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Mixing metaphors

Interdisciplinarity and the Organisation of Knowledge in Europe

Edited by Richard Cunningham

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Conference proceedings seldom make riveting reading even for the conference participants, and this can be exacerbated for those more formalised meetings organised by international commissions. This volume, however, the result of a 1997 conference organised by the Academia Europaea, is an exception.

Interdisciplinarity is of increasing relevance in general academic life, as even long-established Institutions such as my own are discovering. This is particularly true for science understood in the wider sense: science interpreted for, and by, its various publics, and shaped through government policy. The sponsors of this conference, the European Commission, were conscious of its timeliness: the “concrete outcome... is a ‘statement’ containing 14 points,” distributed to “ministries and other organisations in the fields of education and research in Europe” [p. 8]. These conclusions and recommendations list principles and definitions of interdisciplinarity, areas of success, and administrative responses.

So what is interdisciplinarity, then? The opening chapter by Margaret Boden proposes six definitions. Her types of interdisciplinarity range from “encyclopaedic” – a mere juxtaposing of disciplines with little communication between them – to “co-operative” – where complementary skills are applied to a common goal. Yet a point only implicit in the text is that the meaning of the word depends on its focus, too. Thus, in contrast to the types already mentioned, “generalising” interdisciplinarity is outward looking, “applying a single theoretical perspective to a wide range of previously distinct disciplines” [p. 19]. The author’s most esteemed type (“the only true interdisciplinarity”), however, is “integrated” – in which the insights of one discipline contribute to solving the problems of another [p. 21]. This can appear to be a form of intellectual imperialism, the targeting and invading one discipline by another. This chapter highlights a minor problem with the book: it sometimes employs unclear or non-intuitive categorisations despite an evident desire to itemise and clarify. Perhaps this is inevitable in discussing a topic that naturally seeks to transcend boundaries and divisions.

Another dimension explored with more or less clarity is that the sense of the word depends on the context. The contributions to the volume sometimes distinguish, and sometimes do not, interdisciplinary education and interdisciplinary problem-solving. On the one hand, these two activities are quite different. Interdisciplinary education requires co-location and active co-operation by the educators in delivering a mixed curriculum, while problem-solving can be done in stages by teams in separate locations. On the other hand, successful interdisciplinarity in both teaching or research always requires a particular capacity to view knowledge in an unconfined and panoptic sense. This can be inculcated in university courses, instantiated in the composition of research teams, and promoted by imaginative state funding programmes.

The thirteen contributors discuss interdisciplinarity from a wide range of perspectives. Following the definitive opening chapter are three discussions of the historical perspective. These vary in depth. Jürgen Mittelstrass illustrates the unity of the history of science with the simple observation that “Robert Boyle was at least both a chemist and a physicist, Max Weber a historian and a sociologist” [p. 27]. Walter Rüegg gives a more detailed account of interdisciplinarity in the medieval European university, and shows how disciplinary schools were largely a product of the nineteenth century. Raymond Boudon describes the intellectual development of interdisciplinarity in European social sciences.

Other sections are “Interdisciplinarity and Organisation of Research” and “Interdisciplinarity in Teaching”. John Ziman argues that interdisciplinary research is actually common, and that disciplinary inertia is manifested on the scale of professional institutions and university departments. Other chapters cite Space Science and Biosphere Studies as examples in which interdisciplinarity has been institutionalised by international programmes. Two pertinent observations made in this section are that switching research fields can retard a professional career by some years, and that interdisciplinary research can sometimes attract weak contributors and yield non-durable results. Thus the attempted merging of disciplines may have intrinsic flaws.

All in all, the chapters and sections show a remarkable degree of coherence for such an assorted group of contributors – surely a good example of interdisciplinarity in practice! The sum is readable, jargon-free and thought provoking. Moreover, a ‘Debate’ section follows several papers to summarise audience comments. A minor quibble is that the chapters themselves employ alternately footnotes, endnotes or no references at all.

The fourteen-point conclusion is typical of the chapters in its common sense and relevance to practising educators and researchers. One of the authors’ concrete conclusions is sobering: “Interdisciplinarity is frequently the first casualty when academic or research systems are under

pressure” [p. 233]. Concepts, even when difficult to define and exemplify, may be undeserving victims. The understanding and wise application of science needs an interdisciplinary perspective – and a stable one.

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