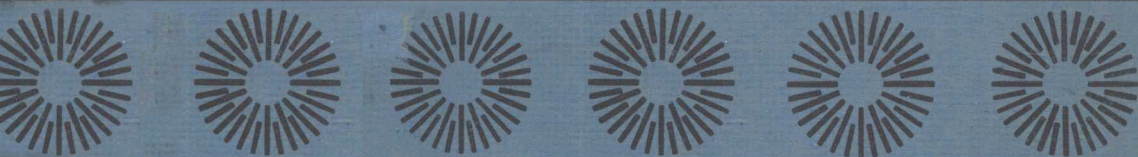


Legal Policy Analysis

**Stuart S. Nagel
Marian G. Neef**



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**Finding an Optimum Level
or Mix**

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**Dedicated to trying to
optimize public policy and
the legal process**

Introduction

This book analyzes how to arrive at an optimum level or mix when confronted with alternative policy decisions, especially decisions relating to the legal process. The book is designed to be useful in courses dealing with policy studies, the legal process, and social science methodology. It is also designed for reading by researchers, government practitioners, lawyers, and interested laymen. There is developing a strong and increasing interest among political and social scientists in policy analysis and deductive mathematical models, both of which this book seeks to combine.

By *legal policy analysis* in the context of finding an optimum level or mix we mean developing models for optimizing legal policy decisions. A *model* in this context refers to a set of equations, inequalities, or other quantitative statements that captures the essence of a social process and thereby enables one to obtain a better understanding of why things happen the way they do (a *descriptive* model), or how one might be able to improve the process being studied in light of given social or individual goals (a *prescriptive* model). The word *optimizing* indicates that we are emphasizing prescriptive models designed to enable one to choose among various alternatives the decision or decisions that will maximize some quantitatively measured goal or goals. The word *policy* indicates that we are concerned with optimizing models that relate to governmental decisionmaking, especially governmental decisions that have a prospective or policy effect on future decisions. By *legal* or *legal process* in this context we refer mainly to the procedures whereby courts arrive at decisions but also to procedures whereby legislative bodies create statutes and administrative agencies create quasi-legislation or arrive at quasi-judicial decisions. Thus, *legal policy optimizing models* refer to systems of quantitative statements designed to enable governmental decisionmakers to arrive at decisions that will maximize quantitatively measured goals, with special reference to the judicial process.

Policy optimizing models can be methodologically classified as those involving situations where the alternative decisions fit into discrete categories (the optimum choice situation) as contrasted to situations where the alternative decisions fit on a continuum of possibilities (the optimum level or mix situation). An example of an optimum choice situation is the legal policy problem of how to provide counsel for the poor in criminal cases with the alternative decisions being volunteer counsel, assigned counsel, a public defender, or some combination of the three. An example of an optimum level or mix situation is the problem of what level of money to appropriate for a public defender's office in a given county, or what mix of available budget money to allocate between the public defender's

office and the prosecutor's office. This book will emphasize optimum level and optimum mix situations. A subsequent book entitled *Decision Theory and the Legal Process* will emphasize optimum choice situations, especially where probabilistic contingent events are involved. Those situations include whether or not to release a defendant prior to trial (which is contingent on the probability of his appearing in court), or whether to take a case to trial rather than plead guilty or settle out of court (which is contingent on the probability of a conviction or of liability being established).

This book is divided into three parts. Part I deals with finding an optimum level for policies involving valley-shaped costs or hill-shaped benefits. It includes the problem of deciding on an optimum percentage of defendants to hold prior to trial in light of the fact that holding too few will involve unduly high releasing costs (such as the cost of rearresting defendants who fail to appear and the cost of crime committing by released defendants), while at the same time holding too many defendants will involve unduly high holding costs (such as jail maintenance, lost gross national product, and bitterness by those whose cases result in dismissal or acquittal after they have been held). The first part also includes the problem of deciding on an optimum size jury in light of the fact that small juries may involve unduly high costs with regard to convicting the innocent and large juries may involve unduly high costs with regard to acquitting the guilty. The pretrial release problem illustrates the use of inductive statistical analysis based on data from many cities to arrive at an optimum holding level, and the jury size problem illustrates the use of deductive mathematical modeling from empirical premises to arrive at an optimum jury-size level.

Part II deals with finding an optimum mix among competing policies. It includes the problem of allocating effort among the six civil rights activities of voting, schools, criminal justice, employment, housing, and public accommodations. It also includes the problem of allocating dollars geographically among states or cities in order to minimize the total national crime occurrence. The civil rights and anticrime problems also respectively illustrate optimum mix methods that emphasize both linear relations between inputs and outputs and also diminishing returns relations. Those problems further illustrate optimum mix methods that emphasize finding an optimum mix of a continuum of effort or dollars among multiple activities or places, as contrasted to the simpler situation of two activities or places. Part III deals with problems that can be viewed as optimum level or optimum mix problems. The problem of free press versus fair trial with regard to prejudicial pretrial publicity is such a problem. It can be viewed as one in which we seek to find the optimum level of pretrial free press (with fair trial to be free from prejudicial publicity as the complement), or it can be viewed as one in which we seek to find the optimum mix between free press and fair trial in the pretrial context.

This book is the third in a series of three books on the legal process. The first, entitled *The Legal Process from a Behavioral Perspective* (Dorsey, 1969), emphasized the relation between judicial decisions as effects and causal forces, like legal rules, evidentiary facts, contestant characteristics, and judicial characteristics. It also showed some concern for judicial decisions as causes that affect the attitudes and behaviors of congressmen, newspaper editors, police officers, election outcomes, and other governmental and nongovernmental persons. The overall emphasis was clearly on describing rather than prescribing. The second book, entitled *Improving the Legal Process: Effects of Alternatives* (D. C. Heath, Lexington Books, 1975), was also concerned with cause and effect relations. The causal variable, however, was almost always a policy alternative, and the effect variable was almost always a goal to be achieved, such as decreasing discrimination, improving judicial personnel, improving procedural efficiency, or increasing compliance. The emphasis in that book was on prescribing in the sense of showing that X_1 produces more Y than X_2 , and therefore X_1 should be preferred over X_2 , assuming Y is the goal to be achieved.

This book attempts to build on the first two books. It draws upon some of the relationships dealt with in both books. It attempts, however, to go beyond relating causes to effects or means to ends. Rather, it copes with such problems as what is the best choice to make where X_1 produces more Y than X_2 , but X_1 does so at a diminishing rate such that after awhile X_2 may produce more Y than X_1 . The best choice under such circumstances may be a middling amount of X rather than an all-out amount of X . Another problem that goes beyond merely relating an X means to a Y goal includes coping with minimum and maximum constraints of a legal, political, and economic nature on the various means and goals. Still other problems include how to handle a relation between an X means and a Y goal that is contingent on a probabilistic event, such as the likelihood of a defendant appearing in court, being convicted, or recommitting his crime.

The optimizing models presented in this book stem from related ideas developed by people in business administration, industrial engineering, economics, and mathematics mainly for application to business-oriented problems. Applying these ideas to legal and political process problems requires reasoning by analogy, since our goal variables, means variables, or both are likely to be noneconomic in nature. Applying those ideas does not require any mathematical background beyond high school algebra, since the ideas are basically quantified common sense or logic. The relevant arithmetic operations can be done with electronic desk calculators, especially those that can raise numbers to unusual exponents as part of the nonlinear and diminishing returns aspects of means-ends relations. Likewise, the relevant data processing operations can be handled with standard computer routines, especially those that can reduce means-ends

data to linear or nonlinear equations. This book will not deal with the mathematical theory behind the logic, calculations, or computer routines. Rather, it will emphasize the implications for understanding and improving the legal process that arise from conceiving the legal process as a process of finding an optimum level or balance between conflicting goals, and of finding an optimum mix of scarce resources.

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