

This article was downloaded by: [Psillos, Stathis]

On: 18 August 2009

Access details: Access Details: [subscription number 913836605]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Australasian Journal of Philosophy

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713659165>

### Scientific Realism and the Rationality of Science

Stathis Psillos<sup>a</sup>

<sup>a</sup> University of Athens,

Online Publication Date: 01 December 2009

**To cite this Article** Psillos, Stathis(2009)'Scientific Realism and the Rationality of Science',Australasian Journal of Philosophy,87:4,681 — 684

**To link to this Article:** DOI: 10.1080/00048400902941430

**URL:** <http://dx.doi.org/10.1080/00048400902941430>

## PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

was no interpersonal determination. Each being his own judge in that way, Hobbes argued, created a state of nature; rights must be established publicly and definitively if they are to play any part in creating peace rather than ongoing insecurity.

There is a lot more to Pettit's argument than can be covered in so brief a review as this one, and the contestable nature of some of the claims, it is to be hoped, will provoke a lot of discussion. This is a book that should be read by anybody interested in Hobbes's thought.

R. E. Ewin

*The University of Western Australia*

© 2009 R. E. Ewin

Sankey, Howard, *Scientific Realism and the Rationality of Science*, Aldershot: Ashgate, 2008, pp. viii + 162, £55.00 [hardcover].

The Australian Realist Outlook, finely exemplified in Howard Sankey's *Scientific Realism and the Rationality of Science*, has a distinctively metaphysical bent. It weds realism with a rich, typically neo-Aristotelian, view of the deep structure of reality. What is more, it takes it to be the case that commitment to this rich metaphysics, which leaves behind both Humean barren landscapes and the Kantian Copernican turn, is licensed by the very method by means of which scientists form and justify their beliefs in the unobservable, viz., inference to the best explanation (IBE). IBE becomes the bridge between epistemology and metaphysics: it (is supposed to) provide(s) a genuine solution to the problem of induction by authorizing the belief that the world is such that induction can work reliably in it. In this review, after a short presentation of the contents of the book, I will indicate what I think are some basic problems of the Australian Realist Outlook. This is a family quarrel, of course, but it does show that how best to conceive of realism and how best to defend it are not written in stone.

*Scientific Realism and the Rationality of Science* is a collection of Sankey's papers on realism, rationality and reliability from 1995 to 2006. An informative introduction binds the papers together and gives the volume unity. Chapter 1 articulates scientific realism, drawing an interesting distinction between the core doctrines and the optional ones. Chapter 2 is an attack on the view that realism requires a God's eye point of view. Chapter 3 argues that entity realism is a coherent metaphysical doctrine that relies constitutively on no theory of truth. Chapter 4 explains everything there is to know about incommensurability and articulates Sankey's version of causal-descriptivism. Chapter 5 argues for the rich metaphysics that Sankey intends to associate with scientific realism. Chapter 6 advances and defends a truth-linked version of normative naturalism. Chapter 7 criticizes attempts to draw a conceptual link between method and truth. Finally, chapter 8 criticizes neo-Popperian attempts to approach science without justified belief in the truth of its theories.

The way I see it, the key argument that permeates Sankey's call for a rich metaphysical perspective on reality is this:

The way the world is grounds the reliability of our scientific methods of knowing it.  
That our methods are reliable is the best explanation of their empirical success.  
Therefore, the world has the structure required for the reliability of our methods.

This argument is elliptic in many respects, but it does capture Sankey's main idea, viz., that admitting that the world has a certain deep structure, with natural kinds possessing essential properties and standing in certain nomological relations to each other, offers the best explanation of the undeniable success of scientific methodology. Sankey's gambit is smart: it assumes the existence of natural kinds in order to *explain* the reliability of induction. Should it work, it promises to avoid the well-known charge of circularity. The move from the success of scientific methodology to the existence of natural kinds is abductive: the existence of natural kinds is taken to be the best explanation of the success of science [84]. If so, the existence of natural kinds can do apparently non-circular work in justifying induction. If there are natural kinds, then *clearly* induction has to be reliable in so far as it latches upon them and projects natural-kind-based regularities among observed correlations.

There are many ifs here and, to his credit, Sankey is alive to them. I think it is wrong to believe that IBE can bypass the problem of induction—since the problem concerns, at bottom, the very idea of an *ampliative* but rational method. IBE has no atemporal warrant—as Hume in effect observed when he criticized a standard appeal to active powers to justify induction. Even if the existence of natural kinds is the best explanation of the success of the scientific methodology, the claim that these natural kinds have an atemporally fixed essence does not follow—it requires further argument. It is no accident, then, that Sankey does go for essentialism about natural kinds. But it is not clear any more that this is a conclusion arrived at by IBE. Neither is it clear that it is *required* for an understanding of natural kinds. Nor is it obvious that essential properties explain the reliability of induction in a non-circular way, since, as Sankey himself notes, 'good inductive inferences project essential properties, whereas bad ones project accidental properties' [87]. Unless there is an independent way to classify inductions into good and bad ones, essentialism cannot ground the reliability of induction.

Sankey professes naturalism (which is a central plank of the Australian Realist Outlook); hence, the reliability of scientific methodology has to be a contingent matter, having to do with the way the world is. He then goes on to adopt a hard line on the issue of laws of nature. Alongside other dispositional essentialists, he takes it that the laws of nature 'are necessarily true' [82], since they flow (whatever that means) from the basic causal powers that constitute the causal-dispositional identity of things in the world. There may be a number of problems with this view, but it is not one of them that laws cannot thereby be discovered *a posteriori*, since (*pace* Kripke) there are *a posteriori* necessary truths. But (there is always a but . . .),

there seems to be another related problem in the offing. If laws are metaphysically necessary (if they hold in each and every possible world in which the things and properties that inhabit the actual world exist), induction is reliable in all metaphysically possible worlds—and the claim that it is reliable is not in any interesting sense a contingent claim any more, since it follows from the basic assumption that laws are metaphysically necessary. This suggests that Sankey has not just solved the problem of induction; he has over-solved it, as it were, since, given the world we live in, induction cannot but be reliable; the application of induction guarantees getting at that truth. It is no longer a contingent truth about the world that induction is reliable; it is a metaphysical necessity.

The problem with this move is that its very viability relies on the existence of a non-inductive method that is able to yield the conclusion that laws of nature are metaphysically necessary. And I do not see any such method forthcoming—though perhaps this is the method of rational insight that Aristotle was after in *Posterior Analytics*. When Sankey comes back to this issue at the end of chapter 6 [105], he seems to perceive this problem and notes that, unlike induction, the methods of theory appraisal are not grounded in any sort of metaphysical necessity since theory appraisal ‘involves factors that go beyond those involved in basic induction’. But this very move seems to create a problem for the sort of scientific realism Sankey intends to defend. Given the (contingent) gap between truth and method that Sankey rightly admits (it is not a necessary truth that the harvest of the method is truth), but the lack of this gap between ‘basic induction’ and truth, it will always be epistemically safer for someone not to be a full-blown realist; that is, to restrict belief to all and only the deliverances of basic induction.

Why should a realist go for the rich metaphysical view of reality that Sankey endorses? In chapter 1 [19–20], he introduces ‘the optional doctrines’ of scientific realism, which include metaphysical accounts of causation and laws and essentialism about natural kinds. Since they are optional, they are not ‘must-buy’ for someone to be a realist. Yet Sankey claims that they are part of the ‘realist outlook’. I beg to differ. I side with Sankey in thinking that the existence of natural kinds ‘reflects the realist intuition that the world is not something amorphous or devoid of structure’ [20]. But admitting objective similarities and differences in nature—even natural groupings of properties—does not imply that one has to hypostatize kinds; let alone that one should be an essentialist about them.

One of the central doctrines of scientific realism that Sankey rightly emphasizes is the claim of mind-independence: ‘there is a world that exists independently of our thought, the existence, structure and features of which depend in no way on human experience, beliefs, concept or language’ [15]. This, to a good approximation, is an adequate account of the world as a limiting concept—something independent of distinctively human activities or categories. But on closer inspection, this conception of mind-independence is quite thin. There are senses in which it can be honoured even by Kantians and modern verificationist anti-realists—though it certainly excludes idealism and phenomenalism. Although

Sankey takes it that some correspondence theory of truth is among the core doctrines of realism [16–17], he feels the need to add by hand an extra core position, viz., that theories are made true by a mind-independent, objective reality [17]. Later on [19], he takes it that a commitment to verification-transcendent truth-conditions is an optional doctrine for realism. For my part, I doubt that a robust but broad enough conception of mind-independence can be arrived at unless realism is taken to constitutively involve some robust non-epistemic conception of truth. I take it that this move will allow realism to capture the claim of mind-independence by allowing the possibility of divergence between what there is in the world and whatever is licensed as existing by even the best theories of the world that meet several epistemic constraints. It seems to me Sankey comes close to this when, in chapter 7, he takes issue with anti-realist verificationism. There [especially 112–13], he claims that realists should insist on the absence of a conceptual connection between truth and rational justification and adds that ‘it is entirely possible for rationally justified beliefs about the world to be false. Indeed, given such mind-independence, the *entirety* of such beliefs might be false’ [113]. My only objection to this way of phrasing the point would be that it should be clearer that this possibility of divergence should be exactly what mind-independence (broadly understood) should be taken to be.

Nothing said or implied so far detracts from my admiration for this book. It’s written in a clear and engaging fashion, it deals with all major aspects of the scientific realism debate, it is sensitive to the opposition and fair in its presentation of rival arguments. It is full of sound judgment and rigorous argumentation. I highly recommend it and hope it comes out in paperback soon.

Stathis Psillos  
*University of Athens*  
 © 2009 Stathis Psillos

Young, Robert, *Medically Assisted Death*, Cambridge: Cambridge University Press, 2007, pp. viii + 251, £16.99 (paper).

A casual observer of public discourse regarding euthanasia and physician-assisted suicide might be forgiven for wondering if there is any work left to be done by rational argument. To be sure, the foundational issues of moral theory remain contested. There is plenty of room to argue about the value of life or about the basis and scope of autonomy. At the other end of the spectrum, there are serious questions of public policy that are far from resolved. What tests are best for settling questions of competence? How serious is the risk of abuse and how best can one safeguard against it? Any serious answer to these questions must be given in the light of a careful consideration of the real world effects of policy experiments under way in diverse jurisdictions.

In the vast middle ground, however, lies the closest thing to philosophical consensus one is ever likely to find. Here, we are agreed that autonomy is an