



Book Review

Zenon Bankowski, Ian White, and Ulrike Hahn, *Informatics and the Foundations of Legal Reasoning*. Law and Philosophy Library, Kluwer Academic Publishers: Dordrecht, 1995. 374 pages. ISBN 0-7923-3455-8.

Between 1988 and 1991 the European Community funded a Basic Research Working Group on the Foundations of Legal Reasoning. This group, mostly lawyers, but with a few computer scientists, and a couple of philosophers, met twice a year to discuss such topics as the feasibility of producing formal models of law, and the extent to which such models were amenable to computation. This book is a selection of fourteen papers from that project. It is not a collective view, nor a systematic summary of conclusions, but rather a set of individual essays, addressing a variety of aspects of the topic, and expressing a variety of approaches. In addition the editors have written a new introduction to the papers, which both indicates the main thrust of each of the papers and provides a critical and explanatory survey of the issues raised. This introduction provides an excellent discussion, and is undoubtedly the high spot of the book.

There is considerable diversity in the papers. Three papers (by John Bell, Neil MacCormick and Giovanni Sartor) focus on defeasibility of legal conclusions; one (by Eric Hilgendorf) on theories of legal argumentation; five (by Zenon Bankowski, S.C. Smith, Geoffrey Samuel, Gregory Pipe and Garrett Barden) on the use of cases and analogical arguments to resolve open textured issues; and one (by Andrew Jones and Marek Sergot) on the role of deontic logic. One (by Lillian Edwards) draws some lessons from the implementation of a simple expert system; one (by Joxerramon Bengoetxea) identifies some problems in a theory of EC law, and the implications for decision support systems; one (by Robert Kowalski) compares the language of legislation with the language of logic programming; and one (by Sandra Dewitz) suggests that in the context of Electronic Data Interchange facts are computer events and could be properly determined by a computer. In this review I shall concentrate on the papers relating to defeasible reasoning and analogical reasoning, as I think they provide a useful comparison of the progress that has been made in AI and law since the papers in the book were written.

From the papers concerned with defeasible reasoning, by John Bell, Neil MacCormick and Giovanni Sartor, a number of useful points emerge, including:

- the necessity for a decision to be made, even if information is incomplete: withholding judgement is not an option;
- that a conclusion, even if defeasible, is not uncertain: it is true until defeated;
- that some conditions need to be established whereas others can be assumed unless the contrary is shown;
- that legal conclusions must be justified, typically by an argument;
- that legal reasoning takes place in a dialogical context;
- that in addition to rules there are policies or principles;
- that some arguments turn on weighing competing considerations, rather than deduction.

Since the papers were written these ideas have moved into the mainstream of AI and Law research. A considerable body of work (e.g. [1], [2]) by a variety of people, not least Giovanni Sartor, has established the study of argument as a central concern when modelling legal reasoning, so as to accommodate and account for such phenomena as those listed above. Thus someone who has followed developments in AI and Law will find little new here, although it is useful to be reminded of the legal theory underlying this work.

In contrast the papers dealing with cases, analogy and open texture, are difficult to relate to current work. Among the impressions that can be got from these papers are:

- that the ratio of a case often becomes clear only as it is used in the decision of other cases; thus in cases relating to whether the manufacturer or retailer was liable for damages caused by invisible defects, *Grant v Australian Knitting Mills* (concerning noxious chemicals in a pair of underpants) not only relies on but also clarifies, and possibly even extends *Donaghue v Stevenson* (which concerned a snail in a ginger beer bottle);
- that analogies depend not so much on matching facts, as on matching structures (a snail does not match well with noxious chemicals, but it plays a similar role in the case);
- that there is an element of creativity in making legal analogies;
- that analogy and what counts as an analogy, is firmly rooted in the tradition and practice of law;

We find, I think, little of the subtlety and on-going development revealed in these papers in case based systems as currently realised. Many systems attempt to match on facts and pay scant attention to structure; and cases are typically seen as yielding guidance in isolation, rather than as one member of a series of related decisions. Even the best case based systems, HYPO [3], BankXX [4] and CATO [5], rely on cases being described in terms of factors before the systems tell us how to deploy them, and producing this description is where most of the real reasoning work identified in the papers in this book goes on. These papers describe some

important aspects of legal reasoning that have as yet hardly been addressed, and those interested in these aspects will find some thought provoking material here.

Another topic which emerges strongly from the papers in general, and especially those of MacCormick and Bankowski, is the importance of so-called institutional facts. Institutional facts are contrasted with “brute facts”, which are in principle observable in the world, and are constituted by institutional rules. The distinction derives from philosophical work relating to the possibility of deriving normative consequences from factual premises. This distinction has recently started to achieve considerable attention, particularly in relation to work on ontologies for legal information systems, e.g. [6].

Despite the title of the book, most of the essays have very little to say about informatics. There is no discussion of existing implemented systems (except that of Lillian Edwards on the Scots law of intestate succession in her chapter describing the lessons she learnt from building it), and little discussion of existing computer techniques. It would have been interesting to have some concrete examples drawn from actual systems to anchor some of the more theoretical discussions. On the other hand, such discussion might well have given the book a rather dated flavour, since some a lot of progress has been made in the field since 1991.

All the essays in the book are well written and readable, and all have some interesting points to make. It is a pity that the work has taken so long to arrive in book form, but it remains of value. It doesn't offer much in the way of specific guidance, but reading it will spark off ideas, and give some fresh perspectives.

References

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