

P. Dawid, W. Twining and M. Vasileki, (eds.)

Evidence, Inference and Enquiry.

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Evidence, Inference and Enquiry is the offspring of University College London's 'Evidence Project', a four year (2004-08) multidisciplinary endeavour funded by the Leverhulme trust and the British Economic and Social Research Council (see <http://www.ucl.ac.uk/jdi/research/evidence-network>). The book is part of the *Proceedings of the British Academy*. The *Guidelines for proposing and editing a themed volume in the Proceedings of the British Academy* (<http://www.britac.ac.uk/pubs/notes-to-pba-editors.cfm>) state that the *Proceedings* are not 'specifically a forum for conference proceedings' and that no conference papers have a "right" to be in a volume'. Thus, although some of the papers in *Evidence, Inference and Enquiry* have been presented at conferences for the Evidence Project, the book cannot be assimilated to mere conference proceedings. Indeed, those same guidelines state that each volume of the *Proceedings* should be 'a landmark in its field'. It has thus been appraised as a regular collection of essays.

The volume can be described as (1) a collection of essays about topics broadly related to evidence and inference and (2) a *memoir* of the Evidence Project. The topics of the essays are extremely varied. Here is a quick description of each, in order, with author(s) name(s) and main discipline(s): 1. A substance-blind classification/science of evidence (Schum, Law). 2. A *post-mortem* of the Evidence Project's 'interdisciplinary group' (Davies, History). 3. A history of legal scholars' theorizing about evidence, which has sometimes been interdisciplinary (Twining, Law). 4. An introduction to two types of formal inference networks: Bayesian nets and Wigmore charts (Dawid, Statistics; Schum, Information Technology and Engineering & Law; Hepler, Statistics). 5. Suggestions for a non-quantitative formalization of evidential reasoning based on argumentation theory (Fox, Engineering). 6. How do ordinary people process evidence? (Lagnado, Psychology). 7. The importance of generalisations for evidential reasoning (Anderson, Law). 8. Interpretation and reasoning: the limits of formal inference networks (Tillers, Law). 9. Evidence-based policy: the risks of scientism and managerialism (Russell and Greenhalgh, Healthcare Innovation and Policy). 10. Developing a guide based on naturalistic causal models for the use of evidence in predicting policy effectiveness (Cartwright and Stenenga, Philosophy). 11. The virtues of randomized trials and the vices of philosophers of science (Colquoun, Pharmacology). 12. Evidence as an intrinsically contextual notion (Chang and Fisher, Philosophy). 13. The possibility of knowledge in archaeology (Wylie, Philosophy & Anthropology). 14. The importance of putting things in their proper historical context: the example of ancient religion (Davies, History). 15. Contemporary economics' lack of attention to evidence: an unflattering comparison with biology (Joffe, Epidemiology). The importance of distinguishing between uncertainty of hypothesis and uncertainty of data in science and in criminal law (Gardner-Medwin, Physiology).

Getting through the volume is analogous to reading random entries in an encyclopaedia: one learns interesting things, but with very little sense of progression. The essays simply come one after another, dealing with a kaleidoscope of topics related to evidence and inference. Given the variations in approaches and topics, it is difficult to imagine to whom the book could be addressed. And, unfortunately, the introduction does not reveal the volume's organizing principle and does not tell us why, among all those associated with the Evidence Project, these particular authors, topics and essays were selected for publication. Finally, there is some overlap between essays (e.g.

between Dawid, Schum and Hepler's and Lagnado's), noticeable mistakes of form and, curiously, nowhere is the contribution of one of the editors (Vasileki) specified.

As to the individual essays, the quality is uneven. The ones written by philosophers are typically rigorous, although perhaps a bit heavy for a general, interdisciplinary volume. The two by Davies (on the Evidence Project's 'interdisciplinary group' and on belief and ancient religion) are excessively long-winded, oddly organized, and written in a heavy 'critical' style that hampers interest and intelligibility. Tillers' essay discusses deep philosophical issues similar to those tackled by Chang and Fisher, but less clearly. It also seems to be constructed on a false dilemma between unyielding formalism and contextualism. Russell and Greenhalgh's arguments against scientism and managerialism are also built upon a similar false dilemma between science and 'practical reason'. And their main suggestion – that excessive scientism and managerialism distort life's complexity – is true, but trite. Colquoun, for his part, is certainly right to rebuke a certain form of nihilistic, anti-scientific, postmodernism, but ends up going too far by putting all philosophers of science in the same basket. Finally, Schum, Twining and Anderson's essays, while very good, duplicate more detailed materials already published in Anderson, Schum and Twining, *Analysis of Evidence*, 2nd ed. (Cambridge: Cambridge University Press, 2005) and in Twining, *Rethinking Evidence*, 2nd ed. (Cambridge: Cambridge University Press, 2006).

The Foreword (by Allen), Introduction (by Dawid), as well as several chapters (notably those by Twining and Anderson and the first one by Davies) allude to the actual unfolding of the Evidence Project. We come to understand that there have been difficulties. As admitted by Dawid (in the Introduction) and Twining, little progress was made on general questions and the benefits were essentially intra-disciplinary or of the personal-moral kind (tolerance of difference, increased open-mindedness, etc.). It would appear that the program ran into some kind of interactional troubles due to the disparity of its multidisciplinary group. More specifically, it seems that the program was at least partially hampered by some participants' irrational fears of various forms of intellectual imperialisms (e.g. Bayesian, scientific, empiricist). We also learn (in Twining and Anderson's essays) that some felt that their disciplines were too special for general notions of evidence to be relevant and were therefore reflexively hostile towards a common intellectual enterprise. Such an amalgam of narcissism and nihilism may help explain Colquoun's frustration with those he calls the 'postmoderns'. Indeed, it seems evident that there never was any kind of 'scientific' or formalistic bid for hegemony within the Evidence Project. If we are to believe the consistently tolerant and gracious Twining – and he is corroborated by Schum and Lagnado on this point – certain approaches (such as Schum's substance-blind science of evidence or inferential networks) were put forward as useful starting-points but never as panaceas. As a memoir, then, the volume may be useful as an account of mistakes not to be repeated when trying to get very wide multidisciplinary projects off the ground. For instance, Twining is by now weary of anticognitivist nihilists who will not even entertain the notion of evidence.

But even if a similar interdisciplinary project on evidence were to admit only card-carrying cognitivists, or only those at least minimally interested in evidence, the question remains whether it is necessary. Is there really a need for a new and distinct interdisciplinary field of evidence, as suggested by Allen and Twining? The book itself exposes disagreements among some of the main participants in UCL's Evidence Project. Twining believes that there is still work to be done 'exploring the extent to which there are concepts, principles, and methods relating to evidence and inference that could be developed and applied broadly across many disciplines' (96) and that this is both theoretically and practically important. Anderson is more pessimistic. He believes that barriers

between disciplines limit what can be done in collaboration and that therefore people should go back to their own disciplines and only sporadically come back to general issues about evidence.

Twining is surely correct that the discussion could go on. But this is because evidence is mostly (as he himself recognizes) about inference. And inference has been discussed in philosophy since its birth. It is indeed surprising to read in Dawid's introduction that 'the need to understand and interpret evidence is surely as fundamental to all enquiry as Aristotelian logic, and just as ancient; but from classical until modern times, there has been all too little interest displayed in general principles of evidential reasoning (1) ... While there is long history of theorising about evidence in some contexts, notably law, probability theory, epistemology and historiography - there have been relatively few attempts to make evidence itself the subject of a general theory (3).'

The first statement amounts to saying that too little interest has been paid to inferential reasoning. This is impossible to disprove. But, more importantly, Dawid then admits that there has been a long history of theorising about evidence in some contexts, notably *epistemology*. But epistemology is not a 'context'. It is the general philosophical study of knowledge, including knowledge by inference. And since epistemology has been concerned with inference for a very long time, this raises the question: has the general study of evidence not already been part of epistemology, and more generally of philosophy, for a very long time? And if that is the case, then what? Clearly, as many people as possible should be familiar with basic notions of logic, epistemology and probabilities. The real issue is how can this best be achieved? For instance, should each university consider the creation of a multidisciplinary group providing 'interdisciplinary studies of enquiry, inference and evidence' and promote 'courses available to all undergraduates', as suggested by Allen in the Foreword (viii)? There is, of course, no harm in *considering* it, but there is reason to remain sceptical that the thoroughly interdisciplinary study of inference and evidence constitutes a non-superfluous research program and a good use of resources, since it is likely to amount to discussing inferential reasoning in various contexts.

To sum up, it cannot be expected that a book of essays by authors coming from many different disciplines will be seamless, but the lack of direction in *Evidence, Inference and Enquiry* is disappointing. The breadth of the Evidence Project itself and the ideological difficulties experienced during its unfolding may well explain this result. Hence, the volume exposes a useful cautionary tale about the temptations of unbridled interdisciplinarity.

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