

BOOK REVIEW

Steven B. Dow,¹ Ph.D. and Christina DeJong,¹ Ph.D.

Review of Statistics for Lawyers, 2nd ed.

REFERENCE: Finkelstein MO, Levin B. Statistics for lawyers, 2nd ed., Springer, New York, NY, 2001, 617 pp.

A little over a century ago Oliver Wendell Holmes, then a justice on the Supreme Judicial Court of Massachusetts, opined that the lawyer of the future will be skilled in “statistics and the master of economics (1).” Holmes was commenting on the state of legal education. At that point, social data gathered through empirical means and the methods of analyzing it had no part in legal education. Economics, psychology, political science, sociology, and other social science disciplines played no part in legal education (2,3). Most of the faculty who had any interest in these fields and their methods had been purged from law schools (4). Simply put, the emerging social sciences had no part in the law students’ curriculum. Needless to say, the methods and research tools of these emerging disciplines, such as statistics, likewise played no part in legal education. As a result, by the end of its formative period, legal education was largely cut off from mainstream intellectual development in American universities.

Holmes’ prediction was largely wrong. The nineteenth-century model continues to dominate legal education today, at least in its fundamentals (4,5). Law students are still not required to take courses in social (or natural) sciences or their analytical methods. No law school requires a course in statistics, not even at the introductory level. Law students who have skills in this area acquired them prior to entering law school and, therefore, with rare exceptions, these skills are at the undergraduate level. Now all states require an undergraduate degree before beginning law study, but there is no prescribed set of skills or knowledge for beginning law students. As a result, possession of skills in statistics is at best randomly scattered among the law student body.

Inasmuch as law students do not receive training in statistical methods, upon graduation they are on their own. In light of the current state of legal education, can *Statistics for Lawyers* do what it purports to do? That is, can a lawyer, untrained in statistics, learn statistics from this book? The current state of legal education raises four related questions with respect to this book. First, can the overwhelming majority of lawyers—a group of people who know next to nothing about statistics—learn statistics by reading this book? The answer to this question depends on how much attorneys need to learn. If the purpose of *Statistics for Lawyers* is for attorneys to read this book cover-to-cover and understand statistics, it will not

succeed. Attorneys with no statistical background would find it impossible to pick up this text and teach themselves statistics. There is simply too much material presented at an advanced level. By way of illustration, a student at Michigan State University who wishes to learn the topics in this book would take a minimum of *five semesters* in statistics, three of which are only offered at the graduate level (and a background in calculus is strongly recommended for these courses).

The authors of this book, however, perhaps did not intend for anyone to learn every topic presented. Instead, it may have been intended as a reference book that a lawyer can pull off the shelf for a brief introduction to a specific statistical technique. Unfortunately, the foundational knowledge needed to truly understand statistical analysis must be learned first before advanced methods such as those used in this book are attempted. One might as well pull a textbook in the Russian language off the shelf and begin learning verb conjugation without first knowing the alphabet. Without an adequate knowledge of introductory concepts, the advanced material in this book will not be understandable.

Second, even if a typical lawyer could not learn statistics from this book, could they learn enough to, say, cross-examine a witness called as an expert in statistics? If this book is the only source used in preparation for such a cross-examination, that litigator will be ill prepared. Suppose, for example, that an expert witness is testifying about the use of multiple regression to demonstrate that female professors earn significantly less than male professors, controlling for such things as years of experience and education (6). The attorney questioning this witness could ask, after studying this book, whether the expert conducted tests for multicollinearity, whether the statistical models were correctly specified, and whether the sample was drawn in a manner that would avoid sampling bias. But would the attorney sufficiently understand the responses of the expert? Would the attorney be able to then evaluate the rigorosity of the expert’s statistical analysis? Only an expert in statistics would be able to critically evaluate another expert’s testimony, and the use of this book would not enable a novice to reach an expert level of understanding.

Third, could a lawyer learn enough about statistics from this book to confer with an expert in preparing a case for trial? An attorney without knowledge of statistics preparing a case with the help of an expert *could* benefit from this book. It might be helpful in familiarizing the reader with the language of statistics and the

¹ School of Criminal Justice, Michigan State University, East Lansing, MI.

examples in the book may be useful to someone conferring with an expert, but it is doubtful that the use of this book can bring about the level of knowledge needed to fully and effectively communicate with an expert.

Finally, can this book help a lawyer know when empirical data and statistical analysis are called for? Selecting the appropriate statistical technique can be a difficult task, even for those trained in statistics. One must have a keen understanding of how variables are measured, how cases are selected, and most importantly, one must be able to identify the primary research question. While there is some discussion in *Statistics for Lawyers* of when specific statistical methods are appropriate, it would take a thorough reading of the text to find the answers. As we have already mentioned, this is a difficult task without the sufficient foundational material. Most graduate programs in the social sciences require a course in research methodology prior to taking any statistical courses, and a significant part of that curriculum focuses on developing research questions.

Even if this book could succeed in teaching statistical methods to lawyers, it would be of little value in ameliorating the more fundamental shortcoming in legal education. The more serious problem for most lawyers is not that they know very little about statistics. A study by Tanford (7) shows the problem is more profound than a lack of skills in statistics. Looking at the jury reform activities of appellate courts, special commissions, and legislatures, he found that in the role of judges, lawyers do not value empirical studies or see a need for them in the legal decision-making process. It's not likely that this problem will not be remedied simply by having lawyers (or law students) learn statistical methods. An empirical orientation along with statistical methods would have to be integrated throughout the curriculum. This will require nothing short of a paradigm shift, something that has not happened in American legal education for over a century.

While we believe this book will not be useful or understandable for most attorneys, *Statistics for Lawyers* does have something to offer. For a reader already knowledgeable in statistics, the examples detailing the application of each statistical method to a real case are very interesting and useful. The use of these helpful examples can aid readers in finding cases that are similar to their own. Unfortunately, these examples are sometimes difficult to follow and the answer key could contain a bit more explanation. In addition, portions of this book could serve as learning tool for someone who has completed a two-semester college statistics sequence. They would probably be able to learn some of the advanced topics in the book. The primary use of the book is by someone who is already well trained in statistics. It can help them gain a better understanding of how empirical data and statistics are being used in some court cases. This use, however, excludes nearly all lawyers. This book would have been more aptly titled: *Forensic Statistics for Statisticians* or, perhaps, *Legal Applications of Statistical Methods*. Whatever the title, most of it is well beyond the skill level of nearly all lawyers and, therefore, will be useful to only a very small number of lawyers and does little to remedy a serious shortcoming of contemporary legal education.

References

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