, old and new experimental philosophers share similar attitudes toward speculative, apriori reflections. Some current-day experimental philosophers seek to identify reliable, universally shared intuitions which provide "a proper evidential foundation" for philosophical analysis, traditionally conceived (Alexander and Weinberg 2007, 61). Similarly, several early modern experimental philosophers, especially among the proponents of the two-stage method of Baconian natural philosophy, thought that empirical



research would establish the principles for a strictly demonstrative natural philosophy. (Anstey and Vanzo 2016, 18)

These suggestions, while reasonable as far as they go, are unhelpful in relation to the broad definition of experimental philosophy given by Systema and Livengood. Either experimental philosophy is a matter of testing claims about intuitions elicited by philosophical cases in conceptual analysis, in which case its claims of standing in a tradition of philosophy as the broad empirical study of mind and morals and many other things is compromised; or else experimental philosophy is more broadly defined, e.g. as Systema and Livengood want to define it, in which case it has to be seen as the descendant of empirically informed philosophy, which also leads up to naturalized but *non*-experimental philosophy. On this approach, Knobe and Nichols do not have a history distinct from Dennett and Quine, and all together owe something to early moderns before Boyle.

The second of the Anstey-Vanzo suggestions for continuity between old and new experimental philosophy works better, for it finds a common ambition for the old and new varieties –finding an evidence base for results reached by analysis on the one hand and demonstration on the other. The problem is that this is a common ambition of only the kinds of experimental philosophy that seek to preserve the results of philosophical analysis. Some prominent experimental philosophers – notably Knobe--are hostile to analysis in particular and linguistic philosophy in general. To accommodate these as well as the Weinbergs of experimental philosophy –the ones who *are* sympathetic to analysis (see Weinberg et al 2001)– a

lower common denominator needs to be found, and a lower common denominator threatens to undermine the suggestion of a common ambition. Systma and Livengood do try to identify a lower common denominator. Call this their ecumenism. The problem is that a very inclusive definition of experimental philosophy resulting from their ecumenism either makes urgent the question ‘But is it philosophy?’ or else it answers that question in the affirmative and experimental philosophy ceases to be different in principle from empirically informed or broadly naturalistic philosophy.

This is important, because of the much looser continuity between past philosophy and current experimental philosophy that the wider definition seems to allow. Instead of a continuity consisting of philosophers each conducting experiments or carrying out empirical investigations for themselves, one can discern a continuity of interest in making philosophy reflect the results of systematic scientific enquiry. This interest arguably has a much longer history than the period from 1600 or 1650 and 2000. But the fact that it does fails to settle the question of whether everything that these days is called ‘experimental philosophy’ is what specialists in the field working today would call ‘philosophy’. Which takes us back to the question posed at the beginning.<sup>12</sup>

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<sup>12</sup> I am grateful to two anonymous BJHP referees, especially Referee 2, for comments that led to a number of improvements in the final draft.

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