

## REVIEWS

### RE-CONCEPTUALISING EMPIRICISM

Bas C. van Fraassen, *The Empirical Stance*. New Haven: Yale University Press, 2002. Pp. xix + 282. US\$30.00 HB.

By *Otávio Bueno*

Empiricism has a complex and intricate history. It is a multifarious tradition that, for centuries, has been reformulated, reshaped, and re-invented. It may seem that there is little in common between the way in which Sextus Empiricus, Ockham, Locke, Reichenbach and Sartre were all empiricists. But often to be part of a tradition is to devise strategies to respond and re-conceptualise that tradition, while still preserving crucial features of the latter. Ultimately, it's this process of re-examination and change that allows one to identify a tradition through time, despite the fuzziness that will always remain.

For many years, Bas van Fraassen has been developing a novel and ingenious framework to defend empiricism. In his hands, empiricism has certainly changed. In *The Scientific Image* (Oxford, 1980), constructive empiricism was first formulated as a claim about the aim of science (empirical adequacy rather than truth), along with a new theory of the pragmatics of explanation, the formulation of the modal interpretation of probability, and a thorough critical assessment of scientific realism (pointing out limits to the inference to the best explanation and using the underdetermination argument in ingenious ways).

But constructive empiricism would be a much less interesting view if it didn't also provide a framework to understand particular aspects of science. To address this need, and to develop the view further, are the main goals of van Fraassen's *Laws and Symmetry* (Oxford, 1989) and *Quantum Mechanics: An Empiricist View* (Oxford, 1991). The former contains a detailed critique of philosophical notions of laws of nature, and an explanation of why there's no defensible account of that notion. The book also examines the role of symmetry in science and metaphysics, indicating that symmetry replaces, at least in part, the goals that were once aspired to with the notion of law. Along the way, a new, more lenient theory of rationality is developed; a theory that insists that rationality is



only bridled irrationality. In *Quantum Mechanics*, this particular understanding of symmetry and empiricism are then applied to make sense of quantum theory, addressing a host of interpretation issues that the theory raises (from the measurement problem to the issue of identity and indistinguishability of quantum particles).

In all of these works, van Fraassen developed an empiricist view about science, without ever having to address the question of what it is to be an empiricist. To answer this question, and to develop the empiricist program further, is the main goal of *The Empirical Stance*. The book, which is based on the Terry Lectures given at Yale University, has five chapters (or 'lectures') and three appendices.

The first lecture provides, as one would expect from any good empiricist, a critique of (analytic) metaphysics. But the critique doesn't come, as has so often happened in the history of philosophy, in terms of some criteria of meaning or content (criteria that, ultimately, empiricism itself couldn't then meet). The criticism is internal to the very project of doing analytic metaphysics, and it aims at opening the way for philosophy to be something other than metaphysics (p. 30).

This paves the way to the second lecture, which, more positively, develops a new account of empiricism. Van Fraassen first argues that the traditional way of conceptualising empiricism doesn't work. In his view, to conceive of empiricism as a doctrine to be believed (e.g. as the claim that experience is the only source of information about the world) is fundamentally incoherent. Empiricism should not be thought of as a doctrine, but rather as a stance, an attitude toward science and research (more on this below). It is one of the main challenges of the book to show the benefits (besides lack of incoherence) that emerge from this way of thinking about empiricism. The rest of the book takes this on.

As van Fraassen elegantly argues, there are three main benefits. First, he shows how the celebrated problem of scientific revolution/conversion can be reconsidered from the new perspective of the empirical stance, indicating, in particular, the role played by emotion in this context. (This issue is addressed in the third lecture.) Second, van Fraassen explores how epistemic life is possible without foundations; the rejection of the latter is one of the consequences of the empirical stance (fourth lecture). Finally, the problem of thinking about the relation between science and religion also acquires a new significance once empiricism is thought of as a stance. As van Fraassen points out, the crucial distinction between the secular and the religious "is not the theories they hold, or beliefs about what the world is like". Rather "the crucial distinction lies in a certain attitude, in how we approach the world and relate to our own experience" (p. 194). The book

concludes with three appendices, respectively on scientific cosmology, on the history of the name 'empiricism', and on why Bultmann's theology is not a philosophy.

Given the crucial role played in the book by re-conceptualising empiricism as a stance, let me elaborate on this point. Empiricism, van Fraassen insists, is presented not as a doctrine (a body of statements, beliefs, claims), but as a *stance*, an attitude. As he points out:

A philosophical position can consist in something other than a belief in what the world is like. We can, for instance, take the empiricist's attitude toward science rather than his or her beliefs about it as the more crucial characteristic . . . A philosophical position can consist in a stance (attitude, commitment, approach, a cluster of such – possibly including some propositional attitudes such as beliefs as well). Such a stance can of course be expressed, and may involve or presuppose some beliefs as well, but cannot be simply equated with having beliefs or making assertions about what there is. (pp. 47–48)

But what exactly counts as a stance? Can one generate a doctrine to be defended based on a stance? The answers to these questions are delicate. And this is the point where the new version of empiricism advanced by van Fraassen meets earlier forms of empiricism, such as that developed by Sextus Empiricus in *Outlines of Pyrrhonism*. According to Sextus, scepticism is not a doctrine to be believed, but an *ability*, an *attitude* of continuous investigation. The sceptic is *not* trying to establish that *nothing can be known* (that would be self-refuting). The sceptic challenges the dogmatists in their claim that we do have knowledge, reminding them that, according to their own criteria, they cannot establish knowledge of the world.

Although the empiricist, in particular the constructive empiricist, is not a Pyrrhonian sceptic, both share the same distrust for dogmatic metaphysics, the same doubts about conceptualising their own work in terms of *doctrines*. Both the Pyrrhonist and the constructive empiricist concede that they have beliefs (particularly about the observable), but ultimately what they are doing is to engage in a practice, articulating a stance.

This seems to immediately invite the charge of relativism. If stances are not to be defended as doctrines, if they are not to be equated with beliefs, how are we to judge such stances? Is it the case that anything goes? Perhaps this is the point where van Fraassen finally meets Paul Feyerabend and Richard Rorty. It's clear that the empiricist tradition, being a tradition of tolerance and pluralism, will always have its healthy dose of relativism. But, as opposed to Feyerabend, it's *not* the case that anything goes. (As van Fraassen reminds us, philosophical accounts of laws of nature, for example, don't go!) As opposed to Rorty, stances can be compared and discussed in terms of their fruitfulness, heuristic resources and problem-solving abilities. The empiricist is neither a full-blooded relativist nor a

thoroughgoing pragmatist, even though empiricism, even conceptualised as a stance, certainly has relativist and pragmatist components. The existence of a *plurality* of interpretations of scientific theories (similarly to what goes on in art) and, as all too often occurs, the impossibility of deciding between such interpretations on purely empirical grounds certainly bring in the share of pluralism that a relativist would appreciate. And the role of *pragmatic* factors in theory selection, clearly explored by the constructive empiricist, would certainly be received with the pragmatist's applause.

Rather than a *reductio* of the whole project, I take these relativist and pragmatist components of the empirical stance to be one of its main virtues, and the parallel with Pyrrhonism just reinforces that. Navigating between the extremes of dogmatic metaphysics and rampant relativism, the empiricist tradition now makes full circle, returning to the point where it started, but with a renewed identity. Re-conceptualised as a stance, empiricism can continue to challenge dogmatic forms of metaphysics, without incurring the risks of accepting everything. Along the way, it provides a fresh approach to the understanding of science, its elegance, richness and importance.

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