STATISTICS FOR LAWYERS, Michael O. Finkelstein and Bruce Levin N.Y.: Springer-Verlag Inc., 1990, $76.50 Aust.

The authors state that the 'aim of this book is to introduce lawyers and prospective lawyers to methods of statistical analysis used in legal disputes'. They seek to meet this objective by presenting discussion on statistical aspects of a wide variety of case studies, interspersed with brief descriptions of statistical concepts and methods. While there are many admirable features in the book, the book requires a level of mathematical literacy and statistical knowledge which, I suspect, is well beyond that possessed by the majority of lawyers. Page 198, for instance, includes the equation

$$G^2(H_1:H_0) = 2\log\{L_1(\hat{\Theta}_1|\underline{X})/L_0(\hat{\Theta}_0|\underline{X})\}.$$

This equation is followed by the sentence 'A remarkable result is that under $H0$ in large samples, $G2$ is approximately distributed as a chi-squared variable, with degrees of freedom equal to the difference between the number of unknown parameters under $H1$ and $H0$'. I believe this level of mathematical presentation is both too advanced and is unnecessary in explaining statistical concepts to lawyers.

For persons who do possess a basic understanding of statistical concepts, there is much to learn from the discussions of application of statistics in case studies and the role of statistical reasoning in these examples. The flavour of the book is perhaps best gained from the authors' statement that 'although the lawyer usually will not need to make calculations, an appreciation of the principles - which is needed - is best gained from some modest grappling with the data'. The authors have been skilful in presenting sufficient detail of the cases to motivate the statistical discussion while avoiding lengthy discussion which would obscure the statistical points. The examples are grouped according to the relevant areas of statistical application and each section in the book is essentially self-contained. Thus, the reader may refer to individual sections without need to have studied earlier sections in the book.

As a book to teach statistics to lawyers, I feel it is quite deficient. The introduction to statistical concepts is brief and often vague. For example, Section 12.1 is titled 'Introduction to multiple regression'. The section opens with the sentence 'Multiple regression is a statistical technique for estimating relations between variables ...'. This is followed by examples in which terms 'regression model', 'dependent variable' and 'regression equation' are included without definition or clear explanation. Without specific definitions or explicit statements describing statistical terms, readers will have difficulty separating the statistical concepts from the examples in which they are introduced. Some widely used terms are ignored. For example, there is no index entry for the term 'p-value' and the notion of 'significance' is given little space. While I applaud the authors' concentration on the use of confidence intervals, lawyers should

be made familiar with the interpretation of p-values and the reason for preferring interval estimates over significances.

The book contains 608 pages and the topics covered are extensive - ranging from descriptive statistics and elements of probability through the common simple inferential methods to survival analysis and regression analysis. Within each chapter, the sections are distinguished by being either statistical topics or case studies. By way of example, Chapter 4 commences with the following sections: 4.1 The binomial distribution, 4.2 *Discrimination in jury selection*, 4.3 The normal distribution and a central limit theorem, 4.4 *Hiring of teachers.* questions, notes and sources follow many sections. Presentation is clear and the layout and quality are what one expects from Springer-Verlag publications.

In summary, the book provides valuable discussion of questions arising from the interpretation of statistical findings in a wide range of legal applications. However, it is a book to be read by persons who have an existing basic understanding of statistical concepts and some mathematical literacy.

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