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COMMENTS ON JOHN IRVINE AND BEN R. MARTIN, RECIPIENTS OF THE 1997 DEREK DE SOLLA PRICE AWARD

It is a pleasure to be asked to write about two of the latest recipients of the Derek Price Medal of the journal *Scientometrics*, John Irvine and Ben Martin. They joined the Science Policy Research Unit (SPRU) in the late 1970s. John the sociologist, who had earlier been a Masters student at SPRU, came from Imperial College. Ben – a Cambridge trained physicist, who went on post-graduate work in Liberal Studies in Science, came from Manchester University. They were hired to carry out a two year study on the evaluation of basic research under the guidance of senior members of SPRU (including this writer) and the University Physics Department. They soon made it clear that they had their own strong ideas about what should be done, involving what turned out to be the method of "converging scientific indicators" of scientific performance, where a mixture of interview and survey-based data, together with bibliometric analysis, was used to compare the scientific output of large installations in high energy physics and radio-astronomy.[1, 5–7, 20]

The next five years turned out to be both an exhilarating and a bumpy ride, combining great creativity and research achievement on the one hand, and controversy and debate on the other. The outcome was a series of papers that have become classics in bibliometric and science policy analysis. The process involved hostility from sociologists of science,[13] indifference from public officials, and sentiments ranging from scepticism to implacable opposition from practising scientists. There were complaints to Ministers and Heads of Research Councils, and attempts by academics to suppress the publication of refereed academic papers. One person who never wavered in his support and encouragement was Derek Price himself, who followed their work from the beginning, and was delighted by its impact and the controversy amongst the policy and scientific establishments that it generated. He supported them whole-heartedly until his death in the development of their careers.

Mercurial John and Steady Ben had nicely complementary personalities to match their complementary disciplinary backgrounds. But what they shared in common was more important: an enormous capacity for hard work, an ability to present their work to - and to raise funds from - the outside world, a real gift for defining research questions

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that combined practical usefulness with intellectual excitement, and a concern for rigour and quality in their work. They were rarely discouraged by the controversies that they caused. Beyond the strong spur of ambition, they firmly believed that what they were doing would improve quality of decisions about science, and that debate and controversy were inevitable - indeed necessary - parts of the process. They moved on to a further major study, this time of CERN,[8–10, 12] and diversified into the development of methods for evaluating small and applied scientific activities.[15, 16, 23, 24] They made international comparisons of basic research inputs and outputs that both became standard references, and stimulated public debate about the state of British science.[14,17,21,25,27,28] They also laid the foundations for the later development of so-called Foresight activities.[26]

During the 1980s, their situation was transformed from radical and potentially dangerous outsiders to respected and much consulted experts - something about which this writer enjoyed, and still enjoys, teasing them. In part, this reflects the quality and impact of their work, but in part it reflects the changing spirit of the times, with the growing emphasis on accountability and performance measures. This has led to the growth of what might be called the "evaluation business" and related private consultancies. John and Ben have on the whole kept some distance from this movement, reflecting their commitment to tackling new rather than repeat problems, and to the quality control that surrounds public and published research.

Looking back, some of their great achievements have emerged as secondary outputs of their major research projects: the problems facing women scientists in the development of their careers,[3] the benefits of radio-astronomy in developing research skills,[2] the poor instrumentation underlying the weak Soviet performance in high energy physics,[11] and the evaluation of applied research laboratories in Norway.[4] We should also remember their unstinting support for Diana Hicks during the completion of her Doctorate and her subsequent career. Now they have gone their separate ways in the development of their careers, but they collaborated recently in a book on scientific instrumentation.[29] Both the academic and the policy communities have a great debt to what was a remarkably stimulating and productive partnership.

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