Prescribing What Scientists Should Not Do:

A Comment on van Fraassen's Anthropocentrism

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Abstract

In the field of general philosophy of science, the debates between scientific realism and anti-realism have been issues of crucial importance. Philosophers of both sides are sensitive to the ontological claims presumed in their opponents' formulations of science. The sensitivity commences a new era of debate which culminates in the confrontation between B. van Fraassen's constructive empiricism and J. Ladyman's ontic structural realism. The core of constructive empiricism boils down to the idea that the interpretation of science should not go beyond its legitimate claim, viz. 'empirical adequacy'. Stemming from this prescriptive idea, this paper proceeds with van Fraassen's critique that all realist interpretations of science are doomed to failure for attributing to it 'anthropocentric elements' (section 2). In defending realism, we draw on Ladyman's criticism that in order to manifestly spot the condition of empirical adequacy, it necessarily and inevitably involves the notion of objective modality in nature. The involvement is obviously at odds with the core idea of constructive empiricism, viz. the anti-metaphysical position (section 3). We then come forward to point out that constructive empiricism, while undamaged by Ladyman's criticism of 'under-determination', is 'anthropocentric' for privileging observability established on the basis of sense perceptions (section 4). By taking insights from I. Hacking's experimental realism, we further show how van Fraassen's criterion of observability should and could be, in his own light, reasonably extended to that of 'detectability' (section 5). The paper finally concludes that, taking scientific practices into consideration, what remains open in these debates is the issue concerning not 'what really is' in science, but 'what can be detected' in science