Book Review

Applications of Political Science to the Analysis and Practice of Law

DAVID A. FUNK*

CAUSATION, PREDICTION, AND LEGAL ANALYSIS. By *Stuart S. Nagel*. New York, N.Y., Westport, Conn. & London, England: Quorum Books of Greenwood Press, Inc., 1986. Pp. xxii, 276. $39.95.

LAW, POLICY, AND OPTIMIZING ANALYSIS. By *Stuart S. Nagel*. New York, N.Y., Westport, Conn. & London, England: Quorum Books of Greenwood Press, Inc., 1986. Pp. xix, 328. $45.00.

MICROCOMPUTERS AS DECISION AIDS IN LAW PRACTICE. By *Stuart S. Nagel*. New York, N.Y., Westport, Conn. & London, England: Quorum Books of Greenwood Press, Inc., 1987. Pp. xxvi, 358. $45.00

I. THE MAN AND HIS WORK

Any academic or practicing lawyer still skeptical about the contributions which political science can make to the understanding of the legal process and the practice of law need only read three recent related works by Dr. Stuart S. Nagel.[1] Dr. Nagel received law and Ph.D. degrees from Northwestern University in 1958 and 1961 respectively,[2] and is one of the preeminent analysts of the legal process from a policy perspective in the twentieth century. Following his first major book in 1969,[3] he

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*Professor of Law, Indiana University School of Law—Indianapolis; A.B., The College of Wooster, 1949; J.D., Case Western Reserve University, 1951; M.A., The Ohio State University, 1968; LL.M., Case Western Reserve University, 1972; LL.M., Columbia University, 1973. The reviewer practiced law from 1951 to 1972, and has taught jurisprudence and sociology of law at the Indiana University School of Law—Indianapolis since 1973-74.

[1] S. NAGEL, CAUSATION, PREDICTION, AND LEGAL ANALYSIS (1986) [hereinafter cited as CAUSATION]; S. NAGEL, LAW, POLICY, AND OPTIMIZING ANALYSIS (1986) [hereinafter cited as OPTIMIZING] S. NAGEL, MICROCOMPUTERS AS DECISION AIDS IN LAW PRACTICE (1987) [hereinafter cited as MICROCOMPUTERS]. These three works are not quite a trilogy, due to rather sketchy transitions between them (CAUSATION ends rather abruptly), and reprinting of some chapters from CAUSATION and OPTIMIZING in MICROCOMPUTERS. *See infra* note 26 and accompanying text. Nevertheless, they are closely related and proceed in an orderly fashion from one topic to another.

[2] WHO'S WHO IN AMERICAN LAW 568 (5th ed. 1987). The Ph.D. dissertation of Dr. Nagel dealt with "Judicial Characteristics and Judicial Decision-Making." CAUSATION 97 n.10.

[3] S. NAGEL, THE LEGAL PROCESS FROM A BEHAVIORAL PERSPECTIVE (1969).

has published at least sixteen volumes as sole author,[4] nine jointly authored volumes,[5] and has edited four works,[6] in addition to many journal articles. His mother, "who inspired a desire to do well,"[7] and his supportive wife and collaborator[8] may be justly proud of his accomplishments.

Dr. Nagel is trying to get "social scientists to show more interest in applying their knowledge and skills to important policy problems" and encourage "policy-makers and policy-appliers to become more aware of the relevant knowledge and skills that social scientists have developed."[9] In the works being reviewed, this general goal often is advanced by application to specific problems. Dr. Nagel encourages others to listen, learn and follow him in this endeavor.[10] Dr. Nagel supplies a dazzling encyclopedic array of social science analyses which may be applied to the legal process.[11] His is not simply a literature survey with respect to

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[4]Who's Who in American Law, *supra* note 2, at 568-69.

[5]Causation, *supra* note 1, at 266.

[6]*Id.* at 265-66.

[7]Optimizing, *supra* note 1, at iv & xix.

[8]Causation, *supra* note 1, at v & xxi-xxii; Optimizing, *supra* note 1, at xix; and Microcomputers, *supra* note 1, at xxvi.

[9]2 Who's Who in American Law 2033 (1986). This reviewer, in a much more modest way, has been engaged in a similar task. *See, e.g.,* Funk, *Pure Jurimetrics: The Measurement of Law in Decision-Regulations*, 34 U. Pitt. L. Rev. 375 (1973); D. Funk, Group Dynamic Law (1982); Funk, *Juridical Science Paradigms as Newer Rhetorics in 21st Century Jurisprudence*, 12 N. Ky. L. Rev. 419 (1985); and Group Dynamic Law (D. Funk ed. forthcoming).

[10]Causation, *supra* note 1, at 48 ("[w]hat is needed now are more people who are willing to do more of the hard but enjoyable thinking involved . . . ."); *id.* at 119 ("[w]hat may be needed is for more management science researchers to apply their skills to such legal policy problems and for more legal researchers to acquire more awareness of management science methods"); *id.* at 196 ("eventual application to a wide diversity of fields of law and its eventual application to building more realistic theories of the operations of the judicial process"). *See* Optimizing, *supra* note 1, at xix ("inspire others to think in optimizing terms with regard to improving the legal process and legal decision-making"); *id.* at 14 ("[w]hat may be needed now are more people in either criminal justice or policy evaluation who are willing and able to apply policy evaluation analysis to criminal justice problems"). Microcomputers, *supra* note 1, at v ("[t]o more systematic decision-making in law practice [w]ith the aid of microcomputers [f]or the benefit of clients, lawyers, and the general public"); *id.* at 4 ("enabl[ing] lawyers and other people who are not such great decision-makers to emulate the processes that good decision-makers implicitly use . . . ."); *id.* at 141 ("[w]hat is needed are some lawyer-entrepreneurs to implement the existing hardware and knowledge in order to make decision science more widely applicable to basic law practice . . . ."); *id.* at 234 ("inspire some experimentation along the lines suggested that could help law practices"); *id.* at 287 ("improve on the questions we ask"). *See generally* Optimizing, *supra* note 1, at 307-08 (the relation of political science to legal policy studies).

[11]The Causation subject index includes entries for: bivariate analysis, cross-lagged

these perspectives, though he cites prime examples from the relevant social science literature to enable any interested reader to pursue each type of analysis further.[12] Fainthearted readers need not be deterred by the variety of forms of analysis which Dr. Nagel brings to bear in his study of the legal process. He is a master of clear and simple explanation of each approach, and often illustrates them with well-chosen examples. The reader need only put himself or herself in the hands of the author and let him unfold his subject step by step.[13]

II. Three Related Works

Each volume under review develops a portion of the overall scheme. The first volume, *Causation, Prediction, and Legal Analysis*,[14] is an excellent systematic explanation of the logic, theory and methodology

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panel analysis, cross-sectional analysis, discriminant analysis, futures research, impact analysis, interrupted time series, judicial prediction, Markov chains, maximizing benefits minus costs, multiple correlation, multiple regression, optimum choice, policy/goal percentaging analysis (P/G%), predictive analysis, queuing, residual analysis, sensitivity analysis, staircase prediction, threshold analysis, and univariate analysis. Causation, *supra* note 1, at 273-76. *See also id.* at 107-12 (economic analysis); *id* at 54-59 (evaluation of social programs); *id.* at 85-106, 175-86 & 197-220 (judicial behavioralism); *id.* 189 (word [evaluative assertion or content] analysis). The Optimizing subject index includes entries for: benefit-cost analysis, decision-making, legal policy studies, optimizing analysis, policy evaluation, policy/goal percentaging (P/G%), queuing theory, simulation, spreadsheet analysis, threshold analysis, and "what-if" analysis. Optimizing, *supra* note 1, at 325-28. *See also id.* at 308 (economic analysis); *id.* at 9 (management science and operations research); *id.* at 17 (policy and program analysis). The Microcomputers subject index includes entries for: allocation analysis, constraints analysis, convergence analysis, decision-making, decision trees, judicial prediction, management science, multiple regression, optimizing, policy/goal percentaging (P/G%), residual analysis, risk analysis, sensitivity analysis, sequencing, staircase tables, and threshold analysis. Microcomputers, *supra* note 1, at 355-58. *See also id.* at 8 (critical path analysis); *id.* at 19 (multi-criteria decision-making); *id.* at 4, 51 & 219 (operations research); *id.* at 8 (queuing theory); *id.* at 19 & 214-15 (spreadsheet analysis); *id.* at 6 & 214-15 ("what-if" analysis). Causation, *supra* note 1, at 39-51 also deals with deductive modeling in policy analysis, which often is overlooked in works of this type.

[12] Each volume being reviewed contains an index of books cited, and a name index. More citations to economic analysis of law literature, where relevant to the discussion, might have been included, though this is a minuscule point.

[13] Causation sometimes includes summarizing charts to clarify terminology. *See, e.g.,* Causation, *supra* note 1, at 48-50. A less skillful author might need to add a glossary of technical terms, but Dr. Nagel explains so well that it is not necessary. Of the three volumes under review, however, Optimizing is best organized.

[14] This reviewer might have changed the title of Causation to "Causation and Prediction in Legal Analysis" due to his antipathy to conjunctive titles. Similarly Optimizing might have been "Optimizing Analysis in Policy and Law."

used in analysis of the legal process and sociology of law.[15] It is no substitute for a traditional statistics text, but uses statistical ideas well where appropriate, explains them clearly, and offers a wealth of pertinent examples illustrating each type of analysis discussed. In many respects it supplies the need, noted by Dr. Nagel, for a book dealing with causal explanation in the legal process.[16] Causation theory logically leads to theories of prediction. The jacket blurb explains these well:

> Within the legal arena, causal analysis explains the factors involved that cause legal policies/decisions to be adopted and the impact a legal policy is likely to have, and why. Predictive analysis is an attempt to forecast the outcome of a legal action and is especially useful for those involved in courtroom procedures.[17]

This first volume is very well organized, proceeding from causal analysis methods (both empirical-statistical and deductive-rational) and applications (especially judicial sentencing discretion, correlating judicial backgrounds with decisions, plea bargaining and jury size) to predictive analysis methods (both empirical-statistical and deductive-rational) and applications (especially predicting the outcome of court cases). Each methodological chapter is followed by practical applications so the reader can see how to use the techniques previously discussed, for practical purposes. At the same time, the author recognizes that not all propositions are susceptible of empirical analysis,[18] normative premises in particular cannot be validated empirically,[19] and traditional knowledge of the subject matter has an important role to play.[20]

The second volume, *Law, Policy, and Optimizing Analysis*, applies methods expounded in a previous work,[21] to practical decision-making in the legal process.[22] This volume deals with cost-benefit analysis and

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[15]This reviewer uses "sociology of law" in a narrow sense for studies of the impact of law on society, and "legal process" for studies of the impact of society on law and the internal workings of the legal process. Others use "sociology of law" more broadly to include both types of work.

[16]CAUSATION, *supra* note 1, at 22 n.1. H. HART & A. HONORÉ, CAUSATION IN THE LAW (1959), although not cited by Dr. Nagel in this discussion, is a "study of causal concepts in the law and their relation to those of ordinary thought . . . ." *Id.* at v. A second edition of this well known work was published in 1985. *See also* Schauer, *Thinking About Causation With Special Reference to Pornography*, L. QUADRANGLE NOTES 24 (No. 2 Winter 1987).

[17]CAUSATION, *supra* note 1.

[18]*Id.* at 57.

[19]*Id.* at 41.

[20]*Id.* at 230.

[21]S. NAGEL, POLICY EVALUATION (1982).

[22]OPTIMIZING, *supra* note 1, at xix.

finding an optimum level or mix, where doing either too little or too much is undesirable.[23] It will be of special interest to economists and political scientists interested in legal processes, as well as law practitioners especially in public law areas. It also is very well organized, with parts on general optimizing analysis, and optimum choice, risk, level, mix and timing. Illustrative applications include the right to counsel, plea bargaining, pretrial release, jury size, crime prevention, and reduction of litigation delay. A masterful introduction explains that five evaluation methods could be applied to five fields of criminal justice policy (crime reduction, police policy, courts policy, corrections policy, and allocation policy), though each field is used to illustrate only one of the five optimizing policy evaluation models.[24] Merely watching Dr. Nagel develop this structure, with its methods and applications is awe-inspiring. The brief conclusion on legal policy studies[25] seems less sure-footed than the rest, but nevertheless suggestive of further applications.

The final volume, *Microcomputers as Decision Aids in Law Practice*, will have greatest appeal to the practicing lawyer, especially managing partners of large law firms and legal departments of corporations and governments. Eventually practitioners in smaller work settings also will need to take these matters into account if they are to compete successfully with larger law offices. Several chapters of interest to practicing lawyers have been reprinted from the previous two volumes,[26] but at least two-thirds of this final volume seems to be new.

The title to this final volume describes its content.[27] Though microcomputers have become commonplace for word processing, file man-

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[23]*Id.* at 3-4.

[24]*Id.*

[25]*Id.* at 207-11. "Legal policy studies could more broadly refer to evaluating alternative policies that take the form of statutes, administrative regulations, court precedents, or quasi-judicial precedents on any subject. That comes close to covering all governmental policy since there are few policies that do not take those forms." *Id.* at 307.

[26]MICROCOMPUTERS, *supra* note 1, at xxvi. *Id.* at 15-19 seems to be a reprint of OPTIMIZING, *supra* note 1, at 39-42. MICROCOMPUTERS, *supra* note 1, at 55-115 seems to be a reprint of CAUSATION, *supra* note 1, at 197-259. MICROCOMPUTERS, *supra* note 1, at 121-30 seems to be a reprint of CAUSATION, *supra* note 1, at 187-96. MICROCOMPUTERS, *supra* note 1, at 143-67 seems to be a reprint of OPTIMIZING, *supra* note 1, at 91-115. MICROCOMPUTERS, *supra* note 1, at 259-70 bears some similarity to OPTIMIZING, *supra* note 1, at 155-81. MICROCOMPUTERS might well have included a table showing these relationships for the convenience of the purchaser of all three volumes.

[27]Apparently MICROCOMPUTERS was originally to bear the title, "*Using Personal Computers for Decision-Making in Law Practice*," used in MICROCOMPUTERS, at 318 & 345. This title discrepancy could have been corrected in final proofreading, but most of us probably are aghast to find that gremlins have had a hand in our final published work! MICROCOMPUTERS is a revised and expanded version of materials developed for a conference entitled "Using Personal Computer for Decision-Making in Law Practice" held May 10-11, 1985. MICROCOMPUTERS xxiii.

agement, information retrieval, accounting and similar office uses, this volume focuses on processing information to aid in predicting and making decisions.[28] Legal policy evaluation methods and illustrations were largely excluded, since they are directed more toward legal policy makers than practicing lawyers.[29] The result is a breathtaking analysis of the possibilities for using microcomputers in decision-making, principally with respect to judicial prediction, litigation choices, allocating law firm resources, and negotiation tactics.

In some respects these applications may seem futuristic, especially for the lawyer in a small work setting, but, as Dr. Nagel remarks, "[t]he future . . . is rapidly becoming the present in this growing field of microcomputers as decision-making aids in law practice."[30] Dr. Nagel has been waiting patiently for twenty-five years for this subject to develop,[31] and may not have to wait much longer. Certainly the rise of microcomputer information processing over that period makes microcomputer applications to lawyer decision-making more feasible.

Anyone interested only in this portion of the works under review will find this final volume invaluable. Though it aptly extends the theories and applications of the first two volumes to even more applications of special interest to the practicing lawyer, it need not be read in that way; summarizing, reprinted[32] and explanatory material enable it to be read alone by those particularly interested in these practical applications of the more general theories explicated in the two previous volumes under review.

Dr. Nagel includes in two places an excellent critique of his "predecessor,"—the Jury Verdict Research Company[33]—in the application of these theories and a rather passionate appeal for expanding this approach into a judicial prediction service.[34] This reviewer is less sanguine concerning the economic feasibility of this project at this time. The reviewer also questions the utility of finding words that are disproportionately present in opinions where for example, plaintiffs have won,[35] and whether knowledge by lawyers practicing in fifty courthouses across the United States that their activities are being used for regional and national generalizations will affect their future behavior.[36] Nevertheless, amazing

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[28]MICROCOMPUTERS, *supra* note 1.

[29]*Id.*

[30]*Id.* at xxv.

[31]*Id.*

[32]*See supra* note 26.

[33]CAUSATION, *supra* note 1, at 192-96. MICROCOMPUTERS, *supra* note 1, at 126-30.

[34]CAUSATION, *supra* note 1, at 187-92. MICROCOMPUTERS, *supra* note 1, at 121-26.

[35]CAUSATION, *supra* note 1, at 189. MICROCOMPUTERS, *supra* note 1, at 123.

[36]*See, e.g.,* the classic experiment at the Hawthorne Works of the Western Electric

things have been accomplished by people who have ignored the fears of earthbound naysayers. If anyone can create judicial prediction and lawyer decision-making services at this time, surely Dr. Nagel is a prime candidate.[37]

III. MINOR CRITICISMS

Even though the publisher is to be applauded for undertaking this large and important project, some minor criticisms remain. Though the text and many tables are set in type and quite legible, many of the tables are not set in type[38] and some of them are not as legible as they might have been for easy reading.[39] Similarly, subject index entries only provide the page number where the discussion of the subject begins, even though it may extend over several pages or an entire chapter. It would have been helpful to one using these works for reference to be able to ascertain from the index, the number of pages devoted to each subject indexed.

Examples chosen seem to emphasize public law more than private law.[40] Though each type of example adequately illustrates the method being applied, additional private law examples probably would be of greater interest to many practicing attorneys. Similarly, the data used to illustrate a method occasionally seem a little old.[41]

Dr. Nagel seems to overemphasize the business aspects of law practice,[42] though his applications of management science are most applicable to that type of activity. Also, he is very careful to point out that his analyses are to be used only within ethical constraints.[43]

Ironically, this reviewer is more skeptical than Dr. Nagel about the ability to isolate and assign meaningful quantities to various aspects of

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Company in which selection as the subject of an experiment apparently affected the behavior of the participants. F. ROETHLISBERGER, MANAGEMENT AND MORALE (1941). Could an insurance company fail to anticipate the larger effect of a liberal settlement in one of these bellwether venues, for example?

[37] *See generally* MICROCOMPUTERS, *supra* note 1, at 141, 142 n.7 & 208-09.

[38] *See, e.g.,* CAUSATION, *supra* note 1, at 68-69, 81-82, 167-68 & 221-22; OPTIMIZING, *supra* note 1, at 5, 43-46, 141 & 143; MICROCOMPUTERS, *supra* note 1, at 16, 22-29, 35, 37-38 & 235.

[39] *See, e.g.,* CAUSATION, *supra* note 1, at 89, 176 & 183; OPTIMIZING, *supra* note 1, at 151; MICROCOMPUTERS, *supra* note 1, at 116-17, 136, 171, 211-12, 266 & 322.

[40] *See, e.g.,* CAUSATION, *supra* note 1, at 229; OPTIMIZING, *supra* note 1, at xvii-xviii; and MICROCOMPUTERS, *supra* note 1, at 7 & 217.

[41] *See, e.g.,* CAUSATION, *supra* note 1, at 175 (civil liberties cases from 1956 through 1960). Similarly, the bibliography in *id.* at 191-92 could have been updated.

[42] *See, e.g.,* MICROCOMPUTERS, *supra* note 1, at 219-39 & 314.

[43] *See, e.g., id.* at 241.

the legal system,[44] while more sanguine on the feasibility of impact studies, even though the criticisms of Dr. Nagel are well taken and his suggestions well worth taking into account.[45] A few remaining criticisms, unworthy of full size type, appear below.[46]

IV. CONCLUSION

Of what importance are a few minor criticisms by one reviewer of the work of a scholar like Dr. Nagel in these three related works? He can scarcely be expected to satisfy every reader with respect to every detail of his enterprise. No one who has seen Devil's Tower rising 865 feet from the plains of Wyoming can forget its grandeur. The work of Dr. Nagel, rising from the plains of Champaign, Illinois, is like that. But, having built this pinnacle, Dr. Nagel is trying to help us climb it, so that we, too, may profit from his view of the surrounding plain. For that, we shall be forever in his debt.

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[44]*See, e.g.,* CAUSATION, *supra* note 1, at 198 (characteristics associated with winning or losing cases); *id.* at 229-30 (listing tentative criteria to aid in explaining why cases were decided one way or another, and the relative importance of each criterion). *See also* MICROCOMPUTERS, *supra* note 1, at 6 (which goal is least important and how many more times as important each other goal is); *id.* at 27 (the relative weight of the first goal relative to the other goals); *id.* at 178 (how many more times each other criterion is more important than the base criterion); *id.* at 314 (scores of the alternatives on the goals, scores of the cases on the criteria and predicted scores of the cases on those criteria).

[45]*See generally* CAUSATION, *supra* note 1, at 53-59.

[46]CAUSATION, *supra* note 1, at 187 & 237 refers to "random" issues and procedures; are they really randomized, and if so, why? Should Louis Guttman be mentioned somewhere in connection with "staircase tables" in CAUSATION, *supra* note 1, at 197-227? *See, e.g.,* Schubert, *Social Psychology and Judicial Attitudes,* JUDICIAL BEHAVIOR: A READER IN THEORY AND RESEARCH 306, 308 (G. Schubert ed. 1964) (noting linear cumulative scaling was initially developed by Louis Guttman and his associates). CAUSATION, *supra* note 1, at 243 seems to attach little importance to the rules of international law as predictors of the outcomes of international law cases, and the cases contained in four leading (American?) international law casebooks may not be a very good sample. This reviewer doubts whether economic analysis of law has pushed sociology, psychology and political science out of the study of law, as much as Dr. Nagel supposes in OPTIMIZING, *supra* note 1, at 308. Similarly, in the opinion of this reviewer, the "old law and society movement" has not moved so far toward abstract theoretical concerns and away from legal policy problems as Dr. Nagel supposes. *Id.* at 309.

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