

Joint Conference on THE STATISTICIAN AND THE LAW : Report

(15th June, 1977 - The Royal Society, London)

There were four papers discussed during the day conference: The position of the expert witness, by Mr Ian Miller, Solicitor; Experience as an expert witness in gambling cases, by Professor F Downtown; Statute Law and Statistical procedures by Dr W R Buckland and Mr W A Pridmore; and Probability and the Law by Professor D V Lindley.

The first paper outlined the constraints on an expert witness when giving evidence in a court of law. It showed that, although the formal role of an expert witness is to assist the court:-

- one has to slant the collection and presentation of data in order to present a convincing picture for one side or the other; and
- the role of consultant to a client imposes a heavy ethical responsibility on the expert witness.

Unsurprisingly, given the audience, most questions were concerned with the level of fees which a statistician can charge. Nevertheless, the question was raised about the availability of data and facilities to both sides in a case; predictably Miller simply expressed disbelief that English justice could ever be biased in this way.

The second paper gave a participant's view: Downtown showed how he had been asked by the police, effectively, to construct a case against particular gambling houses and, later, to give evidence in court against them. Downtown himself admitted he felt some "confusion about [his] exact status: an unofficial policeman or an objective observer helping the court?"

Besides this obvious bias Downtown's paper raised two important issues, both seized upon by Radical Statistics participants. First the extent to which resources are available to one side rather than the other, with usually more available to the prosecution rather than the defence. Secondly, the way in which the necessity to present statistical information and argument in a "simplified" form to the court and the jury might (un)intentionally lead to misinterpretation of the situation. This is especially serious when the problem is to present probabilities involving

large numbers which are notoriously difficult to grasp (for anyone - whether numerate or non-numerate).

The third paper gave a clear picture of a possible future army of statisticians defending righteous, profit minded companies against uppity consumers. Buckland and Pridmore unconsciously underlined the importance of the change from regulations enforcing minimum quantities or standards (which afforded at least some protection to the lay consumer) to average quantities or standards (whereby the expert statistician becomes the arbiter of a fair transaction). There may be several cases for a statistical fire brigade soon...

The last paper, by Lindley, was intended to be the showpiece. In his delivery, he had some of the "mad scientist" qualities: conviction that his audience did not understand; religious fervour in spreading the message; and so on. More seriously, so did the contents of his paper.

He argues that the present process of adjudicating guilt or innocence (presentation of a limited range of evidence by both sides of a jury) should be replaced by presentation of any possibly relevant evidence and statements about this evidence "on the supposition of guilt and on that of innocence". Then the final judgment should be "our probability that the defendant is guilty is" stating the numerical value that results from the continued use of Bayes theorem", and that the sentence should be chosen so as to maximise society's utility function given the probability of guilt and the range of possible sentences.

Lindley's overpowering belief in a particular form of rationalism, shows through clearly: "The only rational way to describe uncertainty is by means of probabilities"; "Notice how neatly it (the utility function) balances the events and elements of sending a guilty and an innocent man to prison".

Most of the objections were of the form that "it is not British" besides commenting on the impracticability of Lindley's proposals. But, to me the crucial point is the authoritarian nature of Lindley's proposals and the importance of combatting them.

Note 1. These papers are going to be published by the R.S.S. and I.S. jointly.

2. I am still interested in the possibility of forming a Statistics and the Law subgroup - contact:

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