

BJUP interview with John Worrall



(http://www.lse.ac.uk/philosophy/wp-content/uploads/2014/12/Old_Building_0463.jpg)

The latest issue of the British Journal of Undergraduate Philosophy (BJUP) features this interview with LSE philosopher Professor John Worrall. You can find out more about the BJUP and view the whole issue here (<http://www.bups.org/bjup-online/>).

What was your first exposure to philosophy of science; where did things go from there?

([http://www.lse.ac.uk/philosophy/wp-content/uploads/2015/04/worrall-](http://www.lse.ac.uk/philosophy/wp-content/uploads/2015/04/worrall-400x500_entry.jpg)

[400x500_entry.jpg](http://www.lse.ac.uk/philosophy/wp-content/uploads/2015/04/worrall-400x500_entry.jpg)) So there I was at my North-of-England Grammar School in 1963/4, deciding at the last minute to reverse the plan to go into the 'Scholarship Stream' to apply for Oxbridge. (Think The History Boys – it then meant an additional year in the Sixth Form, and so another year in Leigh and I just couldn't face that!) This produced a last minute rush to decide where to apply for entry the following September. I received 15



minutes of careers advice – all I ever got. The outcome was that I should (a) study something involving maths, since that was my favourite subject; (b) aim for a course that might make me rich (my only input into the careers session); and therefore (c) go to the

LSE to study mathematical statistics, with a view to being an actuary. (Actuaries apparently having, at any rate then, the highest average salary of all professionals.) So I applied to the LSE for stats, without knowing the first thing about what actuaries do.

I had one optional course in my first year at LSE, and I chose Alan Musgrave's 'Introduction to Logic'. The timetable for this course had an optional lecture series – Karl Popper's 'Problems of Philosophy'. Since Popper's lectures didn't help you do proofs in first-order predicate logic and were in all respects irrelevant to the logic exam, most of my fellow logic students soon dropped them. But I was hooked. First of all they were pretty good theatre: David Miller – his then Research Assistant – would arrive first and write "NO SMOKING" in big capitals on the board. Students – and lecturers – often smoked during lectures in those days, but Popper believed he was allergic to tobacco smoke. Then all the other academics in the Department (all four of them!) would troop in and sit at the front, and finally the great (but tiny!) man arrived. Whatever history may decide, there was no doubt that Popper, in his own quiet way, really believed himself to be a major philosopher. He had, after all, 'solved the problem of induction' – and this came across strongly in his lectures.



(<http://www.lse.ac.uk/philosophy/wp->

[content/uploads/2015/04/Popper_Bronze_Portrait.jpg](http://www.lse.ac.uk/philosophy/wp-content/uploads/2015/04/Popper_Bronze_Portrait.jpg)) He was also a shameless name-dropper. There was much talk of correspondence with Einstein and conversations with the great logician Alfred Tarski on various park benches in Vienna. This was heady stuff for an 18-year-old working-class lad. I bought, and devoured, *Conjectures and Refutations* and *The Logic of Scientific Discovery*. And, although I had been perfectly happy mastering chi-squared tests and the like, I enquired at the LSE Registry and, yes: it was possible to change to Philosophy instead of Statistics. And so it was that Popper ensured I would never be rich.

Next, another stroke of luck. There was only one option in the Philosophy provision then. This was only the second year it had been going – before that the department had only done 'service' teaching. You could choose either Moral and Political Philosophy or Mathematical Logic. I was the only one in my year to take Mathematical Logic and it

turned out that if you made the choice you were assigned Imre Lakatos as your tutor. He got me all sorts of special permissions to go on studying some maths and stats alongside philosophy. He set me a ferocious list of tasks, including working through Stoll's Set Theory and Logic and Courant and Robbins' What is Mathematics?, telling me not to see him again until I had worked through the list. I think he believed he would not see me again. When he did (shortly before Christmas), he branded me a 'hopeful monster' and from then on took a very keen interest in my studies and, later, my early career. Studying his Proofs and Refutations was the intellectual event of my undergraduate study.

From there I went into a career entirely at LSE (aside from various visiting positions). In some ways, I regret the lack of variety, but I could not have been in a better place to research philosophy of science.

What do you see as the main purpose of philosophy of science?

Although I never got very much out of reading Locke, I do think he had absolutely the right characterisation of the role of a philosopher to act as an 'under-labourer to the scientist'. So philosophers of science should be out just to articulate the intuitive principles by which scientists judge theories in light of evidence, and to clarify some of the positions of scientists, because they have not found the time to think through their positions with full logical rigour or because they have more important things to do! Of course, scientists (especially from the 'softer' end) don't always get it right – witness the enormous exaggeration of the evidential virtues of randomization within the clinical trials community. And then philosophy of science can step in and try to make corrections. But all good philosophy of science is, as we like to put it in our department, 'continuous with science itself'.



(<http://www.lse.ac.uk/philosophy/wp-content/uploads/2014/09/lakatos13.jpg>)

What spurred your interest in evidence-based medicine?

Well, I wanted to do work that might impact outside of philosophy of science. But the main spur was undoubtedly a host of conversations over dinner with my wife. She is a consultant physician (though her first degree was in Philosophy at LSE). Of course, it would be hard to be against basing any body of claims and judgements on evidence. (As Hume said in the Enquiry: 'A wise man proportions his belief to the evidence [across the board].') The issue was always in the details: What counts as the strongest evidence for the effectiveness of medical intervention and why? What happens when evidence of different types pulls in opposite directions? Is clinical experience a legitimate source of evidence alongside results from clinical trials? It was always clear to us both that, while it undoubtedly had its heart in the right place, evidence-based medicine exaggerated the epistemological merits of randomised studies and hence tended to downplay the real significance of other types of evidence.

I ought also to mention my former colleague, Peter Urbach, who had been thinking about the methodology of clinical trials some years before I began to. I was initially resistant to his Bayesian analysis (as leaving too wide a role for subjective judgement), but I later became much more sympathetic. Bayesian principles are altogether more in line with 'educated, scientific common sense' than those involved in orthodox 'classical statistics'.

What impact did Imre Lakatos have on your work?

It will be clear from my answer to your first question that Imre's impact on me was enormous. Another strand of my work has been to clarify, and I hope improve, on Lakatos's views on what counts as progressive science (through better analysis on what counts as predictive success in science and why such successes provide stronger evidence for a research programme than successfully accommodating empirical results after the fact). But, aside from my having developed some specific Lakatosian themes in my work, I do feel that in general, it was by sitting at Imre's feet as an apprentice (my first job was as his Research Assistant) that I learned how to do serious philosophy of science. He was massively generous with his time and efforts to improve my early fumbblings.



(<http://www.lse.ac.uk/philosophy/wp-content/uploads/2014/09/lakatos-cropped13.jpg>)

How has your work on Structural Realism come to impact philosophy of science?

Good question. I did my usual job of publishing the original paper in the most obscure place. (Many of my better papers were written for conferences and published in proceedings – nowadays of course, you're not supposed to do that and have to aim for the 'top' journals.) It's always pleasant to get attention, but I have been surprised in this case: I made it completely transparent that what I was doing in the 'Best of Both Worlds' paper was reviving a position initially fully developed by Poincaré. The papers where I go a bit beyond Poincaré – by defending what some people have called 'Ramsey Sentence Structural Realism' (it's just Structural Realism really; no other version is coherent) – have attracted less attention, but then I did publish them obscurely!

Where do you see philosophy of science in ten years' time?

Popper used to distinguish prophecies and predictions. The latter being based on well-confirmed (sorry: corroborated!) theories. Like Popper, I don't put much store by prophecies: I don't know where the subject will be in ten years' time. But there is one change of direction that I would like to happen. For the past few decades there has been a great deal of excellent work on specific philosophical problems arising from science. For example, on trying to articulate a believable interpretation of quantum mechanics, or working out exactly what is involved in Darwinian evolutionary theory. But the 'grander' problem of the rationality of science and of theory-change in science has largely dropped out of focus since the Popper-Kuhn-Lakatos days. It would be nice to see a revival.

Where do you think traditional areas of philosophy, such as language and mind, stand in light of recent hard-science work in these areas?

Well, I have no trouble with philosophy of language – much of which is continuous with logic. Though I do think that some of the most interesting recent work, for example that of Kim Sterny, is involved with the issue of how various linguistic abilities, both syntactic and semantic, might have evolved. Philosophy of mind is a different issue. I struggle really to find a defensible role for it. I guess I am largely an unreformed positivist. If it isn't a question of clarifying some potentially confusing bits of science but also involves making substantive claims about the 'mind', then those claims ought to be testable – and that would be indistinguishable from neuroscience. To pick one example, I find the debates about the 'modularity' of the mind pretty barren. Whether or not there is an interesting notion of 'modularity' and, if so, whether and to what extent the mind/brain is modular, seem to me clearly questions for science itself – in this case, neuroscience. I just don't see any role for philosophy.

John Worrall is Professor of Philosophy here in the Department of Philosophy, Logic and Scientific Method at LSE. A selection of his recent research is available here (<http://www.lse.ac.uk/researchandexpertise/experts/profile.aspx?KeyValue=j.worrall%40lse.ac.uk>).

This interview was published in the British Journal of Undergraduate Philosophy Issue 9 (1) – Spring Conference 2015. Further information about the British Undergraduate Philosophy Society is available on their website (<http://www.bups.org/%20>).

17 April 2015 | Department Blog

(<http://www.lse.ac.uk/philosophy/blog/category/department-blog/>),

Philosophy of Science

(<http://www.lse.ac.uk/philosophy/blog/category/department->

[blog/philosophy-of-science/](http://www.lse.ac.uk/philosophy/blog/category/department-philosophy-of-science/)) | 0 Comments

(<http://www.lse.ac.uk/philosophy/blog/2015/04/17/bjup-interview-with-john-worrall/#respond>)

Leave A Comment

Name (required)	Email (required)	Website
-----------------	------------------	---------

Comment...

POST COMMENT

Notify me of follow-up comments by email.

