Evaluating Scientific Realism
A New Generation of Historical Case Studies

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This project looked to address a very specific popular 'scientific realist position', which claims that when a scientific theory brings about substantial scientific successes, then the elements of that theory which did the work to bring about those successes are very likely at least approximately true. Through the project an important relationship has developed between the philosophy and physics departments at Durham University.
There is widespread agreement that the popular scientific realist claim can be tested by the history of science. That is, one can look to specific instances in the history of science to either confirm or disconfirm the claim. Despite this the position has not been thoroughly tested by the historical record: philosophers have focused on the same few case studies for the past thirty years. This lacuna in the literature was addressed by the project: by introducing a range of new case studies to the literature it establishes a solid starting point from which the noted extensive testing will be almost automatic.

The project identified a list of 20 historical cases which can now be used to ‘test’ modern scientific realist positions. These are all relevant to the modern realist position, since they are all examples of novel predictive success issuing from now-rejected scientific ideas.

Three of the historical cases identified are well-known in the literature, but the other 17 are more-or-less new to the debate. During the project three of the cases were singled out for further investigation. These are discussed in detail by the PI in the project paper ‘A Confrontation of Convergent Realism’.

The stage is now set for these cases to be considered one by one to see which scientific realist positions (if any) survive. A significant outcome of the project is that a large number of open questions have been identified for the emerging debate. The project paper discusses all of these issues, and also offers a (partial) definition for the working/idle distinction, and a (first try) recipe for identifying the working positons of current scientific theories.

This project was conceived as laying a foundation for a major follow-up project. Many of the case studies need to be worked through. One such case – Kirchhoff’s theory of diffraction – is to be tackled by the PI and other academics based at Durham from late 2013 onwards.

The project paper, ‘A Confrontation of Convergent Realism’, published in Philosophy of Science, vol.80, no.2, pp.189-211 can be found here: www.jstor.org/stable/10.1086/669212

For further information or to access audio files and video podcasts of the project colloquium presentations please visit the project website: www.dur.ac.uk/evaluating.realism

"The research behind the project paper would not have been possible without significant stimulus from the project workshop, colloquium, reading group, and collaborative partners."

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