

EDITOR'S NOTES

The one true constant in law is that the law always changes. This fact is as true today as it was during the adolescent years of our country. When we study law, we do so either to win a case or to prevent one from going to court. However, as laws change, society must change in order to adapt. And as society changes, so too must laws. This never-ending cycle of change and counterchange creates in lawyers a profession that is more artisan than scientist. In 1897, Chief Justice Oliver Wendell Holmes tried to capture his thoughts on the constant transformation of law in his seminal work, "The Path of Law" (1897). In it, he argued that the life of law has not been one of logic but one of experience. This experience, he maintained, came from reports, treatises, and statutes from both the United States and England, extending back hundreds of years.

Addressing his concerns that the study of law should be bound not only by tradition and history but by a deliberate, conscious, and systematic questioning of its grounds, Holmes issued a salient assertion: "For the rational study of the law, the blackletter man may be the man of the present, but the man of the future is the man of statistics and the master of economics" (p. 469). Clearly, Holmes's prophecy has been realized as statistics and the science of probability are prevalent in all facets of our legal system today.

Because higher education has seen its share of lawsuits resulting from either intentional or unintentional actions, colleges and universities find themselves trying to defend their actions or create an environment whereby legal claims are minimized. In many instances, higher education administrators use data and statistical tools to support their arguments against discrimination or to assess the current environment within their institutions. For the most part, the institutional research office is involved, either directly or indirectly, with generating the appropriate data for administrators to use. Although it is clear that statistics are being used with greater frequency in legal proceedings, it is also true that the science of statistics and the study of law are incongruent in many ways. This seemingly incompatible nature between statistics and the law is the impetus for this volume.

As Paetzold and Willborn (2001) have stated, statistical analysis can be useful in the law only to the extent that it focuses on issues that are legally relevant to the case at hand. In other words, a great piece of statistical theory or a tried-and-true methodology may be thrown out of court if it fails to meet the rules of evidence or contradicts current legal standing. A good example of this contradiction is the use of rank in salary equity studies.

Many academic articles within higher education have asserted that rank is a discriminating factor and therefore is a tainted variable for use in salary studies. Many courts, however, disagree and force plaintiffs to prove that the rank variable is tainted before it can be removed from a model.

This volume addresses how statistics and statistical reasoning may be effectively used within the legal environment in applications pertaining to higher education and institutional research. This volume also builds on two previous *New Directions for Institutional Research* volumes. In *The Use of Data in Discrimination Issues Cases*, Rosenthal and Yancey (1985) set the foundation by editing a volume that combined both statistics and the law. Before their volume was published, little had been written about these combined concepts within higher education—and little has been written since. Although the laws have clearly changed over the past twenty-three years, the legal concerns of higher education administrators and institutional research practitioners that Rosenthal and Yancey addressed are still as strong. In 1997, Jones edited the volume *Preventing Lawsuits: The Role of Institutional Research*. Jones paved the way further for this current volume by addressing the dissimilar nature of statistics and the law and how institutional research practitioners must adapt to a new way of thinking. I hope that other volumes will continue to address the constantly changing nature of the law and how statistics can be used effectively within our legal system.

In Chapter One, I address the differences and similarities between the science of statistics and the practice of law. Although many scholars believe that the two are, for the most part, incongruent, they have to work together in preventing lawsuits or building a strong *prima facie* case (i.e., one that at first glance presents sufficient evidence for the plaintiff to win the case). Some statisticians may question the logic of the court's statistical reasoning, but they cannot refute the fact that these legal decisions have affected how future higher education cases may be tried. Therefore, it is important for administrators, institutional researchers, and faculty to understand the court structure, jurisdiction, and legal jurisprudence behind these cases in order to prevent lawsuits by designing campus-based studies that are statistically valid and legally sound.

Chapter Two, by Michael S. Harris and John H. Roth, focuses on the role of institutional research in enrollment management since the U.S. Supreme Court's decision in the University of Michigan affirmative action cases in 2003. This chapter explores the ways in which institutions can plan and collect data to avoid lawsuits. The authors examine the types of institutional data and decision making that the courts have ruled meet the constitutional and legal thresholds to avoid legal action.

In Chapter Three, John J. Cheslock and Suzanne E. Eckes examine the application of Title IX to intercollegiate athletics. Given the complex history of this association, they outline the policy interpretations provided by the Office for Civil Rights and relevant case law. They highlight the role of statistical evidence in demonstrating compliance and use recent data on ath-

letic participation to describe the current level of compliance. A discussion of important economic considerations often missing from the Title IX policy debate concludes the chapter.

Bruce A. Christenson, Kathleen M. Maher, and Lorin M. Mueller address in Chapter Four the organization and maintenance of data in employment litigation. They examine the role of personnel system data in addressing allegations in employment discrimination cases and describe the types of data that are frequently relevant in assessing allegations of discrimination regarding personnel actions. Past employment discrimination cases highlight important issues related to the maintenance and organization of personnel and other organizational records. Finally, the authors consider the use of personnel data to prevent employment litigation as compared to its use at the time of litigation.

Chapter Five, by Lorin M. Mueller, Eric M. Dunleavy, and Ash K. Buonasera, examines how employment decisions like selection, promotion, and termination should be analyzed in employment discrimination litigation. This chapter combines statistical concepts with relevant case law and introduces a number of important employment discrimination concepts. It then focuses on the analysis of traditional applicant flow data using statistical significance tests including Fisher's exact test and practical significance tests such as the four-fifths rule. The chapter includes a data analytic example depicting selection decisions across two groups (for example, men and women) and reviews factors that may affect the implications of these analyses. Finally, the chapter concludes with a presentation of alternative data analytic strategies, including constructed pools analysis, that may be reasonable when traditional applicant flow data are inappropriate or unavailable.

In Chapter Six, Julie A. Frizell, Benjamin S. Shippen Jr., and I examine how compensation outcomes should be analyzed in employment discrimination litigation. The chapter addresses this issue by introducing multiple regression analysis and providing a test for discrimination, a method of compensation determination, and a procedure to calculate damages during settlement. We address potential issues associated with violations of key assumptions of the model and cite seminal and recent relevant case law in Title VII cases where regression analyses have played a significant role.

This volume explores a variety of legal issues that may affect the institutional research office. Certainly there are many more legal issues that we do not address in this volume; nevertheless, I hope that the information contained here will benefit institutional research practitioners and create a more frequent dialogue concerning the complexities of statistical science within the legal environment.

I could not have completed this volume without the dedication and hard work of each chapter author, whose expertise in this field is well noted. I also recognize the exceptional work of my graduate assistant, Anna Beth Kirk, for providing her time and talents as a proofreader. To all of these professionals, I offer my appreciation and my gratitude.

Finally, this volume is intended only as a reference on the differences and similarities of statistics and the law. It does not replace sound legal advice. For professional legal advice, consult an attorney.

Andrew L. Luna
Editor

References

- Holmes, O. "The Path of Law." *Harvard Law Review*, 1897, 10, 457–474.
- Jones, L. (ed.). *Preventing Lawsuits: The Role of Institutional Research*. New Directions for Institutional Research, no. 96. San Francisco: Jossey-Bass, 1997.
- Paetzold, R., and Willborn, S. *The Statistics of Discrimination: Using Statistical Evidence in Discrimination Cases*. Colorado Springs: Shepard's/McGraw-Hill, 2001.
- Rosenthal, W., and Yancey, B. (eds.). *The Use of Data in Discrimination Issues Cases*. New Directions for Institutional Research, no. 48. San Francisco: Jossey-Bass, 1985.

ANDREW L. LUNA is director of institutional research, planning, and assessment at the University of North Alabama.