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# Do We Need a Scientific Revolution?

Maxwell, Nicholas (2008) *Do We Need a Scientific Revolution?* [Preprint]

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## Abstract

Do We Need a Scientific Revolution? (Published in the Journal of Biological Physics and Chemistry, vol. 8, no. 3, September 2008) Nicholas Maxwell (Emeritus Reader in Philosophy of Science at University College London) [www.nick-maxwell.demon.co.uk](http://www.nick-maxwell.demon.co.uk) Abstract Many see modern science as having serious defects, intellectual, social, moral. Few see this as having anything to do with the philosophy of science. I argue that many diverse ills of modern science are a consequence of the fact that the scientific community has long accepted, and sought to implement, a bad philosophy of science, which I call standard empiricism. This holds that the basic intellectual aim is truth, the basic method being impartial assessment of claims to knowledge with respect to evidence. Standard empiricism is, however, untenable. Furthermore, the attempt to put it into scientific practice has many damaging consequences for science. The scientific community urgently needs to bring about a revolution in both the conception of science, and science itself. It needs to be acknowledged that the actual aims of science make metaphysical, value and political assumptions and are, as a result, deeply problematic. Science needs to try to improve its aims and methods as it proceeds. Standard empiricism needs to be rejected, and the more rigorous philosophy of science of aim-oriented empiricism needs to be adopted and explicitly implemented in scientific practice instead. The outcome would be the emergence of a new kind of science, of greater value in both intellectual and humanitarian terms.

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