

JOHN WORRALL

ADDRESS

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PERSONAL

born 27.11.46. (Leigh,Lancs, U.K.); married, two children.

NATIONALITY

British

EDUCATION & QUALIFICATIONS

1958-1965 Leigh Grammar School

1965-1968 LSE: B.Sc.(Econ) degree (Special Subject: Philosophy).

1968 Graduated with first class honours.

1968-1971 LSE: post-graduate research.

1976 Awarded Ph.D degree of University of London
(Thesis title: 'The 19th Century Revolution in Optics: A
Case Study in the Interaction between Philosophy of
Science and History and Sociology of Science'.
Thesis supervisor: Imre Lakatos.)

PRESENT POSITION

1997- Professor of Philosophy of Science, L.S.E.

PREVIOUS POSITIONS

1968-1970 Research Assistant to Professor Imre Lakatos, LSE.

1971-1985 Lecturer in Philosophy, LSE.

1985-1987 Senior Lecturer in Philosophy, LSE.

1987-1997 Reader in Philosophy of Science, LSE

HONORARY APPOINTMENTS

1974-1983 Co- Editor then Editor, *The British Journal for the Philosophy of Science*.

1975-1978 Managing Editor of the posthumous works of Imre Lakatos.

1984-1988 National Organising Committee, 1988 World Congress of Philosophy.

1990-1993 Director, LSE Centre for Philosophy of Natural and Social Science

1993- Co-Director, LSE Centre for Philosophy of Natural and Social Science

1996-1998 Subject Editor for Philosophy of Science, Routledge Encyclopaedia of Philosophy

1998 Program Committee, Philosophy of Science Biennial Meeting, Kansas City

1996- Chairman, Management Committee, Lakatos Award

1999- Elected Member, Nominating Committee, Philosophy of Science Association

SCHOLARSHIPS & FELLOWSHIPS

1968-71	British Academy Postgraduate Scholarship
1982-3	Senior Research Fellow, Pittsburgh Center for Philosophy of Science
2001	William Evans Visiting Fellowship, University of Otago, Dunedin, New Zealand

TEACHING EXPERIENCE

I have developed and taught courses in all of the following

- Introductory, intermediate, and advanced levels in philosophy of science and scientific method, including methodological problems of the social sciences.
- Philosophy of Physics.
- Introductory, intermediate, and advanced levels in logic and mathematical logic.
- Advanced undergraduate level courses in the philosophy of mathematics.
- Advanced undergraduate level courses in the history of 16th, 17th, 18th and 19th century astronomy and physics.
- History of philosophy: the British empiricists - Locke, Berkeley, Hume.
- Epistemology and metaphysics.

- I acted as Departmental Tutor for many years and set up the first functioning Staff-Student Forum in the Department - I was responsible, in consultation with the students on that Forum, for introducing the first system of student evaluation of courses given in the Department.

REFEREEING AND EXAMINING

- Editorial Board, *British Journal for the Philosophy of Science* (1983-)
- I have refereed papers for *Synthese*, *Philosophy of Science*, *Studies in the History and Philosophy of Science*, *British Journal for the History of Philosophy*, *Science in Perspective*, and *Erkenntnis*.
- I have refereed book proposals on a number of occasions for each of Princeton University Press, Oxford University Press, Cambridge University Press, and Routledge; and grant proposals for the National Endowment for the Humanities, and for the Rockefeller Foundation.
- External examiner at Imperial College, Chelsea College, University College, University of Leeds and the University of Oxford; Ph.D examiner at the University of Oxford, Bradford University, University College, London, Leeds University, Cardiff University and Jadavpur University.

ADMINISTRATIVE EXPERIENCE

(a) Academic

- Editor, *British Journal for the Philosophy of Science* (1974-83)
- Departmental Tutor, Department of Philosophy, Logic and Scientific Method (1983-90, 1994- 6)
- Committee of the British Society for the Philosophy of Science (1990-5)
- LSE Committees :
Academic Studies Committee (1983-90, 1994-6),
Library Committee (1983-5),
Athletics Committee (1985-),
Committee on Undergraduate Studies (1984-90, 1994-6),
Imre Lakatos Memorial Committee (1974-)
- Chairman, Steering Committee, Centre for Philosophy of Natural and Social Science, 1990-
- International Steering Committee of the Lakatos Award, 1995-
- Sub-Committee on the introduction of Scientific Method and Critical Thinking into the Medical School Curriculum, University College and Royal Free Hospitals Joint Medical School, 1995-6.
- Convenor, Department of Philosophy, Logic and Scientific Method, LSE, 1996-1999
- Program Committee, PSA Biennial Meeting, Kansas City October 1998

(b) Miscellaneous

- Member, Management Committee, Highgate Cricket and Lawn Tennis Club (1979-82 and 1983-5)
- LSE Senior Common Room Cricket XI, 1971- . At various times I have served as captain, team secretary, and fixtures secretary (occasionally all three at once!)

CONFERENCE ORGANISATION

- Co-Organiser, International Conference on "Evolution and the Human Sciences", LSE, June 1992.
- Co-Organiser, Conference on "Evidence and Evidence-Based Medicine", LSE, March 1995.

RESEARCH GRANTS

- Grants from Wellcome Trust, Ciba-Geigy, THES, Harry Frank Guggenheim Foundation and others to run the international conference on Evolution and the Human Sciences, 1992
- Grants from Wellcome Trust, Ciba-Geigy, and North Thames Regional Health Authority to run conference on Evidence and Evidence-Based Medicine, 1995
- LSE Research Initiative Fund (jointly with P.Urbach) - grant for research on Science and Causality in Medicine, 1993-5
- Together with Professor Cartwright, I was instrumental in securing major funding for the Centre for Philosophy of Natural and Social Science.
- I am in the process of applying for funding for a major research project in methodology and foundations of medicine.
- Arts and Humanities Research Board (British Academy) major grant (£500,000) for project on 'Causality: Metaphysics and Methods' (with Nancy Cartwright and Elliott Sober)

Ph D students

S. Fendrich 'From Axiomatisation to Generalisation of Set Theory' PhD awarded 1987

K. Abimbola 'Scientific Rationality and Methodological Change' PhD awarded 1993

J.J. Ketland 'The Mathematicization of Nature' PhD awarded 1998

F. Guala 'Economics in the Laboratory' PhD awarded 1999

Armando Cintora Gomez 'Why Methodology cannot be Naturalized' PhD awarded 1999

Michael Dash 'Psychiatry and Scientific Method' PhD awarded 2001

Jack Ritchie ' Pragmatism and Pluralism: How to avoid becoming a
Physicalist' PhD awarded 2001

JeanMichel Delhotel ' Foundations of Quantum Information' PhD awarded
2004

Ioannis Votsis 'Structural Realism' PhD awarded 2004

MAIN INVITED ADDRESSES

- International Conference on Research Programmes in Physics and Economics, Nafplion, Greece, September 1974 - Lead paper, published as [1976].
- International Conference (Thyssen Workshop No.1), Kronberg, West Germany, August 1975. Lead paper, published as [1978], with reactions to criticisms from Feyerabend, Musgrave, Koertge, Hooker and others in [1978a]
- International Colloquium on the Logic and Epistemology of Scientific Change, University of Helsinki, December 1977. Lead paper, published as [1978c].
- International Union for the History and Philosophy of Science, Conference IV, Blacksburg, Virginia, USA, October 1982. Main paper in session on prediction, published as [1985].
- Boston Colloquium for the Philosophy of Science, Boston, Mass, April 1983.
- The 7th Norwood Russell Hanson Memorial Lecture, University of Indiana, Bloomington, Indiana, May 1983. ("Hypotheses and Mr Newton")
- Philosophy of Science Association, 1984 Biennial Meeting, Chicago, October 1984 - Invited Symposiast, published as [1985a].
- Pittsburgh Center for the Philosophy of Science, March 1986
- National Endowment for the Humanities Institute on Consensus in Philosophy of Science, University of Minnesota, April 1986. Lead paper in session on scientific revolutions, published as [1990].
- 30th Anniversary of the Pittsburgh Center for Philosophy of Science, October 1990. Lead paper in session on Grünbaum & the Duhem Problem - published as [1993a].
- International Union for the History and Philosophy of Science, Conference IX, Florence, December 1990. Lead paper in session on realism, published as [1995].

- Lecture Tour of China March-April 1991. Invited by Chinese Academy of Social Science - lectures on my ideas on theory-change and structural realism at 8 different academies and universities.
- Pittsburgh Centre Fellows Conference, Athens, May 1992. Lead speaker at Plenary Session.
- Philosophy of Science Association Biennial Meeting, New Orleans, October 1994. Paper published as [1994].
- Haredin Memorial Fund Lecture, University of Missouri-Kansas City, October 1994 ("Scepticism about Science and Perplexity about Postmodernism").
- Pittsburgh Centre Fellows Conference, Castiglioncello, Italy, May 1996.
- Athens-Pittsburgh Centre Conference on Anthropomorphism in Science and Philosophy, Delphi, June 1996. Lead speaker, paper published as [1996].
- "What is this thing called science? 20 years on", International Conference at University of Sydney, June 1997. Paper published as [1999]
- Dyason Memorial Lecture, Philfest (Joint meeting of Australasian Philosophy Societies), University of Auckland, June 1997. Paper published as [2000a]
- Lakatos 75th Anniversary, Budapest University, October 1997. Lead speaker, paper forthcoming.
- IUHPS, Krakow August 1999. Invited speaker in Methodology Section ("New Evidence for Old" forthcoming)
- 'Does Science Discredit Religion?' Public Lecture for the Humanities Faculty, University of Otago, New Zealand, September 2001
- '*What* Evidence in Evidence-Based Medicine?' Public Lecture for the University of Otago Medical School, September 2001
- 'A Bridge over Troubled Cultures? Philosophy of Science in Great Britain' Pittsburgh Center 40th Anniversary Lecture Series, April 2002

- Why there's no cause to randomize *British Society for the Philosophy of Science* November 2004

PUBLICATIONS, COMPLETED PAPERS & RESEARCH IN HAND

(a) Original Papers

- [1976]: 'Thomas Young and the "Refutation" of Newtonian Optics: A Case Study in the Interaction of Philosophy of Science and History of Science' in C. Howson (ed): *Method and Appraisal in the Physical Sciences*, Cambridge University Press, pp. 107-179.
- [1976a]: 'Imre Lakatos (1922-1974): Philosopher of Mathematics and Philosopher of Science' in R. Cohen, P. Feyerabend and M. Wartofsky (eds): *Essays in Memory of Imre Lakatos*, Reidel, pp.1-10.
- [1978]: 'The ways in which the Methodology of Scientific Research Programmes improves on Popper's Methodology' in G. Radnitzky and G. Andersson (eds): *Progress and Rationality in Science*. Reidel, pp. 45-70.
- [1978a]: 'Research Programmes, Empirical Support and the Duhem Problem: Replies to Criticism' in G. Radnitzky and G. Andersson (eds): *Progress and Rationality in Science*. Reidel, pp.321-338.
- [1978b]: 'Against too much method', *Erkenntnis*, 13, 279-95.
- [1978c]: 'Is the Empirical Content of a Theory Dependent on its Rivals?', in I. Niiniluoto and R. Tuomela (eds): *The Logic and Epistemology of Scientific Change*, Acta Philosophica Fennica, XXX, 175-200.
- [1979]: 'A Reply to David Bloor', *The British Journal for the History of Science*, 12, 1979, 71-81.
- [1980]: 'Facts and Feyerabend' in H.P. Duerr (ed): *Versuchungen: Aufsätze zur Philosophie Paul Feyerabend*, Suhrkamp, pp. 298-320.

- [1982]: 'The Pressure of Light: The Strange Case of the Vacillating 'Crucial Experiment'', *Studies in the History and Philosophy of Science*, **13**, 133-71.
- [1982a]: 'Scientific Realism and Scientific Change', *The Philosophical Quarterly*, **32**, 201-231.
- [1982b]: 'Broken Bootstraps', *Erkenntnis*, **18**, 105-130.
- [1984]: 'An Unreal Image', *The British Journal for the Philosophy of Science*, **35**, 65-80.
- [1985]: 'Scientific Discovery and Theory-Confirmation', in J.Pitt (ed): *Change and Progress in Modern Science*, Reidel, pp. 301-331.
- [1985a]: 'The Background to the Forefront', in P. Asquith and P. Kitcher (eds) *PSA 1984*, Volume 2. Philosophy of Science Association, pp. 145- 157.
- [1985b]: 'Models versus Mathematics?' *Rendiconti della Accademia Nazionale delle Scienze detta dei XL*, Serie V, Vol IX, II, 121-137
- [1986]: 'The problem of Controlling the Process of Cognition', in O. Molden (ed.) *Autonomie und Kontrolle: Steuungskrisen der Modernen Welt*, pp. 315-342.
- [1988]: 'The Value of a Fixed Methodology', *British Journal for the Philosophy of Science*, **39**, 263-75.
- [1989]: 'Fresnel, Poisson and the White Spot: The Role of Successful Predictions in the Acceptance of Scientific Theories' in D. Gooding, T. Pinch & S. Schaffer (eds.) *The Uses of Experiment - Studies of Experimentation in Natural Science*. C.U.P., pp.135-57.
- [1989a]: 'Why both Popper and Watkins fail to solve the Problem of Induction' in F.D'Agostino and I.C. Jarvie (eds.): *Freedom and Rationality: Essays in Honor of John Watkins*. Reidel, pp.257-96.

- [1989b]: 'Structural Realism: the Best of Both Worlds?', *Dialectica*, **43.**/1-2, 99-124.
- [1989c]: 'Fix it and be Damned', *British Journal for the Philosophy of Science*, **40**, 376-88
- [1990]: 'Scientific Revolutions and Scientific Rationality: The Case of the "Elderly Hold-Out"' in C. Wade Savage (ed.) *Scientific Theories*. University of Minnesota Press, pp.319-354.
- [1990a]: 'Rationality, Sociology and the Symmetry Thesis', *International Studies in the Philosophy of Science*, **4**, 305-19
- [1991]: 'Feyerabend and the Facts' in Gonzalo Munevar (ed): *Beyond Reason*. Dordrecht: Kluwer, pp.329-353.
- [1993]: 'Falsification, Rationality and the Duhem Problem: Grünbaum vs Bayes' in J.Earman, A.I.Janis, G.J.Massey and N.Rescher (eds): *Philosophical Problems of the Internal and External Worlds*. Pittsburgh and Konstanz: University of Pittsburgh Press, pp329-72.
- [1994]: 'How to Remain (Reasonably) Optimistic: Scientific Realism and the "Luminiferous Ether"' in M.Forbes and D.Hull (eds): *PSA 1994*, Volume 1. Philosophy of Science Association, pp. 334-342.
- [1995]: 'Il realismo scientifico e l'etere luminifero: contro la "meta-induzione" pessimistica' in A. Pagnini (ed.) *Realismo /Antirealismo. Aspetti del Dibattito Epistemologico Contemporaneo*. La Nuova Italia Editrice. Florence. pp.167-204
- [1996]: '"Revolution in Permanence": Popper on Theory-Change in Science' in Anthony O'Hear (ed): *Karl Popper: Philosophy and Problems*. Cambridge University Press. pp. 75-102
- [1996a]: 'Structural Realism: the Best of Both Worlds?' in David Papineau (ed.): *Scientific Realism*. Oxford Readings in Philosophy, pp.139-165 (Reprint of [1989b])

- [1996b]: 'Is the Idea of Scientific Explanation Unduly Anthropocentric? The Lessons of the Anthropic Principle' *Centre for Philosophy of Natural and Social Science, Discussion Paper Series*
- [1996c]: 'Popper's Legacy' in H. Sasson and D. Diamond (eds): *LSE on Social Science*. Routledge. pp. 159-167.
- [1998]: 'Philosophy of Science' (Signpost entry), *Routledge Encyclopaedia of Philosophy*.
- [1998a]: 'Imre Lakatos', *Routledge Encyclopaedia of Philosophy*.
- [1998b]: 'Philosophy and Natural Science' in A.C. Grayling (ed); *Philosophy 2: Further Through the Subject*. Oxford University Press.
- [1998c]: "Realismo, racionalidad y revoluciones", *Agora*, v. 17, n. 2..
- [1999]: 'Why ask "What is Disease"?' *Metascience*, March 1999
- [1999a]: 'Two cheers for Naturalised Philosophy of Science', *Science and Education*, July 1999
- [2000a]: 'Kuhn, Bayes and "Theory-Choice": How Revolutionary is Kuhn's Account of Theoretical Change?' in Robert Nola and Howard Sankey (eds): *After Popper, Kuhn and Feyerabend*. Kluwer. pp 125-151
- [2000b]: 'The Scope, Limits and Distinctiveness of the Method of "Deduction from the Phenomena": Some Lessons from Newton's "Demonstrations" in Optics', *British Journal for the Philosophy of Science*, 51, pp. 45-80
- [2000c]: 'Pragmatic Factors in Theory-Acceptance' in W. H. Newton-Smith (ed) *A Companion to the Philosophy of Science*. Blackwell. pp.349-357
- [2000d]: 'Science, Philosophy of', *Concise Routledge Encyclopaedia of Philosophy*. Routledge
- [2000e]: "There is a Thing Called Science", *Metascience*, June 2000

- [2001a] “De la Matemática a la Ciencia: Continuidad y discontinuidad en el Pensamiento de Imre Lakatos”, en Gonzalez, W J (ed), *La Filosofía de Imre Lakatos: Evaluación de sus propuestas*, UNED, Madrid 2001
- [2001a] “Programas de investigación y heurística positiva: Avance respecto de Lakatos”, en Gonzalez, W J (ed), *La Filosofía de Imre Lakatos: Evaluación de sus propuestas*, UNED, Madrid 2001
- [2001b] “Prediction and the Periodic Table” *Studies in the History and Philosophy of Science*, **32**, pp407-452, 2001 (with Eric Scerri)
- [2001c] “ Defining Disease: Much Ado about Nothing?” in A.-T. Tymieniecka and E. Agazzi (eds): *Analectica Husserliana* LXX11, pp33-55. Dordrecht: Kluwer 2001 (with Dr J.G. Worrall)
- [2001d] “ Ramseyfication and Structural Realism” Appendix IV of E. Zahar: *Poincare’s Philosophy: From Conventionalism to Phenomenology*, pp 236-251. Chicago and La Salle, Illinois: Open Court 2001
- [2002a] “Philosophy of Science: Classic Debates, Standard Problems, Future Prospects” P. Machamer and M. Silberstein (eds) *The Blackwell Guide to the Philosophy of Science* , pp18-36. Blackwell, 2002 ISBN 0-631-22107-7 (hardback) 0-631-22108-5 (paperback)
- [2002b] “Heuristic Power” and the “Logic of Scientific Discovery”: Why MSRP is less than half the story’ in G.Kampis, L Kvasz and M. Stoeltzner (eds) *Appraising Lakatos*. Kluwer. 2002. ISBN 1-4020-0226-2
- [2002c] “What Evidence in Evidence-Based Medicine?” *Philosophy of Science*.September 2002
- [2002d] ‘New Evidence for Old’ in P.Gardenfors et al *In the Scope of Logic, Methodology and Philosophy of Science*.Kluwer.
- [2003] ‘Normal Science and Dogmatism, Paradigms and Progress: Kuhn’versus’ Popper and Lakatos’ in T.Nickles (ed);: *Thomas Kuhn*. Cambridge University Press

[2004] 'Why Science Discredits Religion' in M.L. Peterson and R.J. Vanarragon (eds) *Contemporary Debates in the Philosophy of Religion*. Blackwell

(b) In Press

'Prediction and Mendeleev: a reply to Barnes', *Studies in the History and Philosophy of Science*, forthcoming

'Why there's no cause to randomize' CPNSS Working Paper Series, forthcoming

'History and Theory-Confirmation' in J.Worrall and C.Cheyne (eds) *Reason and Reality: Conversations with Alan Musgrave*. Kluwer, 2005

(d) Edited Works

(Editor with Elie Zahar) I. Lakatos: *Proofs and Refutations*. Cambridge University Press, 1976.

(Managing Editor) I. Lakatos: *The Methodology of Scientific Research Programmes: Philosophical Papers Volume I and Mathematics, Science and Epistemology: Philosophical Papers Volume II*, Cambridge University Press, 1978.

(Editor) *The Ontology of Science*. The International Research Library of Philosophy, Volume 10. Dartmouth Publishing Co. 1994 (includes 35 page editor's introduction plus a reprint of [1989b])

(e) Research in hand

I am presently completing a book to be called *Reason and Revolution: A Study of Theory-Change in Science*. to be published by Oxford University Press.

Once the book is complete, I intend to commence systematic research into issues in the methodology of medicine, concerning which I am currently completing a major application for research funds.