A Practical Guide for Policy Analysis

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The Eightfold Path to More Effective Problem Solving

Fourth Edition

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ABOUT THE AUTHOR

Eugene Bardach has been teaching graduate-level policy analysis workshop classes since 1973 at the Goldman School of Public Policy, University of California, Berkeley, in which time he has coached some 400 projects. He is a broadly based political scientist with wide-ranging teaching and research interests. His focus is primarily on policy implementation and public management, and most recently on problems of facilitating better interorganizational collaboration in service delivery (e.g., in human services, environmental enforcement, fire prevention, and habitat preservation). He also maintains an interest in problems of homeland defense regulatory program design and execution, particularly in areas of health, safety, consumer protection, and equal opportunity. Bardach has developed novel teaching methods and materials at Berkeley, has directed and taught in residentially based training programs for higher-level public managers, and has worked for the Office of Policy Analysis at the U.S. Department of Interior. He is the recipient of the 1998 Donald T. Campbell Award of the Policy Studies Organization for creative contribution to the methodology of policy analysis. This book is based on his experience teaching students the principles of policy analysis and then helping them to execute their project work.

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PREFACE

This handbook serves as a guide to concepts and methods applied in the analysis of policy. I have developed the general approach and many of the specific suggestions over thirty-five years of teaching policy analysis workshops to first- and second-year graduate students at the Richard and Rhoda Goldman School of Public Policy, University of California, Berkeley. In the handbook's earliest incarnation, the ideas took form slowly and were conveyed to students in lectures. But because my faculty colleagues and I systematically overloaded our students with work, they would sometimes skip a lecture—and thus miss out on ideas that I regarded as essential. I determined that if I were to create a handout for the students, at least I would have discharged my responsibility, and it would be up to the students to retrieve the ideas they had missed. Over the years, as the handout grew, it was disseminated informally to colleagues at other universities and was posted on the Web site of the Electronic Hallway, based at the University of Washington. This book is the outgrowth of these previous compilations and the product of many years of experience.

The presumed user is a beginning practitioner preparing to undertake a policy analysis, such as one of our master's students at the Goldman School. But I have found this handbook useful at both ends of the spectrum—in teaching undergraduate introduction to public policy courses as well as executive education groups.

The handbook assumes a familiarity with basic economic concepts, including those having to do with market failures (including market imperfections). It is not meant to stand alone but should be used in conjunction with other sources, including some of the best textbooks in policy analysis, which are cited often to amplify points in this handbook: Weimer and Vining (2004); Stokey and Zeckhauser (1978); Behn and Vaupel (1982); Friedman (2002); MacRae and Whittington (1997); Gupta (2010); and Morgan and Henrion (1990).

This new edition of *A Practical Guide for Policy Analysis* clarifies some of the exposition, particularly with regard to "design problems" and the choice of a "base case." It also substitutes a new set of environmental problems in Table I and the surrounding discussion that is more up-to-date and more interesting than the previous one.

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Sasha Dobrovolsky deserves my gratitude more than anyone else, however. Sasha was in my undergraduate Public Policy 101 class in 1991. An unusually gifted and entrepreneurial fellow, he once accosted me with this announcement: "Professor Bardach, these handouts you give us are outstanding. You should publish a book. When I graduate, I'm creating

my own publishing house, and your book is the first I'm putting out." I said, "Sasha, you are surely mad. It's fine by me, but I am not going to be responsible for your financial losses. You are on your own." Sasha did exactly as promised. Alas, his publishing venture, Berkeley Academic Press, did not last long, but he went on to great success in other fields. I have unaccountably neglected to thank Sasha in the preface to earlier editions. I hope I am now making sufficient amends.

INTRODUCTION

Policy analysis is a social and political activity. True, analysts take moral and intellectual responsibility for the quality of their policy-analytic work. But policy analysis goes beyond personal decision making. First, the subject matter concerns the lives and well-being of large numbers of their fellow citizens. Second, the process and results of policy analysis usually involve other professionals and interested parties: it is often done in teams or officewide settings; the immediate consumer is a "client" of some sort, such as a hierarchical superior; and the ultimate audience will include diverse subgroups of politically attuned supporters and opponents of the analysts' work. All of these facts condition the nature of policy analysis and have a bearing on the nature of what is meant by "quality work."

A policy analyst can work in any number of positions. Once upon a time, the term implied a rather wonkish individual who worked in a large government bureaucracy, serving up very technical projections of the possible impacts of one or more policy alternatives to some undersecretary of planning. No longer. Today's policy analysts help in planning, budgeting, program evaluation, program design, program management, public relations, and other functions. They work alone, in teams, and in loose networks that cut across organizations. They work in the public, nonprofit, and for-profit spheres. Although their work is ideally distinguished by transparency of method and interpretation, the analysts themselves may explicitly bring to their jobs the values and passions of advocacy groups as well as the technical expertise of "neutral" civil

servants. The professional networks in which they work may contain—in most cases, do contain—colleagues drawn from law, engineering, accounting, and so on, and in those settings the policy-analytic point of view has to struggle for the right to counter—or, better yet, synthesize—the viewpoints of these other professionals. Although policy-analytic work products typically involve written reports, they may also include briefings, slide presentations, magazine articles, and television interviews. The recipients of these products may be broad and diffuse audiences as well as narrowly construed paying clients or employers.

The advice in this handbook is directed both to policy analysts in practice and to students and others who, for whatever reasons, are attempting to look at the world through the eyes of a practitioner.

THE EIGHTFOLD PATH

Policy analysis is more art than science. It draws on intuition as much as on method. Nevertheless, given the choice between advice that imposes too much structure on the problem-solving process and advice that offers too little, most beginning practitioners quite reasonably prefer too much. I have therefore developed the following approach, which I call the Eightfold Path:

- Define the Problem
- Assemble Some Evidence
- Construct the Alternatives
- Select the Criteria
- Project the Outcomes
- Confront the Trade-offs
- Decide!
- Tell Your Story

These steps are not necessarily taken in precisely this order, nor are all of them necessarily significant in every problem. However, an effort to define the problem is usually the right starting place, and telling the story is almost inevitably the ending point. Constructing alternatives and selecting criteria for evaluating them must surely come toward the beginning of the process. Assembling some evidence is actually a step that recurs throughout the entire process, and it applies particularly to efforts to define the problem and to project the outcomes of the alternatives being considered.

The primary utility of this structured approach is that it reminds you of important tasks and choices that otherwise might slip your mind; its primary drawback is that, taken by itself, it can be mechanistic.

The Problem-Solving Process

The problem-solving process—being a process of trial and error—is iterative, so you usually must repeat each of these steps, sometimes more than once.

The spirit in which you take any one of these steps, especially in the earliest phases of your project, should be highly tentative. As you move through the problem-solving process, you will probably keep changing your problem definition, as well as your menu of alternatives, your set of evaluative criteria, and your sense of what evidence bears on the problem. With each successive iteration you will become a bit more confident that you are on the right track, that you are focusing on the right question, and so on. This can be a frustrating process, but it can also be rewarding—if you learn to enjoy the challenges of search, discovery, and invention.

Some of the guidelines are practical, but most are conceptual. Most of the concepts used will seem obvious, but there are exceptions. First, technical terms are sometimes employed. Second, some commonsense terms may be used in a special way that strips them of certain connotations and perhaps imports others. For the most part, all these concepts will become intelligible through experience and practice.

The concepts come embedded in concrete particulars. In real life, policy problems appear as a confusing welter of details: personalities, interest groups, rhetorical demands, budget figures, legal rules and interpretations, bureaucratic routines, citizen attitudes, and so on. Yet the concepts described in this handbook are formulated in the abstract. You therefore need to learn to "see" the analytic concepts in the concrete manifestations of everyday life.

Caution: sometimes, some steps are already determined. Suppose your client says, "We need an extra million dollars to run this program in the next budget year: find it." Does the Eightfold Path apply to this "analysis"? In a limited way. The client has already defined the problem and narrowed the relevant criteria very tightly. There won't be much

creative scope for you when it comes to those steps. But all the other steps are likely to be relevant.

This challenge to "find it" is a simplified version of a more complex challenge—"Design it," as in "Figure out [that is, 'design'] a way to protect this subway system from terrorist attack." Here, too, the problem definition step has already been settled by the client, though the other steps are likely to get the creative juices flowing. Ideas for dealing with design problems in general are introduced in the section headed "Step Three: Construct the Alternatives."

Your Final Product

So what will your final product look like? Here is a very rough sketch of a typical written policy-analytic report:

- In a coherent narrative style you describe some problem that needs to be mitigated or solved.
- You lay out a few alternative courses of action that might be taken.
- To each course of action you attach a set of projected outcomes that you think your client or audience would care about, suggesting the evidentiary grounds for your projections.
- If no alternative dominates all other alternatives with respect to all the evaluative criteria of interest, you indicate the nature and magnitude of the trade-offs implicit in different policy choices.
- Depending on the client's expectations, you may state your own recommendation as to which alternative should be chosen.

The Spirit of the Eightfold Path

The spirit of the Eightfold Path is, I hope, economizing and uplifting. Analyzing public policy problems is a complex activity. It is easy to get lost, to waste a lot of time, to become demoralized. Other manuals and textbooks in policy analysis are primarily concerned that you get the analysis "right," in some sense. This one should help in that respect, too. But, in addition, I hope that this handbook will help you to get it done with reasonable efficiency—and with a minimum of anxious confusion.

Finally, just as policy analysis originates in politics, so it concludes in politics. Political life has two sides: channeling conflict and building

community. Policy analysis serves both sides. It channels conflict by showing that some arguments, and their proponents, are in some sense superior to others and deserve to win out. But it helps to build community by marking off potential common ground as well. This common ground is defined by the rules and conventions of rational discourse—where opponents may employ analytical procedures to resolve disagreements, or where they may discover that at least some seemingly irreducible values conflicts can be recast as dry-as-dust technical disagreements over how much higher a probability Policy A has than Policy B for mitigating Problem P.

OVERVIEW OF THE BOOK

This book is a compilation of many component parts. The primary component is Part I, describing the Eightfold Path and recommending heuristics to help you negotiate it.

Part II focuses on one particular step in the Eightfold Path: assembling evidence. It first appeared thirty-five years ago as a journal article, but I have since modified it and tried to integrate it better into the overall book in terms of both style and content. I include it because its objective is, I think, unique among the many prescriptive works in the social sciences and in journalism about data gathering and interpretation: it is, above all, concerned with using the researcher's time and energy efficiently.

Part III also addresses a specialized topic in policy analysis not dealt with in other works: making use of ideas—and specimens of "smart practices"—that are to be found in other sites. Imitation and adaptation are standard routes to progress (albeit occasionally, to regress) in other areas of life, so why not in public policy?

In previous editions of this book, the third appendix offered a summary of "semantic tips." It may not surprise readers to learn that semantic pitfalls abound on the Eightfold Path of policy analysis, but it will surely be more surprising that there are many semantic tricks to help policy analysis along. Tips about these pitfalls and the tricks that can help to bridge them appear throughout this volume, and these practical recommendations—no longer collected in a separate appendix—are now highlighted in context by means of a new semantic tips icon that appears at the beginning of each such discussion in Parts I, II, and III.

Appendix A contains the preface and summary sections of a lengthy study by researchers at the RAND Corporation on the relative worth of mandatory minimum sentences for drug dealers. I include this material because many students and fellow teachers have voiced the wish for a specimen of real, high-quality policy analysis, along with some commentary to highlight its most effective characteristics. Institutionally, RAND is the oldest policy research organization in the country, if not the world. It has a deserved reputation for excellence. It also has a tradition of doing cost-effectiveness analysis, beginning with work for the military and, in the past two or three decades, branching into domestic policy. It is therefore particularly fitting to make use of a specimen produced by RAND.

Why this particular specimen? Not because its conclusions are necessarily correct; I do not know enough about the drug policy field to have an opinion. I do know that these are highly respected researchers in the field and that the work selected here highlights the fifth, "Project the Outcomes," step in policy analysis—which I pronounce "the hardest step," mostly because of the uncertainties involved in projecting the future. The chosen specimen wrestles in an interesting way with such uncertainties. It also takes a creative approach to defining alternatives. And it illustrates clearly how to integrate strictly analytical work into a larger policy discussion rife with the value disagreements that are inevitably present in a democratic, pluralistic society.

Appendix B, "Things Governments Do," is a condensed survey of eleven types of governmental instruments for intervening in society. This new edition also offers both a new Appendix C, "Understanding Public and Nonprofit Institutions: Asking the Right Questions," and an Appendix D, "Strategic Advice on the Dynamics of Political Support."

I have tried to keep the style simple and the text short. But the topics covered are numerous and complicated. The result is that the book is in some respects very dense. My students tell me that the book should be treated not just as a quick and pleasurable read, which of course it is, but as a reference volume to be experienced again and again for its delicious subtleties. No doubt they are right.

PART

I

THE EIGHTFOLD PATH

The analytic work in problem solving generally proceeds in a certain direction, from defining the problem at the beginning all the way to making a decision and explaining it at the end. But remember, this is a process much given to reconsidering, reviewing, changing your mind—in other words, retracing your steps on the path before starting out once more. Also, in some cases, the client or, perhaps, the political situation has already narrowed and focused the analytic task to such a degree that you need not even bother thinking through some of the steps. The exposition that follows lays out a generic process that must be adapted to particular contexts.

STEP ONE: DEFINE THE PROBLEM

Your first problem definition is a crucial step: it gives you both a reason for doing all the work necessary to complete the project and a sense of direction for your evidence-gathering activity. And in the last phases of the policy analysis, your final problem definition will probably help you structure how you *tell your story*.

Think of Deficit and Excess

Semantic Tip It often—but not always—helps to think in terms of deficit and excess. For instance:

- "There are too many homeless people in the United States."
- "The demand for agricultural water is growing faster than our ability to supply it at an acceptable financial and environmental cost."

- "California's population of school-age children is growing by 140,000 per year, and our ability to develop the physical facilities in which to educate them is not growing nearly as fast."

It often helps to include the word *too* in the definition—as in "too big," "too small," "growing too slowly," "growing too fast." These last two phrases (about "growing") remind us that problems deserving our attention don't necessarily exist today but are (at least potentially) in prospect for the future, whether near or distant.

However, it does not help to think in terms of deficit and excess when your problem is an already well-structured decision choice—for example, "Dump the dredging spoils either in the Bay or somewhere out in the Pacific Ocean." Nor does it help if your challenge is to invent *any* way to accomplish some defined objective—for example, "Find some grant funds to close the anticipated gap between revenues and expenditures." These decision- and invention-type challenges are problems *for* the policy analyst but are not the substantive sort of problems I am addressing in this section.

Make the Definition Evaluative

Remember that the idea of a "problem" usually means that people think there is something wrong with the world, but note that *wrong* is a very debatable term. Not everyone will agree that the facts you (or others) have defined as a problem really do constitute a problem, for each person may apply a different evaluative framework to these facts. Unfortunately, there are no obvious or accepted ways to resolve philosophical differences of this type.

A common philosophical as well as practical question is this: "What private troubles warrant definition as public problems and thereby legitimately raise claims for amelioration by public resources?" It is usually helpful to view the situation through the "market failure" lens (Weimer and Vining 2004, chap. 5).[1] In its simplest formulation, market

1. For an analysis of most traditional market failures in transaction cost terms, see Zerbe and McCurdy (1999), which also emphasizes the rich variety of interventions besides those undertaken by government to remedy traditionally conceived "market failures."

failure occurs when the technical properties of a good or service have one of the following effects:

- Making it hard to collect payment from all the potential beneficiaries—for instance, the large number of people who profit, albeit indirectly, from advances in basic science
- Making it hard to collect from the beneficiaries of consumption the true economic cost of making use of the good or service—such as the fresh air that vehicle owners use as a sink for their auto emissions
- Making it hard for consumers (and sometimes suppliers) to know the true qualities of the good or service they are acquiring—for instance, many repair-type services, including those performed by physicians as well as those performed by auto mechanics
- Making the cost of producing the marginal unit lower than the average cost within the relevant range of demand—such as a magazine article distributed via the Internet

It is impossible to overestimate the importance of this point. In most—though not all—situations in which no actual market failures can be identified, people's private troubles *cannot* typically be ameliorated by even the most well-intentioned governmental interventions. Even when some amelioration is possible, there are usually many adverse side effects. In some cases, it may nevertheless be worthwhile to pay the price of these side effects, but such calculations must be done carefully and scrupulously.

Besides market failures, the main situations in which private troubles can warrant definition as public problems are these:

- Breakdowns of systems, such as family relationships, that occur largely outside markets
- Low living standards that arise precisely because markets do function well and do not reward individuals very generously if they lack marketable talents or skills
- The existence of discrimination against racial and other minorities
- The failure of government to function well in areas in which it is traditionally expected to act effectively (e.g., in providing public schools)

Using issue rhetoric. Usually, the raw material for the evaluative aspect of your initial problem definition comes from your client and derives from the ordinary language of debate and discussion in the client's political environment—language that I call generically "issue rhetoric." Such rhetoric may be narrowly confined to a seemingly technical problem or broadly located in a controversy of wide social interest. In either case, you have to get beyond the rhetoric to define a problem that is analytically manageable and that makes sense in light of the political and institutional means available for mitigating it.

Use the raw material of issue rhetoric with care. It often points to some condition of the world that people don't like or consider "bad" in some sense, such as "teenage pregnancy," "media violence," or "global warming." These evaluations do not necessarily need to be taken at face value. You will sometimes wish to explore the philosophical and empirical grounds on which you, your client, or others in your eventual audience should or should not consider the alleged condition "bad." Furthermore, issue rhetoric may point to some alleged—but not necessarily real—cause of the troubling condition, such as "welfare" or "human wastefulness."

Issue rhetoric often has a partisan or ideological flavor. Although Americans cluster toward a mixed-ideology and pragmatic center, issue rhetoric is created by the more passionate and often more articulate individuals who settle closer to the extremes. The great ideological divide in most developed democracies concerns the role of government assistance and regulation in solving problems relative to reliance on self, kin, and neighbors. Self-reliance is generally presumed to be the ideal, but this is a rebuttable presumption. "Liberal" issue rhetoric typically offers many rebuttals, usually involving distrust of "the market," but only some of these rebuttals are grounded in realistic understanding of how markets do and do not work. "Conservative" issue rhetoric sometimes offers thoughtless defenses of "the market" but can also fall silent when favored business interests seek protectionist legislation. Because government as an institution is the chief alternative to private and community problem-solving, liberals and conservatives alike ideologize the question of just how competent and trustworthy it is. Selective perception abounds on both sides of this argument.

Generalities originating in issue rhetoric only sometimes suffice to settle concrete issues of policy choice and policy design, although economic theories of market failures and imperfections can often tell us when not to rely on the market, and public choice theories of government failure can often tell us when not to rely on the government (Weimer and Vining 2004; Glazer and Rothenberg 2001). Policy analysis typically bridges all political ideologies by reliance on the normative standard of "maximizing welfare" and on social science theorizing about the comparative advantages of different institutions for different purposes. Thus you want not simply to echo the issue rhetoric in your problem definition, but to use it as raw material for a provisional problem definition that you hope will prove analytically useful.

Note also that some issue labels may signify more than one problem. Depending on the audience, for example, "teenage pregnancy" may connote any or all of the following conditions: sexual immorality, the blighting of young people's and their children's life chances, exploitation of taxpayers, and social disintegration. Usually you will want to determine a primary problem focus, to ensure that the analysis does not get out of hand. But if the problems aren't too complicated, you may feel willing to define more than one.

Quantify If Possible

Your problem definition should, insofar as possible, include a quantitative feature. Assertions of deficit or excess should come with *magnitudes* attached. How big is "too big"? How small is "too small"? How about "too slowly" or "too fast"? With regard to homelessness, how many homeless people are there in the United States? Or in the case of agricultural water, how many acre-feet of water are used now, and how does that amount compare with the demand in some specified future year (given certain assumptions about water pricing)? Exactly what is "our ability to develop physical facilities for water storage," and how do we expect it to grow, or shrink, over time?

If necessary, gather information to help you calibrate the relevant magnitudes. (See the discussion under "Step Two: Assemble Some Evidence.")

In many or most cases, you will have to estimate—or, more likely, "guesstimate"—the magnitudes in question. Sometimes you should furnish a *range* as well as a *point* estimate of magnitudes—for example,

"Our best guess of the number of homeless persons in families is 250,000, although the truth could lie between 100,000 and 400,000."

Even if you cannot come up with good numbers yourself, qualitatively defining a *metric* that might be used to quantify the problem helps you make your problem definition more behavioral and concrete. It is better to say, "Too many people with annual incomes over $60,000 are living in subsidized apartments," than simply, "Too many relatively well-off people are taking advantage of low-rent public housing." The $60,000 value provides desirable texture and information about a threshold number that will serve in the promised analysis.

Diagnose Conditions That Cause Problems

Some problematic conditions are not experienced as troublesome per se by citizens but are perceived by them, or by analysts working on their behalf, to be causes of trouble. It is sometimes useful to diagnose at least one alleged condition of this type and to define it as a problem to be mitigated or removed—as in, "One of the problems in the air pollution area is that states have not been willing to force motorists to keep their engines tuned up and their exhaust systems in proper order."

Semantic Tip Note that this sort of problem definition is not merely descriptive but is also diagnostic. It implicitly asserts that some condition, which people may or may not find troubling on its own, is an important cause of some other condition that is indeed troubling. Problem definitions that pretend to such diagnostic power can be useful, but they can also be treacherous. Suppose, after all, that the causal diagnosis is mistaken or misleading—for example, that states' unwillingness to enforce engine maintenance routines is *not* in fact a very important cause of air pollution. Because the term *definition* in some contexts connotes legitimate arbitrariness ("I'll define *justice* to mean . . ."), the causal claims implicit in diagnostic problem definitions can easily escape needed scrutiny. (See "Step Five: Project the Outcomes" for further discussion.)

Risky Conditions: "The Odds"

"The odds are too high that this nuclear reactor will suffer an accident in the next twenty-five years that will emit excessive radiation." This sentence

does indicate a problem, but it is not something tangible, like "too many cases of asthma are being reported in this neighborhood." It refers to risk and is stated in probabilistic language dealing with "the odds."

Semantic Tip Referring to "the odds" is a useful way to talk about anything that is uncertain in your analysis, not just the problem definition. It can also refer to the uncertain prospects of an alternative's working out as planned, or the likelihood that a key political actor will remain in office in order to oversee policy implementation. It is an especially useful locution when talking about uncertainties that are particularly resistant to quantification, for example, "The odds are that the U.S. nuclear modernization program is causing other countries to look more favorably on acquiring nuclear weaponry themselves."

The odds formulation can also be used for specifying criteria. For instance, one could say that one criterion is "Maximize the odds that the People's Party will control the upper chamber following the next election" or "minimize the odds that teens in the catchment area of this program will reject it because it is not 'cool.'"

Identify Latent Opportunities

A special kind of problem is an opportunity missed. Is it not rather small-minded to think of policy analysis as devoted merely to the amelioration of problems? May policy analysis not rise above the tedious and uninspiring business of patching and fixing? Can we not aspire to a world in which we can identify opportunities to do creative—not to say wonderful—things? "If it ain't broke, don't fix it" is a confining idea, and certainly policy analysts, policymakers, and public managers ought not to allow the "problem" focus to restrict the search for plausible opportunities. Unfortunately, the working agenda of most policy professionals is set by complaints, threats, worries, and troubles—often leaving little time or energy to think about improvements that no one has identified as needful. Still, if latent opportunities are really lying around, it would be a pity to ignore them.

Where do we find opportunities for creative policy improvements that haven't first been identified by complaints, threats, and so on? Little academic or technical theory is available to answer this question. But Box I-1 (p. 8) contains a list that is suggestive.

BOX I-1 **Some Generic Opportunities for Social Improvement That Often Go Unnoticed**

Operations research strategies. By means of sequencing, timing, prioritizing, matching, clustering, and other such rationalizing arrangements, it may be possible to use a fixed stock of resources to achieve higher productivity than is possible otherwise. For instance, provided that traffic flow conditions are within certain parameters, high-occupancy-vehicle (HOV) lanes can maximize vehicle throughput in a fixed section of roadway.

Cost-based pricing. Discrepancies between prices and real costs present an opportunity for enhancing social welfare by adjusting prices to better reflect reality. For instance, introducing congestion tolls, eliminating cross-subsidies for peak-period utilization of electricity, or removing rent controls would each bring prices more into line with real costs.

By-products of personal aspirations. It is possible to structure new incentives or create new opportunities for personal advantage or satisfaction that can indirectly result in social benefit. For example, public-sector employers can offer to share the benefits of cost-reducing innovations with the employees who conceive them and implement them.

Complementarity. Two or more activities can potentially be joined so that each may make the other more productive. For example, increased public works construction can combat unemployment.

Input substitution. The world abounds in opportunities to substitute less costly inputs in a current production process while achieving roughly equivalent results. For instance, municipalities can hire lower-paid civilians to perform police clerical tasks rather than use expensive uniformed officers.

Avoid Common Pitfalls in Problem Definition

Problem definition is a step beset by at least two dangerous pitfalls.

Semantic Tip ***Defining the solution into the "problem."*** Your problem definition should not include an implicit solution introduced by semantic carelessness. Projected solutions must be evaluated empirically and not legitimated merely by definition. Therefore, keep the problem definition stripped down to a mere description, and leave open where you will look for solutions.

Development. A sequence of activities or operations may be arranged to take advantage of a developmental process. For example, a welfare agency can assess clients for employability and vocational interest before, rather than after, sending them out to search for a job.

Exchange. Unrealized possibilities for exchange can increase social value. Policymakers typically design policies to simulate market-like arrangements—for example, conducting pollution permit auctions, or reimbursing an agency for services it renders to another agency's clients or customers.

Multiple functions. A system can be designed so that one feature has the potential to perform two or more functions. For example, a tax administrator can dramatize an enforcement case in such a way as both to deter potential violators and to reassure nonviolators that they are not being played for suckers because of their honesty.

Nontraditional participants. Line-level employees of public agencies—as well as their customers, clients, or the parties whom they regulate—often have knowledge of potential program improvements that could usefully be incorporated into the agencies' policies and operations. The IRS, for instance, has sought feedback from ordinary tax filers about how to improve federal tax forms.

Underutilized capacity. Governments sometimes systematically underutilize resources at their disposal. In many communities, school facilities are used for relatively limited purposes for only part of the day and for only part of the year—although school officials would be quick to warn that tapping this capacity without harming school functions is not always easy.

- *Don't say:* "There is too little shelter for homeless families." Inadvertently implying that "more shelter" is the best solution may inhibit you from thinking about ways to prevent families from becoming homeless in the first place. *Try instead:* "Too many families are homeless."
- *Don't say:* "New schools are being built too slowly." Simply assuming that "more schools" is the solution may inhibit you from thinking about ways to use existing facilities more efficiently or even to try forms of "distance learning." *Try instead:* "There are too many schoolchildren relative to the currently available classroom space."

A tip-off that you're probably smuggling an implicit solution into the problem definition is to hear yourself saying, "Aha, but that's not the real problem; the real problem is . . ." While there are better and worse ways to conceptualize a problem—or to solve a problem—it stretches ordinary usage too much to say that one problem could be "more [or less] real" than another.

Accepting too easily the causal claims implicit in diagnostic problem definitions. I suggested earlier that conditions that cause problems may also be problems themselves. However, the causes must be real, not merely assumed. You have to evaluate the causal chain that goes from the situation itself to the bad effects it is alleged to cause, and to convince yourself that the causal relationship is real. For instance, for some people, cocaine use is not a problem in itself, but it may become a problem if it *leads to* crime, poor health, family disintegration, and so on. But does it lead to these outcomes, and to what degree? The evidence on this question should be evaluated very carefully before you decide that it's okay to work with a problem definition that sounds like "too much cocaine use."

Iterate

Problem definition is a crucial step. Because it is hard to get it right, however, you may take that same step again and again. Also, your empirical and conceptual understanding will evolve over the course of your analytic work. For instance, you may start out thinking that the main problem is "too many halfway houses for the mentally ill in our city" but end up concluding that the main problem is how badly some of them are managed.[2] As you begin to rule out alternative approaches to solving or mitigating your problem, you will probably want to sculpt the problem definition so that, in the end, you and the political system will have some chance of attacking the problem successfully. Finally, if you are working in an office or agency context, you will implicitly be negotiating a mutually

2. This happened to a graduate student group at the Goldman School whose client was the Oakland Police Department. Members of the group struggled hard to escape the initial assumptions held by their client and eventually to refocus their work.

acceptable problem definition with your analyst colleagues and your hierarchical superiors.[3]

STEP TWO: ASSEMBLE SOME EVIDENCE

All of your time doing a policy analysis is spent on two activities: thinking (sometimes aloud and sometimes with others) and hustling data that can be turned into evidence. Of these two activities, thinking is generally the more important, but hustling data takes much more time: reading documents, hunting in libraries, poring over studies and statistics, interviewing people, traveling to interviews, waiting for appointments, and so on.

The real-world settings in which policy analysis is done rarely afford the time for a research effort that would please a careful academic researcher. In fact, time pressure is probably almost as dangerous an enemy of high-quality policy analysis as is politically motivated bias, if not more so. Therefore, economize on your data collection activities. The key to economizing is this: try to collect only those data that can be turned into "information" that, in turn, can be converted into "evidence" that has some bearing on your problem.

Semantic Tip For the logically minded, here are some definitions: *Data* are facts—or, some might say, representations of facts—about the world. Data include all sorts of statistics but go well beyond statistics, too. Data also include, for instance, facts about an agency manager's ability to deal constructively with the press. *Information* consists of data that have "meaning," in the sense that they can help you sort the world into different logical or empirical categories. The prevalence of cigarette smoking in five different countries constitutes data, but these data become information when you decide it is interesting to array the countries comparatively (e.g., from lowest to highest prevalence). *Evidence* is

3. Some analysts also claim that it is simply not worthwhile to define as "problems" conditions that cannot be ameliorated: "Problems are better treated as opportunities for improvement; defined problems, as problems of choice between alternative means to realize a given opportunity. The process of problem definition would then be one of search, creation, and initial examination of ideas for solution until a problem of choice is reached." See Dery (1984, 27).

information that affects the existing beliefs of important people (including yourself) about significant features of the problem you are studying and how it might be solved or mitigated. Differential prevalence of smoking, for instance, can become evidence bearing on hypotheses concerning different levels of concern about personal health across countries.

You need evidence for three principal purposes, all of which are relevant to the goal of producing realistic projections of possible policy outcomes. One purpose is to assess the nature and extent of the problem(s) you are trying to define. A second is to assess the particular features of the concrete policy situation you are engaged in studying. For instance, you may need to know—or guess—about agency workloads, recent budget figures, demographic changes in a service area, the political ideology of the agency chief, the competency of the middle-level managers in the agency, and the current attitudes of some other agency that nominally cooperates with yours on some problem. The third purpose is to assess policies that have been thought, by at least some people, to have worked effectively in situations apparently similar to your own, in other jurisdictions, perhaps, or at other times. (Sometimes these situations will have been evaluated statistically and sometimes not: see Part III, "'Smart (Best) Practices' Research: Understanding and Making Use of What Look Like Good Ideas from Somewhere Else.")

Because each of these purposes becomes salient in different phases of the policy analysis process, the second step on the Eightfold Path, "Assemble Some Evidence," will be taken more than once but with a different focus each time.

Think Before You Collect

Thinking and collecting data are complementary activities: you can be a much more efficient collector of data if you think, and keep on thinking, about what you do and don't need (or want) to know, and why. The principal—and exceedingly common—mistake made by beginners and veterans alike is to spend time collecting data that have little or no potential to be developed into evidence concerning anything you actually care about. People often do this because running around collecting data looks and feels productive, whereas first-rate thinking is hard and

frustrating. Also, when they see you busily collecting data, the people paying for your work tend to be reassured that somehow they are getting their money's worth.

The value of evidence. Since most evidence is costly to produce, you must weigh its likely cost against its likely value. How is its likely value to be estimated? The answer may be cast in a decision-analytic framework (decision trees), though remember that the process of making a decision involves a great many elements prior to the moment of actual choice, such as defining a useful problem, thinking up better candidate solutions, and selecting a useful model. In general, the value of any piece of evidence depends on these factors:

- The likelihood that it will cause you to substitute some better decision for whatever decision you would have made without it (which might have been an "acceptable" decision in and of itself)
- The likelihood that the substituted decision will, directly or indirectly, produce a better policy outcome than the outcome that would have been produced by the original decision
- The magnitude of the difference in value between the likely-to-be-improved outcome and the original outcome

The utility of an educated guess. It is surprising how well you can do in many cases by gathering no evidence at all but simply by sitting down and thinking something through and then making some serious educated guesses. There is nothing shameful about acting on such guesstimates and thereby conserving your data-collecting time and energies for answering questions for which good evidence is really necessary (see Part II, "Assembling Evidence").

A helpful check on your thinking, to avoid collecting useless data, is to ask yourself the following questions before embarking on some data collection venture:

- "Suppose the data turn out to look like so-and-so as opposed to thus-and-such. What implication would that have for my understanding of how to solve this problem?"

- "Compared to my best guess about how the data will look once I've got them, how different might they look if I actually took the trouble to get them?"
- "How much is it worth to me to confirm the actual difference between what I can guess and what I can learn about the world by really getting the data?"

It is this sort of critical attitude about the value of expensive data collection (especially ad hoc surveys!) that often leads good and experienced policy analysts to make do with back-of-the-envelope estimates. However, none of this reasoning is meant to be an excuse for shirking the job of getting good data—and sometimes a lot of it, at huge costs in time and money—when you've convinced yourself that the investment really will pay off. There's an obvious and critical difference between justifiable and unjustifiable guesstimates.

Review the Available Literature

There hardly exists a problem on whose causes and solutions some academic discipline or professional association is not doing research. It is easy to find journals and various professional publications disseminating research results, theories, case studies, the musings of experienced practitioners, and so on. The Internet brings much of this literature to your desktop.

Advocacy organizations often publish a great deal of interesting work and may take special pains to disseminate their findings on the Internet. However, because advocacy-based analyses are not, in general, as reliable as more disinterested work, there is a danger of relying too much on such sources just because they are readily available.

Survey "Best Practices"

The chances are good that the problem you are studying is not unique, and that policymakers and public managers in other jurisdictions, perhaps not very different from the one you are studying, have already dealt with it in some fashion. See if you can track down some of these past solutions and extrapolate them to the situation you are studying. Bear in

mind, however, that the extrapolation process is complicated (see Part III, "'Smart (Best) Practices' Research").

Use Analogies

Sometimes it pays to gather data about things that, on the surface, seem quite unlike the problem you are studying but, on a deeper level, show instructive similarities. For instance, your understanding of how a merit pay plan for compensating managers in the public sector might work could perhaps be improved by seeing how similar schemes work in the private sector. Or, if you are working on the problem of how a state can discipline, and perhaps disbar, incompetent attorneys, you might usefully spend a good deal of your time learning about how the medical profession handles problems of physician incompetence. If you are working on how to reduce neighborhoods' resistance to accepting low-income housing projects, you could usefully look into the literature on community resistance to accepting solid-waste incinerators.

As these examples suggest, some analogies are easier to perceive, and to make sense of, than others. It takes a little imagination to see an instructive analogy and, occasionally, a little daring to try to convince others to recognize both its usefulness and its inevitable limitations.

Start Early

You are often dependent on the very busy schedules of other people whom you ask to furnish information or to make time for an interview. It is extremely important to submit requests for information—and especially for interviews—well in advance of when you want to have completed the data collection. (For a useful description of how to conduct literature reviews, library searches, phone interviews, and personal interviews, see Weimer and Vining 2004, chap. 13; see also Part II, "Assembling Evidence.")

Touch Base, Gain Credibility, Broker Consensus

The process of assembling evidence inevitably has a political as well as a purely analytic purpose. Sometimes it entails touching base with potential critics of your work so that they will not be able to complain later that

you have ignored their perspectives. Conversely, by making yourself known to potential supporters of your work, you may be able to create a cadre of defenders.

A more complex objective, where appropriate, might be to blend policy analysis with the process of improving a policy idea or decision during the course of implementation. (See the following discussion of "improvability" as a practical criterion.) This objective entails obtaining feedback from participants, usually in an iterative process, and sharing some of your own reactions with them. You thereby become more of a partner in the process than an outside observer and diagnostician. An even more complex and challenging role would be for you to become a particular type of "partner," a facilitator and broker, whether by acting as a conduit from one person to another or by convening meetings and other gatherings.

Free the Captive Mind

In exchange for access to data and a ready-made worldview, researchers sometimes uncritically accept problem definitions and preferred solutions from kindly informants (not to mention from paying clients or employers). To counter such temptations, be sure to make contact with individuals or factions whom you would expect to disagree—the more sharply the better—with those informants. A time-saving, but only partial, substitute is to ask your kindly informants, "Who might object strongly to your point of view about this, and why might they do so?"[4]

STEP THREE: CONSTRUCT THE ALTERNATIVES

By *alternatives* I mean something like "policy options," or "alternative courses of action," or "alternative strategies of intervention to solve or mitigate the problem."

Beware a Linguistic Pitfall

Semantic Tip Specifying alternatives does not necessarily signify that the policy options are mutually exclusive. Policy analysts use the term

4. For an excellent discussion of this process, see Klitgaard, forthcoming.

alternative ambiguously: sometimes it means one choice that implies foregoing another, and sometimes it means simply one more policy action that might help to solve or mitigate a problem, perhaps in conjunction with other alternatives. Be aware of the ambiguity in other people's usage, and in telling your story (see Step Eight), be sure that no such ambiguity enters your own usage.

Sometimes you won't be entirely sure whether two alternatives are or are not mutually exclusive. For instance, although the mayor may have promised enough money to either fix potholes or provide homeless shelters (but not both), you may have made such a great case for both programs that the mayor may decide to increase the budgetary allocation.

Start Comprehensive, End Up Focused

In the last stages of your analysis, you won't want to be assessing more than two or three principal alternatives, but in the beginning, err on the side of comprehensiveness. Make a list of all the alternatives you might wish to consider in the course of your analysis. Later on, you will discard some obvious losers, combine others, and reorganize still others into a single "basic" alternative with one or more subsidiary "variants." For your initial list, though, where should you turn for ideas?

One starting point would be to note the alternatives that key political actors are actively proposing or seem to have on their minds. These may include prominent people's pet ideas, institutions' inventories of "off-the-shelf" proposals that simply await a window of opportunity, and prepackaged proposals that political ideologues are perennially advocating. Then you could try to *design* alternatives that might prove to be superior to the alternatives currently being discussed by the key political actors. It's good to brainstorm, to try to be creative—but don't expect that you will necessarily produce much better ideas than those that other people have already advanced.

One way to coax your creativity is to refer to the checklist in Appendix B, "Things Governments Do." For each entry on the list, ask yourself: "Might it make sense to try some version of this generic strategy to help mitigate this problem?" Because it is a comprehensive list, the answer with respect to any single strategy will usually be no. Going through the list systematically is worthwhile, however. Because the list is not very long,

with experience you will need to spend only a few minutes to decide whether any ideas there might be worth considering further. (See also the valuable discussion about generic policy instruments in Weimer and Vining 2004, chap. 10.)

Semantic Tip Always include in your first approach to the problem the alternative "Let present trends (or 'business-as-usual') continue undisturbed." You need to do this because the world is full of naturally occurring, ongoing changes, some of which may mitigate, or worsen, the problem on which you are working. (Note that I am not characterizing this alternative as "Do nothing." It is not possible to do nothing or to "not decide." Most of the trends in motion will probably persist and alter the problem, whether for better or for worse.)

To see if "natural" change will affect the scope of the problem, inspect its most common sources in the public policy environment: (1) political changes following elections, as well as changes induced by the prospect of having to contest an election; (2) changes in unemployment and inflation rates that accompany the business cycle; (3) the changing "tightness" or "looseness" of agency budgets caused by overall taxing and spending policies; (4) demographic changes, such as population migration patterns and population "bulges" moving through certain age levels; and (5) changing technologies. In most cases, however, this "let-present-trends-continue" option will drop out of your final analysis. It follows that if you do your problem definition work well, you will end up with an important problem in your sights that in most cases can be mitigated to some degree by purposive action.

Another frequently helpful alternative is "Learn more." This can be done by using pilot studies, or by looking around for examples of "smart practices" elsewhere (see Part III), or by waiting for the future to get less murky, or perhaps by negotiating further with important players to ascertain what they might do under various contingencies. Don't forget that there is a cost to waiting if, in the absence of further learning, you would have guessed "the right conclusion" anyway. Conversely, there is a cost to premature decision making or action if you are likely to make a consequential mistake that could be corrected by further learning.

Model the System in Which the Problem Is Located

We often think about alternative approaches to the problem as possible *interventions* in the system that holds the problem in place or keeps it going. Logically, it is not necessary to model the causes of a problem in order to cure it—pharmaceutical manufacturers can testify that many of their successful products work by unknown causal routes on conditions whose causes are not at all understood. But a good causal model is often quite useful for suggesting possible "intervention points." This is especially true when the problem is embedded in a complex system of interacting forces, incentives, and constraints—which is usually the case. Consider, for instance, a system that produces "too much traffic congestion" at some choke point such as a bridge or a tunnel. A sketch of the relevant causal model would include the demand for travel along the relevant route, the available alternative modes of travel, the amount of roadway capacity, and the price to users of roadway capacity. An efficient and simple—but usually politically unpopular—intervention might be to increase the price to users so as to reflect the degree to which each user contributes to congestion and increased travel times.

How self-conscious, elaborate, and rigorous should your causal model be? Many social scientists who devote themselves to policy analysis would hold, "The more so the better." I say, "Yes, but . . . ." Self-consciousness is highly desirable. Elaborateness (or comprehensiveness—in this case a near synonym) is desirable because it decreases the risk of missing important causal connections, but it can blur the analytic focus and blunt creativity in designing intervention strategies. Rigor is desirable if it prevents you from relying on unarticulated and false assumptions; its downside is that it may persuade you to exclude factors that are important—for instance, the personalities of certain actors—because you don't know how to model their effect rigorously or because you have only hunches regarding the facts.

Many models are best thought of as elaborations of a fundamental metaphor. They can be mathematically precise or verbal and evocative. Some commonly used metaphors that are the bases for models of particular value in designing alternatives are discussed in the following sections.

Market models. The model of a market in which disaggregated suppliers exchange goods or services with disaggregated demanders can apply to unpriced goods and services. The main idea behind the market model is really equilibration through exchange. Hence, the market model can be applied to many phenomena other than the production and allocation of textbook goods such as widgets or apples.

For instance, you might try to understand the flow of patients into a state mental hospital system in terms of supply and demand: there is a fixed short-run "supply" of available beds in state hospitals and a per-diem charge for each, and a complex "demand" for their use generated by police departments, county psychiatric emergency units, judges, members of the public, and so on.

A standard intervention strategy for improving markets that are not working as well as they might is to find some way to raise or lower the prices faced by either suppliers or demanders.

Production models. Unfortunately, little academic literature has examined the operating logics of the common types of production systems found in public policy—such as command-and-control regulation, the provision of information, and all the other "Things Governments Do" that are described briefly in Appendix B. (However, see Weimer and Vining 2004, chap. 10, on "generic policies"; see also Salamon 2002.) In any case, the main concern in understanding production systems should be to identify the parameters whose values, when they move out of a certain range, make the systems most vulnerable to breakdown, fraud and abuse, egregious diseconomies, and the distortion of intended purpose. It is also helpful to know about those parameters that matter most when we try to upgrade a production system from mere adequacy to performance levels we might think of as "excellent" (see Part III, "'Smart (Best) Practices' Research").

Another way to look at production models is through optimization lenses. Operations research models—such as queuing, inventory management, Markov processes—are relevant here.[5]

5. For a good, brief discussion, see Stokey and Zeckhauser (1978) and Victorio (1995); also see the models, particularly that of case management, in Rosenthal (1982).

Evolutionary models. An evolutionary model describes a common process of change over time. It is constructed of three important subprocesses: variation among competitors, selection, and retention. Suppose, for instance, that in an agency enforcing health-related standards in the workplace, the complaints disproportionately concerned visible and annoying problems that were not, however, as hazardous to worker health as less visible and annoying problems. In this case, the evolutionary model suggests several plausible intervention points. The agency might try to educate workers to detect and complain about more serious problems, contriving thereby to swamp the less serious problems—thus changing the pool of "competitors." It might start screening the complaints for their likelihood of being associated with more fruitful targets—thus changing the "selection mechanism." Or it might attempt to persuade workers, and perhaps their union representatives, to reduce their propensity to complain about matters the agency wishes to hear less about—thus changing the "retention mechanism," workers' attitudes.[6]

Conceptualize and Simplify the List of Alternatives

The final list of alternatives—the one you include in your presentation to your client and other audiences—will almost certainly look quite different from the one you started with. Not only will you have thrown out some that just don't look very good, but you will also have done some work to *conceptualize* and *simplify* alternatives.

Semantic Tip The key to conceptualization is to try to sum up the basic strategic thrust of an alternative in a simple sentence or even a phrase. This is difficult but usually worth the effort. It helps to use very plain, short phrases stripped of jargon. When the Environmental Protection Agency (EPA) was created, the first administrator confronted (a partial list of) alternatives that might have been described as thus: "Let the states do the work; let the feds give them the money"; "Remove impediments to firms cooperating on antipollution research"; and "Sue the bastards" (meaning

6. For other ideas and an excellent discussion of the uses of models generally, see Lave and March (1975).

the large, visibly polluting firms and industries, the prosecution of which would help build political support for the new agency).

The key to simplification is to distinguish between a basic alternative and its variants. The basic element in many policy alternatives is an intervention strategy—such as regulatory enforcement or a subsidy or a tax incentive—that causes people or institutions to change their conduct in some way.[7] But no intervention strategy can stand alone; it must be implemented by some agency or constellation of agencies (perhaps including nonprofit organizations), and it must have a source of financing. Usually the variants on the basic strategy are defined by different methods of implementation and different methods of financing.

The distinction between a basic strategy and variants based on implementation details is especially helpful when you have a lot of possible solutions to consider and you need to reduce the complexity involved in comparing them. Making the distinction puts you in a position to break your analysis into successive steps. In the first step, you might compare, say, three basic alternatives while ignoring the details described by their variants. Then, once you have decided on one of these basic alternatives, you could turn to comparing the variants.

For example: You want to decrease the prevalence of heroin use in your county by 50 percent over the next five years.[8] You consider three basic alternatives: methadone maintenance, law enforcement pressure, and drug education. Potential variants for each one have to do with the funding sources, in that state, federal, and county money can be used in different degrees (although not all mixes of funds available for one approach are also available for the other two). Variation is also possible according to who administers the program(s): nonprofit organizations, county employees, or state employees. Or, you might consider variants of scale and scope, such as two possible sizes for your methadone program.

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7. Often, though not always, the basic element is something like a smart practice—that is, an intervention strategy that attempts to take advantage of some qualitative opportunity to create valued change at relatively low cost or risk. See Part III, "'Smart (Best) Practices' Research."

8. Choosing a numerical target can help to focus energies and can force you to think about what effects are too small to be worth seeking. But when all increments are of equal value, choosing a target may be arbitrary and self-defeating.

Points on a Continuum as "Alternatives"

Suppose you are asked to recommend changes in, say, the rental rates for public housing in your city. Theoretically, each penny change in the rent charged could represent an alternative, but clearly that is a mistaken way to consider "alternatives." A better approach is to make this into a two-step problem. Step one is to establish the upper and the lower limits of an acceptable range of possibilities, and step two is to choose some point within that range. Choosing each of these limits is a small policy problem in itself, complete with criteria, projections, and the like. For instance, equity might require that the upper limit not be "too high," meaning somewhere close to $600 per month, whereas affordability might suggest a slightly lower upper limit. Cost recovery requirements might suggest a lower limit of, say, $450 per month. In any case, suppose that at the end of step one, the acceptable range has been narrowed to $475–$575 per month. One might almost say that a good move for step two is simply to take the midpoint of these two limits, $525 per month. But there might be additional criteria of interest, for example, finding a "reasonable" increment relative to the current rental rate. If the current rate is $475 per month, a $50 increment, to $525, could be seen as reasonable, but so might a $75 increment (especially if rents have not been raised in several years), which will permit the city's housing authority to offer some needed services to residents. At any rate, $25 increments between $450 and $575 seems to be the psychologically "right" set of alternatives—not too large and not too small for the range of options to be considered. Thus, in the end, we have narrowed our alternatives down to six, from an initial array of several thousand.

This two-step procedure could be useful for a variety of problems involving near-continuous variables as alternatives, for example, budget allocations, future dates to begin or to discontinue a service, the number of people to be accommodated by some project or program, emission limits for some effluent, fee or fine schedules, or quantity of water to be released from a reservoir.

The great majority of social science hypotheses about what might work to ameliorate a given problem show up in the language of continuous variables, which then need to be transformed by the policy analyst into policy-compatible discontinuous choices. If, for instance, studies

show that the price elasticity of a pack of cigarettes is –.4, that tells you about a continuous relationship (within a certain range) between aggregate cigarettes demanded and the price charged. But if you want to exploit this fact to raise cigarette taxes so as to discourage smoking, you need to translate this information into particular numbers, for example, "Raise the tax $.25 per pack to $1.75."

Design Policy Alternatives

This handbook assumes throughout that you are working on a problem of policy choice. However, a special case of policy choice occurs when you wish to, or have to, *design* at least one policy alternative to add to the menu of possibilities. Perhaps you are just not satisfied with the menu of alternatives that people in the policy environment are already talking about. Most challenges in "exploiting opportunities," as opposed to "solving problems," also involve designing some relatively fresh or new system for doing so.

What is the essence of a design problem? It starts by specifying a primary objective to be achieved, and by assuming that many different elements need to be combined into some workable system that would achieve it. Think, for instance, of an objective like "increase patronage in our regional mass transit system by 20 percent over the next three years." You might approach this design problem in the following way:

1. The system being designed to meet this objective involves elements like (1) quantity of buses and subways, (2) their schedule, (3) tolls on local highways, (4) rules about diamond-lane usage, (5) parking meter rates, (6) monthly bus pass charges, (7) arrangements between transit operators and large traffic-generating institutions for pass sales to employees, and (8) no doubt, a host of other elements.
2. Those elements could be combined in a (sometimes large) variety of ways. To complicate matters even further, each element is also in need of design analysis.
3. As hypothetical combinations shift in the mind of the designer—or, more likely, in the minds of the group of stakeholders involved in the design process—the hypothetical system could also shift the relative significance of the varied objectives, including the primary

one that motivated the design effort in the first place. The 20 percent goal might appear to be too ambitious, given the budget constraints on bus purchases or union resistance to bus driver schedule changes. By contrast, newly salient environmental protection goals might emerge to strengthen commitment to the 20 percent goal.

4. The process of combining and recombining elements into different versions of a workable system is based largely on trial and error. For example, the thought process involved might proceed in this manner: "Okay, let's start by seeing how far we can get by discounting monthly bus passes. If that's insufficient, let's see how much more we can get by adding time-of-day pricing. And what if we raise the tolls on some of the key highways and choke points? Maybe that will be better than tinkering with the pricing of bus service. . . ."

Is there a way to minimize the thrashing about that often accompanies this trial-and-error process? And how, if at all, might the Eightfold Path framework contribute?

Consider targets and budgets. You can eliminate a lot of thrashing by artificially limiting either the budget you can work with or the target you wish to achieve. In the preceding example, we discussed a 20 percent increase-in-ridership goal and worked backward from there to design the least-cost (in a broad sense) way of getting there. This time, let us take the opposite tack of assuming a particular budget, as in, "If your agency has $10 million to spend on emergency preparedness next year, what would be the most effective way of spending it?" The budget of $10 million is chosen somewhat arbitrarily, although it is expected to be somewhere within the realistic range of possibilities. But it has the advantage of focusing your imagination for designing a spending package on something concrete. If at the end of the analysis, you believe $15 million might be a more realistic and politically achievable number, then think about what an extra spending package of $5 million would look like. In any case, it is not realism so much as analytic focus that you are trying to achieve.

Look around. Take advantage of design efforts made by others before you. Perhaps the problem you are dealing with is so new or unique that

you will be the first, or even the only, person to oversee the needed design work. More likely, though, others have already dealt with this problem. It pays to see what they have done and to assess their degree of success or failure. Successful approaches are usually the most helpful, but sometimes you can learn a lot from evident failures, as well.

Where to look? It may help to observe sister jurisdictions or institutions. If you are thinking about a problem at the state level, look to other states; at the city level, to other cities; at the community foundation level, to other community foundations. Professional associations linking government officials (such as chief state school officers, district attorneys, or county welfare directors) often publish materials describing "best practice" in one or more of their member jurisdictions; even if they do not, a phone call to the executive offices of the association may produce useful leads.

When you are looking around, however, you may need to consider whether the problems in your "target" jurisdiction and the "source" jurisdiction are similar in nature and scale. A city that has nearly solved its homeless problem with a service-rich mix of supportive housing and solicitous outreach (e.g., Philadelphia) may or may not be a source of good ideas for a city with a problem that is four or five times as large per capita and a physical climate that is very mild and therefore attractive to homeless people (e.g., San Francisco). You may discover that although the source's ideas are very good indeed, they will need to be adapted to the target jurisdiction's particular context. (For more on how to deal with this "extrapolation problem," see Part III, "'Smart (Best) Practices' Research.")

Start wisely. Your initial step is important, for the design process is somewhat "path dependent." That is, you may see, or not see, relationships and possibilities differently depending on when and how in the trial-and-error process you come upon them. For better or worse, there are several different ways to choose a first step. Hunch and experience are probably more important in making this choice than any strictly logical or analytic guidance of which I am aware. Consider the following possibilities:

- *Start with the least flexible design element.* In our mass transit example, you might assume that budget constraints on the purchase of new rolling stock foreclose a large number of design options.

- *Start with the most "powerful" design element.* By *powerful,* I mean that the element, once chosen and its likely value assumed, strongly suggests the next most important element to consider. Once those two elements are chosen, the rest more or less "naturally" fall into place. To do this, you need a realistic theory of cause-and-effect that, to some extent, links the various elements. Although a perfect theory is probably lacking, some rough guesses can usually suffice. In the mass transit case, I would guess that supplying disincentives to single-occupancy auto use, in the form of tolls or congestion fees, would probably be the best place to begin, the theory being that mass transit use depends on making private autos a comparatively less desirable mode of transportation. That theory could also suggest making mass transit more attractive, perhaps by decreasing fares. But my own hunch is to start with disincentives to auto use, which I suspect would be more powerful than making mass transit marginally more attractive. Of course, on inspection, the opportunities for increasing the costs of auto use in targeted routes might be too few to make much difference.
- *Start with the most robust element.* Since there is always a possibility that the complete, and ideal, system will never come into being—politics and budgets being volatile and uncertain—it might be a good idea to put something in place that would be socially valuable all by itself. This might, for instance, be some sort of limited set of elements (a subsystem, one might say) involving discounted bus passes for employees of large traffic generators.
- *Start with the most transitory, and least costly, element.* I am thinking here of grant-in-aid windfalls that typically come from a higher level of government and that might, by design or by accident, disappear in a year or two.

Check your assumptions as you proceed. The trial-and-error process requires, first, creative imagination and, second, rigorous evaluation of what creative imagination comes up with. The most commonly applied evaluative procedure is to generate what are known as "logic models." This involves spelling out in some detail, and often with the help of graphic aids, how the emerging system is supposed to work. Presently, a leading

source of ideas about how to do this is the W.W. Kellogg Foundation "Logic Model Development Guide," (available online at www.wkkf.org). The Kellogg Foundation's approach is to divide the planned program or, in my language, *system* into six parts: resources/inputs, activities, outputs, outcomes, and impact. The modeler is supposed to fill in the details in each category and to specify the assumed relationships. In general, this approach assumes a production model, in which services of some kind are being delivered to a recipient population by a governmental or nonprofit organization. The model can be applied to nonproduction systems too, for example, regulatory systems, provided one is creative enough with filling in the "activities" section, which works as a catch-all for the complexity of relationships among system elements.

Another, very similar, approach, designed explicitly for service systems, is "service blueprinting." It goes somewhat beyond logic models in that it also asks the modeler to specify assumptions about "offstage" and back-office support functions.[9]

Design problems usually have two stages. These stages are (1) design the system as it is projected to run in its steady state, and (2) plan the strategy of change that would take us from here to there. The first stage is predominantly technical; the second, predominantly political and bureaucratic.

Designing a case processing system. Design problems are generally of two types. One involves the management of "cases," by which I mean individuals or other entities (such as firms or communities or lower levels of government) that receive some kind of "treatment." The treatment may involve delivery of a subsidy, regulatory imposition of obligations, or application of some sort of person-changing regime (such as educating children or getting offenders to "go straight"). The second principal type of design problem involves operating on a collectivity of some kind rather than on individual cases—for example, improving traffic flow, eliminating corruption in the police department, preserving habitat, or launching a community clean-up campaign.

9. A good source of information about this approach is Bitner, Ostrom, and Morgan (2008).

The second type is too varied to discuss here, but a program that manages cases fits a rough template. That is, we can lay out a general procedure and list questions that should be asked.

I use the term *program* deliberately, to refer to an organized ensemble of routines. For instance, a program to distribute subsidies has routines for determining eligibility, calculating the amount to be paid, and detecting and deterring fraud and abuse. A regulatory program has routines for enforcing compliance with its rules, including inspection procedures and formulas for applying sanctions. It may also have routines for adopting rules, giving technical assistance to regulated parties, and offering forbearance in exchange for more efforts to cooperate. In a person-changing program, the routines typically bring the subjects into a setting where change is to be rewarded, facilitated, induced, or demanded, and where professionals apply a whole kit of tools to the change process. Think of schoolchildren, classrooms, and teachers; or of patients, hospitals, and doctors; or of welfare recipients, training programs, and caseworkers and trainers.

The logic model and service blueprint approaches can work for these types of programs, but each approach needs to be amplified to take account of two design levels, the individual and the population. Presumably, the analysis has to be done for each of these two levels separately. For instance, in a weatherization program, design issues at the individual case level might involve rules covering eligibility, what sort of weatherization measures to use in a particular type of dwelling unit, copayments (if any) that the agency charges the customer, and what sort of guarantees (if any) to provide the customer regarding performance. At the population level, another set of design issues intrudes, such as which type of customers to target, how to allocate weatherization-counselor time among target groups, whether to manage counselors by geographical districts or by types of functional expertise, how to handle customer complaints, and the like.

In confronting the inevitable design trade-offs at the individual level, it helps to look at any set of routines from two perspectives: that of the case manager in the agency and that of the citizen whose case is being "treated." It often happens that routines designed to make life easier for program staff only make life harder for citizens. ("Sorry, we don't give advice about that; send in the application and we'll respond . . . .")

It also helps to remember occasionally to go back to basics, to reiterate to yourself and others the main objective of the program. What social problem is supposed to be ameliorated? Or what existing program is to be redesigned to accomplish what objective better? Doing so presents an opportunity to think also about an often-neglected but very important design issue of a more instrumental kind: what evidence will you systematically collect in the course of normal program operations that can let program managers know whether they are succeeding? That is, what tracking and evaluation routines can be designed and put in place?

Another common set of design issues revolves around making adjustments—sometimes large, sometimes small—in an existing organization or interorganizational network, so as to improve performance. Space precludes discussion here of this vast set of topics, but Appendix C, "Understanding Public and Nonprofit Institutions," provides a menu of questions that any analyst of organizational performance issues ought in most cases to consider.

A little help from your friends—and enemies, too. In some cases, the policy analyst works on the design problem more or less alone, like some brooding master architect. More likely, she does her work in loose or tight conjunction with other policy professionals who bring to the table different sorts of expertise (e.g., legal, engineering, fiscal) and who bring different viewpoints and priorities, as well. In any case, sooner or later, the design work will be held out for much more public view. Interested stakeholders, and perhaps more diverse audiences, who have previously been unaware of the design work going on seemingly behind the scenes, will see what you're up to. And they will offer their reactions.

You will want to use such reactions for two purposes: to improve your design according to criteria that you and your client—and very likely your audiences—think are important, including the criterion of political feasibility; and to respond in such a way as to increase the political support (and decrease the opposition) that may come your way, now or later, on process grounds alone. I do not discuss here the strategy and tactics involved in communicating effectively with different audiences or the sequence in which to do so. I limit discussion to the questions of just how rough or polished the design should be that you first subject to relatively public review and comment and how tentatively you should put it forward.

Not surprisingly, a middle ground is best. A very rough and admittedly tentative design may leave out important points, creating a sort of vacuum that outside interests will rush to fill on their own terms. You will then be forced onto the defensive, as you try to forestall the solution they have been first to suggest. Moreover, a very rough design may signal that the design work is at such a preliminary stage that it is not worth the trouble (or the risk of early-mover vulnerability) for any of the stakeholders to react at all. On the other hand, an overly polished and seemingly definitive design may signal to stakeholders that you are not interested in consulting them. In that case, they may feel that they have no choice but to oppose your design more vehemently than they otherwise might have done—unless, of course, they conclude that they have no choice but to get on board and negotiate for the best terms they can manage.

Assuming that you have put out a rough-but-not-too-rough design and elicited a range of fairly thoughtful opinions as a result, you will need ways to keep in touch with the variety of actors who now expect—and whom you may wish—to be part of an ongoing, if rather diffuse, design process. Keeping in touch will require a communications infrastructure (telephone, fax machine, e-mail, chat room), of course. It will also require efforts on your part to develop the sort of network relationships that permit rapid and reasonably trustworthy interpersonal communications.

At a more analytic level—because any design must be anchored in working assumptions about its objectives, available resources, and constraints—you should choose your assumptions with an eye to their reasonableness as "a basis for further discussion." You may feel some discomfort at putting forward such assumptions because they are hypothetical or speculative, and because critics might therefore challenge them as "lacking in rigor." Policy analysis is not just an exercise in truth-telling, however. It is a pragmatic and responsible effort to facilitate reasonable discourse about a policy future that is inherently uncertain.

STEP FOUR: SELECT THE CRITERIA

It helps to think of any policy story (see Step Eight) as having two interconnected but separable plotlines, the analytic and the evaluative. The first is all about facts and disinterested projections of consequences, whereas the second is all about value judgments. Ideally, all analytically

sophisticated and open-minded persons can agree, more or less, on the rights and wrongs in the analytic plotline and on the nature of its residual uncertainties. But this is not true with regard to the evaluative plotline—where we expect subjectivity and social philosophy to have freer play. The analytic plotline will reason about whether X, Y, or Z is likely to happen, but it is in the evaluative plotline that we learn whether we think X or Y or Z is good or bad for the world.

This fourth step in the Eightfold Path belongs primarily, though not exclusively, to the evaluative plotline. It is the most important step for introducing values and philosophy into the policy analysis, because some possible "criteria" are evaluative standards used to judge the goodness of the projected policy outcomes that are associated with each of the alternatives.

Of course, the most important evaluative criterion is whether or not the projected outcome will solve the policy problem to an acceptable degree. But this is only the beginning. After all, any course of action is likely to affect the world in many ways, some desired and some not. Each of those effects—or projected outcomes, to apply our Eightfold Path language—requires a judgment on our part as to whether or not and why it is thought desirable. Our set of criteria embodies such judgments. Because any significant impact cries out for such a judgment to be made, the greater the variety of significant impacts, the richer will be the set of evaluative criteria needed to deal with them.

Semantic Tip Evaluative criteria are not used to judge the *alternatives,* or at least not directly. They are to be applied to the projected *outcomes.* It is easy to get confused about this point—and to get the analysis very tangled as a result. This confusion is encouraged by a commonsense way of speaking: "Alternative A looks to be the best; therefore, let's proceed with it." But this phrasing ignores a very important step. The complete formulation is "Alternative A will very probably lead to Outcome O_A, which we judge to be the best of the possible outcomes; therefore, we judge Alternative A to be the best." Applying criteria to the evaluation of outcomes and not of alternatives makes it possible to remember that we might like O_A a great deal even if, because we lack sufficient confidence that A will actually lead to O_A, we decide not to choose Alternative A after

all. With that judgment on the table, it will be possible to look for other alternatives with a greater likelihood of producing O_A.

Commonly Used Evaluative Criteria

Efficiency. Typically, the efficiency criterion is the most important evaluative consideration in cost-effectiveness and benefit-cost studies. I use *efficiency* more or less as the term is used in economics, for maximizing the aggregate of individuals' welfare as that welfare would be construed by the individuals themselves—in economic jargon, "Maximize the sum of individual utilities," or "Maximize net benefits." Another roughly equivalent formulation would be "Maximize the public interest."

Although *efficiency* has an antiseptic, technocratic, and elitist ring to it, the insistence here that "utilities" are to be assessed according to individual citizens' construction of their own welfare is thoroughly democratic. Indeed, siding with efficiency—on average, across most policy issues and policy decisions—is a way to produce more humanistic policy results, too. The reason is not that efficiency is so very humane a concept in itself, but that policy decisions failing to consider efficiency very often fail to take account of the welfare of the little guy at all. The little guy may be little, but in a proper efficiency analysis, he at least shows up to be counted. Efficiency analysis imposes a moral check (for whatever that is worth in the real world of politics) on political visionaries eager to relocate entire populations so as to make room for dams, and on special interests eager to impose seemingly small price increases on large numbers of consumers through protectionist measures in order to maintain the incomes of a relatively small number of producers.

We should observe, though, that from the point of view of social justice, the efficiency criterion may be somewhat limited. First, because analysts typically estimate people's "utility" by inferring their willingness to pay for some benefit (or to be spared some deprivation), individuals with less money do not, in an analytic sense, have as much clout as those with more. Just how big a limitation this analytic anti-egalitarianism turns out to be will depend on particular cases, however. Second, if the values at stake have few or no human defenders, and therefore no human pocketbooks to back an estimate of willingness to pay, the efficiency criterion may underestimate these values even if by some conception of

justice they ought to be weighted heavily. In theory, ecological values are the main example, although in fact some ecological values do have human defenders who derive enormous utility from preserving them—a utility that would be accounted for in a proper efficiency analysis.

Although cost-effectiveness analysis and benefit-cost analysis sound alike and are frequent traveling companions, they are not the same, and their uses can be quite different. True, both construe the policy problem as involving some production relationship between resources and objective(s). And both entail thinking about the relationship by using an economizing lens. However, cost-effectiveness analysis is usually satisfied to assess only the nature and quantity of the desired outputs, whereas benefit-cost analysis goes a further step and tries to estimate a value for those outputs in some fashion, typically in terms of money or (rarely) actual utility. Because it is less ambitious, the cost-effectiveness approach is more common in policy analysis than is the benefit-cost approach. Indeed, a surprisingly large number of policy issues can be simplified and stylized as cost-effectiveness problems, even though on the surface they may not appear to be likely candidates at all for this sort of treatment. Here are two examples:

- The Mudville mayor wishes to respond to business complaints that building permits "take forever" to obtain. Given that you can spend no more than $500 and are permitted to change the work flow in the city planning office but not personnel assignments, the cost-effectiveness framework might suggest minimizing delay (measured in days) arising from purely procedural and bureaucratic sources.
- Quake City must upgrade the seismic safety of several thousand buildings constructed of unreinforced masonry. You have a twenty-year time span and no immediate budget constraint, but you wish to accomplish the job with minimum disruption to the lives (and incomes) of the residents and small businesses that may be displaced temporarily by the building renovation process. To minimize such disruption, cost-effectiveness analysis might lead you to propose that the work be done in one season rather than another, or that not all grocery stores be closed at once, or that tenants be assisted in organizing mutual-aid groups.

Relative to the benefit-cost approach, a cost-effectiveness framework typically simplifies policy analysis in another useful way, as well: it assumes as *fixed* either resources or outputs, and focuses only on choices involving the other member of this pair. Fixed resources usually involve a money budget or a human or physical asset such as a work team or a set of hospital beds. A fixed output is generally a target of some kind, such as a minimum required pollution abatement level or a maximum acceptable proportion of children failing an achievement test. Analysis then involves finding the best means to manipulate the other member of the cost-effectiveness pair so as to improve productive efficiency. Colloquially, if resources are fixed, you are "getting the biggest bang for the buck," or if you have a fixed target, you may be "doing no worse with less."

Now suppose that, once you have figured out some approach whereby you can do no worse with less, you want to broaden your inquiry to explore whether you can make use of this new and better approach to produce a little more than you had originally planned. That is, instead of assuming that either resources or outputs are fixed, you are prepared to allow the scale of the activity to increase. The analytic challenge is much more difficult now, because at this point you cannot avoid the question of whether the augmented output "is worth it," given the envisioned cost increment. That question cannot be answered unless you compare the utilities of *both* the cost increment and the augmented output. That is, cost-effectiveness analysis must now rise to the level of benefit-cost analysis.

Here is an example of a 1995 RAND Corporation cost-effectiveness analysis—concerning crime prevention strategies aimed at juveniles—that tried, rather convincingly, to stretch its way into a benefit-cost analysis without quite admitting it. The study compared the cost-effectiveness of four "early intervention" strategies to that of incarceration under California's "three-strikes" law and found that at least two of them were very likely superior. It then reasoned:

> *It might be inferred from California's vote in favor of the three-strikes law that the public believes a 21 percent reduction in crime [RAND's estimate from an earlier study] is worth the measure's cost of $5.5 billion a year. For less than an additional*

> *billion dollars, graduation incentives and parent training could roughly double that crime reduction, if they are as effective as our analysis suggests.*[10]

Equality, equity, fairness, justice. There are, of course, a great many different, and often opposed, ideas about what these terms do, or should, mean. In addition to thinking hard about these ideas yourself, sometimes you should also take your audience through some of that thinking, as in the following examples:

- Drivers who do not carry liability insurance leave persons whom they injure in auto accidents at risk of being undercompensated. Many of those who "go bare" are relatively poor. Many other drivers purchase their own insurance against exactly this risk ("uninsured-motorist coverage"). A policy proposal to pay for all drivers' liability insurance out of a fund created by surcharges at the fuel pump was denounced by some observers as "inequitable" to the poor, who were going bare of insurance. Other observers said that those who go bare impose inequitable premium expenses or risks of undercompensation on the rest of society, including many individuals who are themselves poor or not very well off. Clearly, the analyst needs to include a discussion of the idea of equity.
- The current debate over whether to retain affirmative action preferences for African Americans and certain other minorities in university admissions is sometimes said to pit fairness to individuals against justice to social groups. This is odd, though, since some philosophers—and most ordinary folk, too—suppose that no system claiming to be just could contain any features deemed unfair. Again, the analyst has a job to do in sorting out ideas and language.

Freedom, community, and other ideas. To stimulate thought, here is a (far from complete) list of more ideas of possible relevance as evaluative criteria: free markets, economic freedom, capitalism, "freedom from government control," equality before the law, equality of opportunity, equality of

10. See Greenwood et al. 1995.

result, free speech, religious freedom, privacy, safety (especially from chemicals, various environmental hazards, and the like), neighborliness, community, sense of belonging, order, security, absence of fear, traditional family structure, egalitarian family structure, empowerment of workers, maintenance of a viable nonprofit sector, voluntarism, and trust in others.

Process values. American democracy values process and procedure—that is, having a say in policy issues that affect you, rationality, openness and accessibility, transparency, fairness, nonarbitrariness—as well as substance. These considerations probably apply to the very design or decision process for which you are doing your present analytic work. Therefore, remember to consult broadly and equitably. In addition to building up legitimacy for your work, you may be surprised at how much you can learn, especially from people who are very unlike yourself socially or ideologically. This does not, of course, mean that you should in the end accord equal deference to all opinions or desires, or keep the consultative process open forever. Some opinions are more creditable than others, and at some point consultation must give way to decision.

Do not make the mistake of thinking that "more participation" or "greater access to the process" necessarily equates to "more democratic" or "more rational." Greater opportunities for participation may be exploited more heavily by those with more time to participate or by those with special interests to protect or by ideological zealots. Ordinary people and their ordinary concerns can come out as relative losers.

Weighting Conflicting Evaluative Criteria

As we saw in the case of defining the problem, when values are at issue—as they are in regard to criterion selection, as well—we must reckon how to weight opposing values. There are three general approaches to this problem.

The political process takes care of it. One approach is simply to allow existing governmental and political processes to determine the weighting. Typically, this approach will accord primacy to the analyst's employer or client, as well as allowing derivative influence to be exercised by those parties in the relevant arena who are in turn important to the employer or client.

The analyst imposes a solution. A second approach is for the analyst herself to modify—though not replace—the weighting assigned by the employer or client by reference to some overarching philosophical or political conception. The justification usually offered for this approach is that because certain interests, and perhaps philosophies, are typically "underrepresented" in government and politics, and because the analyst is in a better position than most other participants in the process to see or understand or appreciate this problem of underrepresentation, the analyst is duty-bound, or at least permitted, in the name of fairness and democracy, to right the balance.

For instance, some observers would argue that were it not for policy analysts, efficiency-related criteria would rarely be heeded and that, as a consequence, analysts should in effect speak up for the taxpayers whose interests may be squeezed out by better-organized advocacy groups. A related argument is sometimes made that certain conceptions of equity—in particular those having to do with the idea that the beneficiaries of publicly provided goods or services should pay for them—are underrepresented except among policy analysts. (These conceptions of equity typically exclude public expenditures deliberately intended to redistribute wealth among citizens.) Other interests that people sometimes claim are underrepresented and therefore need representation by analysts are future generations, children, people who live outside the jurisdiction making the decisions, ethnic and racial minorities, women, the poor, consumers, and animals and plants (ecological entities).

A variant of this approach introduces the idea of an educational process. Depending on circumstances, the analyst might encourage influential political actors—perhaps including the analyst's boss or principal client—to rethink their existing criteria in the light of facts or arguments the analyst can draw to their attention. In this case, the analyst takes responsibility for opening up a dialogue, and perhaps for trying to infuse it with reason and insight, but then allows the political process to take over.

The distribution of "rights" precludes some solutions and forwards others. If X has a recognized property "right," you can't easily override it just because your policy solution would find that convenient; and if

Y has a "right" to privacy, you might be inclined to tilt the weighting of criteria heavily in that direction. Generally, claims based on rights are a reasonable guide to choosing "better" policies, and rights-based criteria deserve some extra weighting. However, plenty of exceptions exist, and it pays to examine, briefly, the whole matter of where rights come from and how policy analysis can make good use of them. This is a controversial matter, of course, and my thoughts on the matter are certainly contestable.

Typically, rights are specially protected claims of an individual or a group against encroachment by "others," including society as a whole, though in some cases it is society that claims the rights against component groups or individuals. Sometimes rights are long-standing, well established, consensual, and, within our social context, unquestioned, as in "X has a right to be treated with dignity, irrespective of X's economic condition." In these cases, the pattern of rights claims, hedged and limited though they might be, very likely is found to be a good self-help tool for organizing the many and varied interactions in a complex society. But rights are sometimes more emergent than established, and claims based on rights can be quite contentious or in conflict: "I have a right to use my cell phone in any place, private or public" versus "I have a right not to be disturbed by your loud and obnoxious cell phone conversation, thank you very much."

It is best to think of *all* rights claims as emerging from a social process of trial-and-error and contestation, with the ones that seem obviously legitimate to us being merely the (so-far) best established and (probably) most socially beneficial. Claims that particular rights are justified by nature or "divine will" or reason or "our common humanity" are simply rhetoric, because these justifications are always challenged by others. Over the centuries through which these debates have continued, no permanent resolution has occurred, and I think will never occur, since "rights" are simply convenient tools of social organization and rights-based claims, a consensually accepted way of negotiating the changing landscape of whose interests should be protected to what degree and with what exceptions.

From the point of view of a hypothetical social engineer trying to improve social welfare, some rights should certainly be treated as relatively

fundamental. If the moral realm were the legal realm, these rights would be considered constitutional. But, like the Constitution, even fundamental rights, such as "the right to privacy" or "the right to control your own body," should evolve to fit new social and technological conditions. Technological change raises questions of privacy and transparency (e.g., confidentiality and fairness), and the past structure of rights is not necessarily a good guide to how to redesign that structure for the emergent situation. A fortiori, this applies to matters of lesser moment—where it is easier to see that rights are constructed rather than found. Forcing others to listen to your cell phone conversation may or may not be a right we wish to create and honor, but it is surely novel, and needs to be settled by reference not to reason and the like but rather to the balancing of utilities in a strictly pragmatic fashion. The same applies to compensation for takings, decent health care, privacy, abortion, and a host of other matters that now or in the recent past have been subject to debate over who ought to have what sort of highly protected positions that we dignify and crystallize as rights.

Please do not misunderstand this as an argument in favor of relativism, which in many people's usage is the same as saying that there is no choosing among different rights claims, that one is as good as another. That is not true. Certainly, allowing people to claim a high level of protection for (i.e., a right to) certain values—such as individual autonomy—is beneficial to the running of a modern democratic society. But this right sometimes needs to have exceptions carved out of it to accommodate cases when the exercise of this right imposes excessively on other people. The fine texture of the fabric of such rights is always subject to discussion, and the basis for making these decisions is not to be found in rhetoric or in philosophical speculation but in the analysis of alternative fabrics, each taken as a whole and including all the internal tensions that are bound to be included in them. The evolution of rights in the moral realm—that is, in the realm of private practice and thence public opinion formation—involves the sort of constant tinkering and adjustment we see in the realm of both statutory and judge-made law.

In the end, therefore, claims to weight criteria by reference to which rights ought or ought not to take priority deserve to be treated critically.

Semantic Tip Note, however, that rights alleged to be "natural" or "human" are conceptually quite different from legal rights, despite the semantic similarity. Examples are the conflicting abortion stances predicated on right-to-life values or a woman's right to control her own body. Alleged natural or human rights are sometimes controversial in that some people would like to have them recognized as legal prescriptions whereas others would oppose such recognition.

Commonly Used Practical Criteria

Not all criteria that come into play in an analysis are part of the evaluative plotline. Some are purely practical and are part of the analytic plotline. These criteria have to do with what happens to an alternative as it moves through the policy adoption and policy implementation processes.[11] The main ones are legality, political acceptability, robustness under conditions of administrative implementation, and improvability.

Legality. A feasible policy must not violate constitutional, statutory, or common law rights. Remember, however, that legal rights are constantly changing and are often ambiguous. It is sometimes worth taking a gamble on a policy that might—or might not—be adjudged illegal when tested in court. (In such cases, advice of counsel is clearly in order to help craft the policy so that its survival chances are enhanced.)

Political acceptability. A feasible policy must be politically acceptable, or at least not unacceptable. Political unacceptability is a combination of two conditions: too much opposition (which may be wide or intense or both) and/or too little support (which may be insufficiently broad or insufficiently intense or both).

Do not take a static view of unacceptability, however. Always ask yourself the question "If my favorite policy solution doesn't look acceptable under current conditions, what would it take to change those conditions?"

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11. I said earlier that criteria apply to outcomes and not to alternatives. However, this statement needs a slight amendment in the case of practical criteria, which apply not to outcomes but to the prospects an alternative faces as it goes through the policy adoption and implementation processes.

You may discover that creative political strategizing can open up options that haven't been seriously considered before. (Discussion of techniques for building coalitions and launching successful campaigns is far beyond the scope of this book, but Appendix D, "Strategic Advice on the Dynamics of Political Support," sketches some of the basics.)

In assessing strategic limitations and possibilities, it will help to make use of various models of the political process. As I observed earlier, models are based on metaphors, and the ones that are likely to be most valuable, in this case are these:

- A complex game in which well-organized and well-positioned minorities enjoy special advantages
- A theater, in which the actors are elected officials who strive, with or without a basis in reality, to create a good appearance—to themselves, to each other, to the critics, and to the audience (whose approval, ultimately, is all-important)
- A marketplace of slogans, symbols, and ideas, with a mix of honorable merchants and hucksters as sellers and a mix of sophisticates and innocents as buyers
- A school in which elected officials learn how to do good policy design work and sometimes share their results and their methods with their classmates

How exactly is one to make use of such models? Think of them as conceptual lenses. Observe the relevant political process through each of them in turn, and identify the probable pitfalls and opportunities brought into focus by each.[12]

Robustness and improvability. Policy ideas that sound great in theory often fail under conditions of field implementation. The implementation process has a life of its own. It is acted out through large and inflexible administrative systems and is distorted by bureaucratic interests. Policies that emerge in practice can diverge, even substantially, from policies as designed and adopted. A policy alternative, therefore, should be robust

12. An analogous procedure was first given prominence by Graham Allison (1971).

enough that even if the implementation process does not go very smoothly, the policy outcomes will still prove to be satisfactory.[13]

Some adverse implementation outcomes usually worth worrying about are long delays; capture of program or policy benefits by a relatively undeserving and unintended constituency; excessive budgetary or administrative costs; scandal from fraud, waste, and abuse that undermines political support and embarrasses supporters; and administrative complexities that leave citizens (and program managers) uncertain as to what benefits are available or what regulations must be complied with.

Even the best policy planners cannot get all the details right at the design stage. They should therefore allow room for policy implementers to improve on the original design. The most common vehicle for such improvement is participation in the implementation process by individuals and groups whose expertise or point of view was not included in the design phase. However, the openness that makes for improvability can also, by opening the door to hostile political interests, diminish robustness. Hence, a careful evaluation of the current factual situation—personalities, institutional demands and incentives, political vulnerabilities, and so on—is usually in order.

In estimating robustness and improvability, models of bureaucracy can serve as useful conceptual lenses, as suggested earlier with regard to carrying out political analysis. I find the most useful metaphors for bureaucracy to be these, listed in no particular order:

- An automaton enacting preprogrammed routines ("standard operating procedures," or "SOPs")
- A person in an environment, driven by survival needs, self-enhancement interests, and, under some conditions, a desire for self-actualization
- A political arena wherein individuals and factions jockey for influence over the organization's mission, access to its decision systems, and its prerequisites

13. Robustness under conditions of "deep uncertainty" is sometimes a preeminently important criterion—for example, for long-term and very risky problems such as global climate change or shifts in the technical and organizational capacity of terrorist movements and cells (Lempert, Popper, and Bankes 2003).

- A tribe with its own rituals and an array of safeguards against contamination by "outsiders"
- A society of individuals cooperating toward a more-or-less common set of goals
- A structure of roles and interrelationships that are intended to complement one another in a rational division of labor
- An instrument used by "society" for society's own objectives

"Criteria" as Logical Constructs

Criteria such as efficiency, equity, political acceptability, and robustness are substantive. But we can think of criteria of a purely formal sort, as well. For instance, we can distinguish among criterion values that we wish to maximize, those that must be minimally satisfied, and those of a generally lesser priority for which "more is better."

It is helpful to focus initially on one primary criterion, a *principal objective to be maximized* (or minimized). Typically, this principal objective will be the obverse of your problem definition. For instance, if your problem is that too many families are homeless, then your principal objective will probably be to minimize the number of homeless families. If the problem is that global temperatures are rising too rapidly, a good statement of a principal objective might be, "Minimize or reverse the increase of global temperatures." Naturally, there are other criteria to judge outcomes by, such as costliness, political acceptability, and economic justice, and these should all enter into the final evaluation. However, unless you focus—initially, at least—on a single primary criterion and array others around it, you will likely find yourself getting very confused. As you get deeper into the analysis and feel more comfortable with a multiplicity of important objectives, you may wish to drop your emphasis on a primary criterion and work on a more complex "objective function," in the language of mathematical programming.

Linear programming. A mathematical (and now computer-accessible) technique for optimizing choice when you have a principal objective or an objective function and a scarce stock of resources for maximizing it

is called "linear programming."[14] Often, at least some of the resources—such as the agency budget and the available physical facilities promised by a nonprofit agency—are constrained. Even if the problem is not subject to simple quantitative assessment, analysts often find it useful to take advantage of the logical structure of linear programming to conceptualize their task. The conventional formulation then sounds like this: maximize this objective (or objective function) subject to such-and-such resource constraints.

Here is an example from the homelessness problem: "maximize the number of homeless individuals housed on any given night, subject to the constraints of not exceeding $50,000 per night total budgetary cost to Agency X, not putting shelters into Neighborhoods A and B for political reasons, and trying to give 'more' choice to the beneficiary population as to where they will take shelter."

Semantic Tip ***Linguistic clarity.*** If it is possible to sort your criteria according to whether they refer to values to be maximized, values that stand as constraints, or values that have a more-is-better quality, keep the different statuses of the criteria in mind. Be conscious of them. You can do this with a simple verbal trick: as appropriate, define your criteria as "maximize such-and-such value," "satisfy such-and-such value constraint," or "get more of such-and-such value." If your criterion label contains no signal as to the better direction to move in, as in "governance structure" or "effect on landlords," it is almost certainly insufficient.

In any case, to the extent possible the criteria should be characterized both in conceptual and in operational (typically quantitative) terms. Conceptually, for instance, one talks about "maximizing the reduction of greenhouse gas emissions from publicly owned buildings," whereas operationally, one talks about "Minimizing the tons of greenhouse gas emissions per month from publicly owned buildings." In this case, the operational definition is a close proxy for the more qualitative conceptual definition. Frequently, however, something of a gap exists, since what is measurable may only imperfectly reflect the conceptual characterization. For

14. See Stokey and Zeckhauser (1978, chap. 11).

instance, minimizing "the hassle factor" to the citizen in recycling his garbage is conceptually meaningful but hard to express quantitatively. It is really about the psychology of effort, the degree of belief in the desirability of the goal, and the degree of frustration involved in preparing one's garbage for pickup. In this case, the best you could probably manage operationally would be to estimate the number of minutes the citizen spends per week to cooperate in the enterprise.

To the extent possible, group your criteria in such a way that all the "positive" (benefit) criteria are clustered separately from the "negative" (typically, cost plus avoidance of negative unintended consequences) criteria. In a logical sense, how one does this does not really matter. But it makes for easier reading and discussion. It is a little like arranging your bridge hand by suit and, within suits, by number sequence.

Don't embrace euphemisms or other dodges as a substitute for words that describe harsh realities. The client for one student project asked for advice on what adult school programs to cut in order to save money in financially desperate circumstances. The students initially put together a brief defending adult school programming in general, at best leaving to inference what elements of the bundle were most deserving of cuts.

Avoid Confusing Alternatives and Criteria

Semantic Tip *Alternatives* are courses of action, whereas *criteria* are mental standards for evaluating the results of action. How could you ever mistake an alternative for a criterion, or vice versa? As with many instances of confusion in policy analysis, the source of such a mistake is likely to be semantic. Consider, for example, a senior manager in a state regulatory agency dealing with worker safety. She wishes to incorporate worker complaints into the agency's strategy for targeting inspections across work sites in the state. Her assistant presents her with a number of alternatives for doing so, one of which is called "Rapid-response (twenty-four-hour maximum) hotline." Not surprisingly, one of the criteria for assessing outcomes is "responsiveness." The alternative therefore seems a lot like the criterion. But this is an illusion. The alternative (course of action) is really the hotline. The main reason it looks like a criterion is that the *intention* of "rapid-response" has crept into the definition of the

alternative.[15] This is a dangerous mistake, because one should not assume through definition that an intention, as expressed in the verbal characterization of the alternative, will actually be realized.

This sort of confusion is most likely to arise when the internal activities of an organization are under discussion, since proposals to create or modify organizational units resonate with intentionality. Consider a proposal to create a performance measurement office, a strategic planning team, and a customer service department. The performance measurement office may end up, for whatever reasons, using meaningless measures collected by unreliable agents; the strategic planning team may be deliberately ignored by savvy or possibly unsavvy managers; and the customer service department may unintentionally end up as an instrument of customer alienation. I once questioned a student's proposal to create a "drug counseling service" for employees within an organization. The proposal seemed to me too weak to make a dent in the organization's problem. The student countered, "No, I'm not talking about any old counseling service that might attack this problem, but an 'effective' one." Nothing in the student's account of how the service was to work increased the odds that it might really be effective. Effectiveness was assumed simply because the student wished to assume it.

STEP FIVE: PROJECT THE OUTCOMES

For each of the alternatives on your current list, project all the outcomes (or impacts) that you or other interested parties might reasonably care about. This is the hardest step in the Eightfold Path. Even veteran policy analysts do not usually do it very well. Not surprisingly, analysts often duck it entirely, disguising their omission by a variety of subterfuges. Hence, the most important advice about this step is simple: do it.

At least three great practical as well as psychological difficulties must be confronted here. First, "policy" is about the future, not about the past or the present, but we can never be certain about how the future will unfold, even if we engage it with the best of intentions and the most thoughtful of policy designs.

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15. Also, in this case, the stem *respons-* appears in both alternative and criterion.

Second, "project the outcomes" is another way of saying, "Be realistic." Yet realism is often uncomfortable. Most people prefer optimism. Policy can affect people's lives, fortunes, and sacred honor, for better or for worse. Making policy, therefore, imposes a moral burden heavier than many people care to acknowledge. Understandably, we would rather believe that our preferred or recommended policy alternative will accomplish what we hope and that it will impose fewer costs than we might realistically fear.

Third, there is what is sometimes called "the 51–49 principle." That is, in the thick of the policy fray, we are driven out of pure self-defense to treat 51 percent confidence in our projection as though it deserved 100 percent confidence, so that we sometimes mislead not only others but ourselves as well. The first difficulty—namely, that we can never have wholly convincing evidence about the future—compounds the second and third, inasmuch as our wishful thinking is not readily disciplined by reference to empirical demonstrations and proofs.

These psychological difficulties notwithstanding, systematic efforts to project outcomes are essential. For policymakers in a modern democracy, neither following gut instincts nor reading pigeon entrails is a responsible alternative.

Extend the Logic of Projection

In this section I discuss, in a very general way, the logic of combining models and evidence to produce usable projections of policy outcomes from the various alternatives being considered. The logic is largely that of common sense but with some important additions.

The first addition is that of metaphor. Policy analysis, as we have seen, makes use of the metaphors behind the models—metaphors such as "bureaucracy as automaton" and "politics as theater" and "this piece of the world as production system"—to yield qualitative insights about important causal relationships. The especially important relationships are those that may afford useful intervention points in complex systems or that present potential pitfalls in the policy adoption or implementation process.

Second, policy analysis uses social science to the degree that it can. A great deal of social science is directed toward answering the question "Is

Model X of this piece of the world realistic?" Social scientific studies of this type can often be useful for diagnosing the existence of problems, mapping trends, and deciding whether some seemingly "smart" practice (see Part III) is worth trying to replicate. You should be careful, however, to avoid using the social scientific standard of adequacy for judgments about the realism of a model, for it is quite conservative. In policy analysis the looser, but more appropriate, standard should be whether reliance on a model can lead to better results and avoid worse results than less disciplined guesswork.

Third, policy analysis, as we have seen, uses multiple models. Most social science, in imitation of the hard sciences, looks for the "best" model (or, in the case of some practitioners, the "true" model). Because all models abstract from reality, however, even the best models are never complete. Although such abstraction may advance the progress of science, in the world of policy, where real consequences of policy choices are to be experienced by real people, no facet of a problem or the possible alternatives to be adopted can be exempted from analysis. Whatever models *can* be employed to illuminate some important facet of the problem or of the possible outcomes *should* be employed—even if doing so results in an inelegant and ad hoc multiplication of subanalyses.

Finally, even when you have adopted adequately realistic models of sufficient number and variety, these models still need to be used in conjunction with evidence about "initial conditions," or the facts on the ground as they currently exist. For instance, "Deputy Director Smith is as incompetent as they come. The need to work around her will raise the risks of failure by at least 25 percent." Or: "The community appears very angry about the drug scene right now, and they'll almost certainly help the police in the planned crackdown." Although the projections of many models are not particularly sensitive to initial conditions, some are. These are the models that bear on projections of political acceptability and on the robustness of an alternative to the stresses of the implementation process.

Magnitude Estimates

Projecting outcomes often requires you to think not just about the general direction of an outcome but about its magnitude, as well. Typically

it's not enough to say, "We expect this program to have a very positive effect on reducing unwanted teenage pregnancies." Instead, you'd want to say, "We expect this program to reduce by 100 to 300 the number of unwanted teenage pregnancies per year in this community over the next five years."

Sometimes a single point estimate of your best guess about the degree of magnitude will suffice. But in other cases, you should provide a range.

Break-Even Estimates and the Problem of Uncertainty

"You have no evidence this will work," carp your critics. You—quite correctly—respond, "You have no evidence it won't." You are both right, because "evidence" about events that have not yet occurred is a contradiction in terms. Nevertheless, your critics make the valid point that you probably can't be very certain that your recommended policy option will work and that the *burden of justification* (not, of course, a burden of literal "proof") falls on you.[16] You will want to take up this burden using whatever strategic leverage you can muster.

This means that you will set the bar of justification as low as is reasonable. Typically, you will want to claim only that the recommended course of action is "sufficiently likely" to produce results that are good enough to justify the known costs and risks. This approach is known as "break-even" or "threshold" analysis. It is an astonishingly powerful—yet simple, intuitive, and commonsensical—conceptual lens.[17] It builds a decision framework out of what is known or reasonably assumed and handles the residual uncertainties by comparing them to elements in this more secure frame.

Suppose, for instance, that some youth-guidance-oriented policy meant to reduce incarceration of juveniles is under consideration and has known costs of $1 million, but the level of effectiveness is speculative. You build a decision frame out of (1) a decision-rule that says, "If the benefits exceed the costs, do it," and (2) a known fact about the

16. This assumes that you do make a recommendation. But even if you only lay out options and attach projected outcomes to them, you still cannot escape justifying the projections.

17. It is also, I believe, a lens that is inadequately appreciated and utilized.

costs, $1 million. You then evaluate the remaining uncertainty in these four steps:

1. Locate the point of minimum acceptable effectiveness given the costs. Ask: "What is the minimum level of effectiveness this policy would have to achieve in order to justify our spending $1 million?" Your answer: "Different observers have different opinions about how much avoiding an incarceration is worth, but leaving that aside and going with my own values, I'd say that a 15 percent reduction is the minimum I would accept given the expenditure of $1 million."[18]
2. Referring back to your model of the processes that create the problem and hold it in place, ask: "What new processes, or changes in old ones, could conceivably produce this level of effectiveness?" This is largely a qualitative analysis. The answer might be: "Based on previous documentation of how the guidance process works, we can safely say that it works in different ways with different sorts of kids—when it works at all, that is. It can provide about half the kids more constructive life choices; in about a quarter of the cases it works through heightening the (realistic) perception of punishment; and in about a quarter of cases we are just crossing our fingers."
3. Assess how likely (or unlikely) it is that the processes for improvement thus identified will actually produce the required—that is, the break-even—level of effectiveness. It is particularly helpful to ask whether the break-even level (15 percent, in this case) looks like a plausible number given what is known or assumed about the effectiveness in similar circumstances of similar sorts of interventions. If the number is implausibly high, you might then go on to ask whether special circumstances of some sort might be at work in this case to help achieve it. Note that in this and the previous step you

18. Some writers speak of "switchpoint analysis" and would refer to the 15 percent here as the switchpoint at which a decision maker would switch from a favorable view of this policy to an unfavorable view or vice versa. Others refer to "threshold analysis" and would call the 15 percent figure the threshold level of effectiveness we would need to assume in order to justify choosing this alternative.

must rely on what we might think of as "theory," or self-conscious and evidence-based reasoning about the way causal processes work. Typically, these are the weakest links in the chain of policy-analytic reasoning. That is why it is particularly important—and particularly difficult—to take this step as thoughtfully, self-critically, and responsibly as possible.

4. Estimate the probability of failure and the political and other costs of having to accept failure—asking yourself whether these costs would be tolerable should they be incurred.

In the hope that it may be helpful to encourage readers to use break-even analysis (when appropriate, of course), I offer two more examples:

- Policy X for establishing a chain of wildlife refuges looks like an excellent choice to implement a broader conservation agenda, provided that the funding comes through as planned. But it might not, because federal grant-in-aid resources may not be forthcoming, or the governor may give the policy lower priority than she now promises, or some development interests that have their eye on two of the designated sites may find a way to block it. You interview your client, a state environmental agency director, and determine that she likes the program so much that she is willing to go for it if it has at least a 50-50 chance of working out. Your analysis can then focus her attention on why, after considerable research, you have concluded that it has a somewhat better (or somewhat worse) chance than 50-50, even though you may find it impossible to specify exactly how much better (or worse).
- Building a new stadium for the Hometown Heroes looks like a good idea, given the nature of the costs and benefits, if average daily attendance turns out to be no less than 10,000. That's the break-even attendance figure for you and the relevant decision makers. It's up to them to decide, first, how confident they are that this break-even level will be reached and, then, whether that degree of confidence is enough to warrant making an affirmative decision. You can

thus organize your presentation of facts and opinions to focus on these two key issues.[19]

Semantic Tip Assuming for the moment that benefits are uncertain while costs are not, ask yourself these two questions: (1) "Given what I know for sure about the costs of this alternative, what is the minimum help we need to get from Condition X to ensure adequately offsetting benefits?" and (2) "How reasonable is it to believe that Condition X will actually produce that minimum?"

Try Sensitivity Analysis

Which uncertainties are the most important, in the sense that relatively small changes in what you believe would cause you to change your mind about how desirable some alternative might be? By a process known as sensitivity analysis, you can discover these most important uncertainties. The procedures are somewhat technical (Morgan and Henrion 1990, chap. 8), but the intuition behind them is simple. Consider the several assumptions you have made on the way to your conclusion and suppose that each of them is somewhat mistaken. Now ask yourself: "How big a mistake can I afford in this assumption before this analysis is in really big trouble?" The smaller the affordable mistake, the more sensitive is your analysis to the particular assumption. (For a good example of sensitivity analysis, see Appendix A.)

It is not hard to examine these assumptions one at a time. But what if they pile up in such a way that you are "somewhat" wrong on two or three or four assumptions all at once? This situation is typically dealt with by a technique called "Monte Carlo simulation," which begins by recognizing that each assumption is in itself probabilistic and then combines the probabilities behind the assumptions to create a new set of

19. A special case of break-even estimation is a fortiori estimation. If you hypothesize worst-case estimates of all important parameters that remain uncertain, and the policy alternative still satisfies your decision criterion, the alternative would, a fortiori, prove satisfactory even if more careful estimates were to be more favorable. In that case, the more careful estimates are unnecessary. See MacRae and Whittington (1997) on a fortiori analysis (pp. 218–219) and, more generally, on the question of precision versus approximation in projecting outcomes (pp. 209–224).

probabilities about how the combination of assumptions will turn out. You can then say something like this: "Given the many possible scenarios that might occur, there is an 82 percent chance that the actual scenario would exceed our break-even requirement."[20]

But suppose that projections must be made for a future beset by multiple uncertainties, like climate change or the global configuration of military forces and technologies twenty-five years off, for which probability distributions are not known or are controversial. One promising approach makes use of any of an emerging set of computer-assisted projection techniques, generally known as long-term policy analysis. This approach is similar to Monte Carlo simulation in that it starts with scenarios about alternative futures, but instead it searches for policy choices that would be "robust," in the sense that they would not necessarily be the best but would satisfy the whole, or nearly the whole, array of minimum policy desiderata. The objective is to minimize the maximum "regret" that relevant parties might experience.[21]

Confront the Optimism Problem

Great ventures require optimism. Because even small ventures by government can affect so many lives, they are in their own way great. Hence, some realistic optimism is beneficial. But how do you guard against excessive optimism?

Scenario writing. What scenarios might cause the proposal to fail to produce the desired outcome—that is, solving or sufficiently mitigating the policy problems? Do not create such scenarios from whole cloth; be realistic. And yet, let your imagination run a little, so that you have a good chance of thinking of the most dangerous possibilities. In particular, think about the dangers of the implementation process, political and otherwise. Scenario writing also benefits from thinking about possible

20. For further details, see Morgan and Henrion (1990, chap. 8). You can use the commercially available (and very user-friendly) Crystal Ball program to run Monte Carlo simulations.

21. Most of the work on this type of simulation has been done at the RAND Corporation. See Lempert, Popper, and Bankes (2003).

failures from a vantage point in the future looking backward. Consider the following scenarios:

- In a health or safety regulatory program, the scientific or technical knowledge necessary to produce rational and legally defensible standards may prove to be lacking. As a result, five years from now, symbolic politics, corruption, industry capture, or excessive regulatory zeal will have filled the vacuum.
- Time passes, and budgetary resources and political support that were once available slip away under the impact of electoral change and shifts in the economy. A terrorist-identification program, begun under nurturant leaders and accompanied by editorialists' applause, will have become consolidated with another program, then taken over by a different bureaucratic unit, and eventually will have disappeared.
- A successful state program designed to furnish technical assistance to extremely poor rural counties will have added a mandate to aid many not-so-poor urban counties, with the result that scarce program resources will have been dissipated and squandered. (I call this scenario "piling on"; see Bardach 1977).
- A program that subsidizes research and development of "fish protein concentrate," intended as a cheap and nutritious food additive, is launched with great fanfare. Five years from now it will have been stalled, permanently, by the U.S. Food and Drug Administration, which will not have been able to assimilate this product into its standard operating procedures for regulatory review.

Semantic Tip Notice that these scenarios are written in the future perfect tense. Use of this verb tense encourages concreteness, which is a helpful stimulant to the imagination (Weick 1979, 195–200). It often helps your scenario writing to start with a list of adverse implementation outcomes, conjuring up one or more scenarios about how each of them might occur. Remember the list of such outcomes embodied in the scenarios just described: long delays; "capture" of program or policy benefits by a relatively undeserving and unintended constituency; excessive budgetary or administrative costs; scandal arising from fraud, waste,

and abuse that undermines political support and embarrasses supporters; and administrative complexities that leave citizens (and program managers) uncertain as to what benefits are available or what regulations must be complied with.

Semantic Tip ***Undesirable side effects.*** Analysts are often cautioned to think about "unanticipated consequences." But this term is not appropriate, for it is often used to refer to perfectly anticipatable, though undesirable, side effects. Here are some common undesirable but foreseeable side effects in public programs:

- *Moral hazard* increases. That is, your policy has the effect of insulating people from the consequences of their actions. For example, increasing the size of unemployment benefits has the side effect of blunting the incentives to search for a replacement job.
- Reasonable regulation drifts toward *overregulation,* especially if the costs of overregulation are not perceptible to those who bear them. One possible adverse result of setting health or safety standards "too high" and enforcing them "too uniformly" is that you increase private-sector costs beyond some optimal level. For instance, given most people's preferences for safety, imposing auto bumper standards that cost some $25 per vehicle, but have only trivial effects on improving vehicle crashworthiness, would not pass a conventional benefit-cost test.

  A second adverse result of overregulation might be that you inadvertently cause a shift away from the regulated activity into some other activity that—perversely—is less safe or less healthful. For instance, some observers argue that overregulating the safety features of nuclear power production has caused a shift toward coal, which they argue is much more hazardous than nuclear power.
- *Rent-seekers*—that is, interests looking out for profitable niches protected from full competition—distort the program to serve their own interests. It is not inevitable that suppliers of goods and services to the government, including civil servants, will find ways to capture "rents," but it often happens (e.g., with many defense contractors). Rent-seeking also occurs in less obvious ways—as

when some regulated firms successfully lobby for regulations that impose much higher compliance costs on their competitors than on themselves.

The ethical costs of optimism. It is hard to overstate the importance of worrying about the possible adverse side effects of otherwise "good" policies, not to mention the possibility that even intended main benefits may fail to materialize under many circumstances (see the chapter on "Assessing Your Ignorance" in Behn and Vaupel 1982). The ethical policy analyst always poses the question, "If people actually were to follow my advice, what might be the costs of my having been wrong, and who would have to bear them?" Keep in mind that the analyst typically is *not* one of the parties who have to bear the costs of her mistakes.

The Emergent-Features Problem

Policy often intervenes in systems of some complexity, systems populated by actors who adapt to your interventions in surprising ways and whose adaptations lead other actors to create still further adaptations. Surprising behavior may emerge from such dynamics. How can you take such possibilities into account when you make your projections?

In many cases, you cannot, for the systems are too complex and too little understood. The macro-economy is an extreme case—the hypothetical responses of producer interests to "supply-side" tax cuts are a major source of contention between those who think the taxes generated by a growing economy will substantially offset the direct effects of the cuts and those who are deeply skeptical of this scenario. Few cases are that extreme, however, and you might make some progress with what might be called "the other-guy's-shoes" heuristic.

Imagine yourself in the other guy's shoes. Say to yourself: "If I were X, how would I act?" And then proceed to crawl into X's mind and play out, in your own mind, what X might do. Do this systematically for each of the important stakeholders or other affected parties. The value of this exercise is that you will discover them to be adapting in surprising ways to the new policy situation you may be creating.

For example, under chemical right-to-know laws, workers must be told what substances they have been exposed to, and they may examine

health records maintained by employers. If you were a worker, how might you use this law? Might you use the information to quit your present job? To demand a higher wage or more protective equipment? To sue your employer or put pressure on your union representative?

And how would your union representative react to such pressure? Might this pressure make the representative's job harder—or perhaps easier in some way?

Now, suppose that you were an employer. Given what you expect your workers to do, you would face incentives to make adaptations or countermoves. Might you stop keeping all health records not explicitly required by law? Or continue keeping records but permit doctors to perform only selected lab tests? And if you were a worker and saw your employer doing these things, what countermoves would you make?

Not all the moves and countermoves of players wearing the other guy's shoes will necessarily lead to trouble for the policy alternative you are evaluating. Many such adaptation sequences may prove to be helpful, in the sense that they may help society to adjust to the changes set in motion by the new policy. At some point in the 1970s, the Federal Trade Commission (FTC) attacked the problem of retailers evading implied warranty obligations for defective products by selling installment debts to banks and other collectors that had no duty, under the so-called holder-in-due-course doctrine, to fix the product or to refrain from collecting on the installment debt. The FTC solution was, in effect, to abolish the protections of the holder-in-due-course doctrine. Banks complained that they did not want to go into the toaster repair business. But if you put yourself in the shoes of a bank manager suddenly obliged to become a toaster repairer, might you not have thought of contracting out your repair obligations to repair specialists, or perhaps arranging not to buy installment debts from retailers who you believed could not be relied upon to make good on their implied warranties?

Construct an Outcomes Matrix

The step of projecting outcomes leads you into a dense thicket of information. At some point along the way, you will probably need to stand back and assess complex and uncertain scenarios for perhaps two to five basic alternatives, combined with their principal variants. A convenient

way to get an overview of all this information is to display it in an *outcomes matrix*. The typical outcomes matrix format arrays your policy alternatives down the rows and your evaluative criteria across the columns. Each cell contains the projected outcome of the row alternative as assessed by reference to the column criterion.

Table I-1 is an example. It appeared in a report by four of my students in 2008 that had been requested by the international environmental group ICLEI–Local Governments for Sustainability.[22] They projected outcomes for eight alternatives ("scenarios," in their usage) across five criteria (in three clusters).[23] I do not vouch for the accuracy of their projections, though they tried the best they could to synthesize the diverse and sometimes contradictory research literature as it existed at the time. Of greater interest is their attempt to fill in the cells in a canonical matrix form. The alternatives are listed down the rows and the criteria across the columns. Three criteria are lumped together under the heading "Viability," though if space had permitted, the students might have made a separate column for each. The analysis applies to a representative U.S. city called Anytown. Note that the matrix is labeled as a "Comparative Analysis." Each projection is compared to a baseline projection for the year 2050, showing only the difference between the baseline projection and the estimated projection for the indicated alternative. Most cells contain a projected range rather than a single point estimate. In Step Six, I come back to Table I-1 and discuss how this comparative setup facilitates confronting the trade-offs.

An outcomes matrix at this stage of your work is a scratch-pad affair, useful for you and your team members and perhaps a friendly outsider or two. Its main function is to help you see what you have in hand and what you still need to learn about. A secondary function is to prepare to confront the trade-offs (see Step Six). If the matrix looks to you large and complicated, you may be encouraged to shrink it: conceptualize some alternatives as mere variants of more or less the same thing, get rid of alternatives that are obvious losers, and omit criteria that don't

22. See Cryan et al. 2008.
23. They grouped their eight alternatives into five sub-groups, however, to simplify the analysis.

TABLE I-1

COMPARATIVE ANALYSIS
Anytown, U.S.A
(2050 Baseline: 5.5 Million Metric Tons CO_2e)

O (Operational)
E (Economic)
P (Political)

	Policy Scenario	(% reduction from 2050 CO_2e baseline) Efficacy	(Cost per ton CO_2e abated) Cost-effectiveness	Viability
EXISTING BUILDINGS	Mandate efficiency retrofits for homes	6.9% to 8.8%	–$130 to $5	O: High E: Medium P: High
	Mandate efficiency retrofits for commercial buildings	7.9% to 10.5%	–$132 to –$30	O: High E: Medium P: High
NEW BUILDINGS	Require zero-energy capable homes	4.1% to 5.6%	–$132 to –$25	O: High E: High P: High
	Require zero-energy capable commercial buildings	6.5% to 8.9%	–$120 to –$48	O: High E: High P: High
URBAN PLANNING	High-density residential development	2.4%	–$1,333 to –$702	O: High E: High P: Medium
ENERGY SUPPLY	Incentives for distributed PV	3.9%	$15 – $139	O: High E: Medium P: High
FINANCIAL MECHANISMS	$20 carbon tax	11.3%	$20	O: High E: Medium P: Low
	$50 carbon tax	20.6%	$50	O: High E: Medium P: Low

differentiate among alternatives (i.e., all the alternatives appear to do about as well or as poorly with respect to these criteria). The students who produced Table I-1 excluded three alternatives that they had originally considered: a local cap-and-trade program, leveraging collective purchasing power in energy markets, and urban forestry.

You may find it useful to go through this exercise more than once, as your analysis evolves over time. (Table I-1 is the final version of several matrixes that the student group made.)

A later version of such a matrix may also prove useful when you tell your story (see Step Eight). However, unless the matrix is very well designed and explained, it can impede the flow of your story rather than assist it.

Semantic Tip Here is a tip with a graphic dimension. Take advantage of the fact that being listed earlier (more leftward) in the matrix is usually taken to signify greater importance. Even if you are unsure how to weight criteria on some cardinal scale, with equal intervals assumed between all it points, you might feel better about an ordinal scale, requiring judgments only of "more than" and "less than." Put what you think should be the weightier criteria in the more leftward columns. A common error that occurs in labeling the criteria columns in such a matrix is to fail to indicate what value is at stake and in what dimensions the measurement is being done. For instance, if you are assessing a rental subsidy program and you enter a plus sign in a column labeled "Landlord/tenant relations," the reader may not know whether you think relations will become more harmonious, more confrontational, less dominated by landlords, less dominated by tenants, or something else. It is not sufficient that your surrounding text makes your intention clear; the matrix label itself must be informative. In many cases it helps to insert the term *maximize* or *minimize* in the criterion label. Table I-1 is exemplary in almost all respects, except that the column labels do not include such words. It happens that the meaning is quite clear from the context, of course, but in the interests of "analytic hygiene" it would have been better to include them.

If you cannot fill in the cell with a quantitatively expressed description of the projected outcome, you may have to settle for a verbal descriptor such as "very good" or a symbolic descriptor such as + or –. The operative word here, though, is *cannot*. Quantification goes a long way toward making an analysis useful, and rough yet adequate quantification is easier than you might suppose. Remember, also, the heuristic of increasing or decreasing "the odds," mentioned in "Step One: Define the Problem."

In listing or stating criteria, speak in the declarative, not the interrogative. "How equitable is the final budget outcome?" is not a criterion; it is a question. "Maximize equity" is a criterion.

How Projecting Outcomes Connects to Design Problems

Semantic Tip The Eightfold Path language of choice—problems, alternatives, criteria, projections, trade-offs—does not fit design problems (see "Step Three: Construct the Alternatives") without a little translation. The object of design is usually an organization or a program that is, more generally, a system of interrelated parts. The object of design is to make the system *perform* in a certain way. You can translate the problem to be solved as the performance objective to be achieved. Meeting this objective is the primary criterion of success. Other criteria are distinctly secondary. Meeting a variety of other performance requirements usually means satisfying other criteria of the "constraint" type (see the earlier discussion of linear programming).

Once you have designed the best system you possibly can, though, that design becomes just another entry in the set of alternatives you are considering. Some other alternative, perhaps proposed by a stakeholder interest, less customized but perhaps also less chancy, might be sitting out there ready to beat back a challenge from your own best effort at design. The choice framework applies nicely at that point.

In the choice framework, we typically find ourselves working on a single problem. That problem can have more than one aspect, though probably not too many. But because design problems encompass a system of interrelated parts, you may have to treat each part separately—that is, as a separate problem. For instance, consider redesigning a state educational system's approach to delivering the full menu of college-preparatory courses to all high school students. This task involves a set of related but differentiable problems or performance objectives involving, among other things:

- The level of discretion allowed school districts in imposing college-preparatory graduation requirements
- How districts might provide student support, and how the state might support the districts in their efforts to do so

- The rapidity with which the new requirements might be implemented
- The nature and adequacy of the procedures for monitoring high school course content
- The proficiency level expected of students in the relevant high school courses[24]

STEP SIX: CONFRONT THE TRADE-OFFS

It sometimes happens that one of the policy alternatives under consideration is expected to produce a better outcome than any of the other alternatives with regard to every single evaluative criterion. In that case—called "dominance"—there are no trade-offs among the alternatives. Usually, though, you are less fortunate, and you must clarify the trade-offs between outcomes associated with different policy options for the sake of your client or audience.

Focus on Outcomes

A common pitfall in confronting trade-offs is to think and speak of the trade-offs as being across *alternatives* rather than across projected *outcomes*—for example, "trading off twenty foot-patrol police officers in the late night hours against a lower-maintenance-cost fleet of police vehicles." Although such a trade-off exists, with a second's thought you'll see that you can't do anything at all with it. Both alternatives must first be converted into outcomes before genuine trade-offs can be confronted. Thus the competing outcomes might be fifty (plus or minus) burglaries per year prevented by the foot-patrol officers versus a savings of $300,000 in fleet maintenance.

The most common trade-off is between money and a good or service received by some proportion of the citizenry, such as extending library hours from 8 p.m. till 10 p.m., weighed against a cost of $200,000 annually. Another common trade-off, especially in regulatory policies, involves weighing privately borne costs (a company's installing pollution abatement equipment) against social benefits (improved health of the affected population and the protection of forests). If the projected outcomes can be monetized—that is, expressed in dollar terms—it is sometimes simple

24. See Sutton (2008).

to evaluate the trade-offs. Just choose the option that yields the largest net value, once costs have been subtracted from benefits. This procedure applies nicely if budgets, and therefore the scope of the activity, are not limited. But it can run afoul of another monetary consideration, cost-effectiveness per unit of activity, if budgets or other inputs are limited. In Table I-1, note that the high-density residential development option—presumably limited in extent because of the limited likely scope of new development—is more cost-effective than any other activity but is less efficacious than all the others, too.

In Table I-1, we see that there is no dominant outcome. The really efficacious options, involving a carbon tax, are not viable politically. Retrofitting existing buildings is apparently more efficacious than meeting green standards in new buildings, but it is a strategy deemed by the student-authors to be less viable than the latter. And, as we said earlier, making new developments denser, although cost-effective, is not very efficacious.

The student-authors did not recommend choosing among these alternatives, however, but recommended doing as many of them at one time as was feasible ("viable"). The trade-offs analysis would nonetheless permit decision makers, and the public, to prioritize which alternatives to emphasize in the likely case that priorities needed to be set. In their view, setting standards for energy efficiency in buildings was the first order of business.

Establish Commensurability

Suppose some Alternative A_1 stacks up very well on Criterion C_1, moderately well on C_2, and poorly on C_3. And suppose that A_2 stacks up in the opposite way. We can choose between the two alternatives only if we can weight the importance of the criteria and if we can express their relative weights in units that are commensurable across the criteria. As you may have heard, money is everybody's favorite candidate for the commensurable metric. Using money as the metric is a very good idea, and it often works much better than you might imagine. For instance, even the "value" of life can sometimes be described reasonably well in the metric "willingness to pay X dollars for a reduction in the risk of death by Y percent a year," or something like it.

However, there are limits to the money metric and to commensurability, as well. To reach a summary judgment as to how much political equality to give up in a political redistricting case, for instance, in exchange for how much more African American voter power, it seems impossible even to state the trade-off in meaningful terms. In general, this problem is known as the "multi-attribute problem." In some deep sense the problem is logically insoluble, although some heuristics are available to help trim it down to its irreducible size.[25]

Break-even analysis revisited. We have seen how break-even analysis can help you both to focus on which residual uncertainties you will have to estimate and to frame the terms in which those estimates must be given (e.g., "We have to believe Alternative A_1 will produce at least X results in order to justify choosing it."). We turn now to how break-even analysis can also help to solve commensurability problems.

Consider those policy areas, such as safety regulation, where we are often implicitly trading off dollars against risks to life. It might be supposed that in order to assess these proposals, you would have to decide what a human life is *really worth*—a task many of us, quite understandably, are unwilling to perform. The task is made somewhat more tractable, however, if you work with quantitative estimates and apply break-even analysis. Suppose, for instance, that you are considering whether or not to impose on the auto industry a new design standard that will improve safety and save an estimated twenty-five lives every year into the indefinite future. The cost of meeting the standard is estimated at $50 million per year indefinitely. The trade-off at the margin appears to be, therefore, "$2 million per life." But you don't have to answer the question "What's a human life really worth?" in order to make at least some sense of this decision. You do have to answer the question "Is a statistical life

25. See Stokey and Zeckhauser (1978, 117–133) and MacRae and Whittington (1997, 201–203). One potentially misleading heuristic has the analyst creating a score for each alternative with respect to each criterion and then manipulating the scores arithmetically. It is easy to get the arithmetic right, but it is often hard to come up with scoring procedures that are not at some level arbitrary (e.g., anchored against some arbitrarily defined level of excellence or its opposite).

(that is, the life of an unknown individual 'drawn' in a random manner from some population, rather than a named person's life) worth at least $2 million?" That is a break-even analysis sort of question. For reasons best known to yourself, it may be obvious to you that a statistical life surely is—or isn't—worth that much. And although it's very difficult to decide whether the worth of a statistical life falls on one or the other side of some monetary boundary, it's a lot less difficult than coming up with a point value.

Even this sort of trade-off calculation is troubling to many people, and some find it morally repugnant. Unfortunately, repugnant or not, it is in a sense inevitable. Whatever position you take on the auto safety design standard described, you are by implication also taking a position on the dollars/risk-to-life trade-off: if you favor the standard, you implicitly believe the trade-off is worthwhile, whereas if you oppose it, you don't. Fortunately, this logical implication has its uses. You may in many circumstances quite sensibly prefer to rely on your intuition rather than on some complicated systematic method. Once you have reached your conclusion on that basis, though, you should check your intuition by asking yourself: "Since the implication of my policy choice is that I value X as being worth at least (or at most) thus-and-such, do I really believe that?"

Choosing a Base Case

Choosing a base case against which to compare the other alternatives is unavoidable. Even if the base case implicitly is "whatever situation exists today," which is the simplest and most obvious option, this does represent a choice. What are some of the other possible choices? Here is a list of some possibilities, along with a brief commentary:

- *Future conditions provided that business were to continue as usual.* This is what the authors of the matrix in Table I-1 chose. But what is included in the "business as usual" base case? The authors of Table I-1 assumed no new regulations and no changes in fossil fuel consumption other than those caused by demographic changes. They did not include possible technological changes, for instance.
- *Changes from the present that would occur if some policy not in the matrix were to be adopted.* Suppose, for instance, that the state were

likely to finance and construct a train system connecting major cities, and that this system were expected to reduce automobile usage overall by, say, 5 percent. This is like "business-as-usual" except that changes caused by a particular policy are in sharper focus.

- *Projections of the results of one particular policy option.* In 1996 the RAND Corporation, referred to earlier, published a study comparing the cost-effectiveness of crime reduction strategies programs to the base case of the "three-strikes" mandatory incarceration policy that California had recently adopted. Three out of the four programs were clearly more cost-effective, and the fourth possibly so. The objective was to show that on narrow crime-prevention grounds alone, and leaving aside humanistic considerations, "three-strikes" was wasting taxpayer money, since other options were cheaper for achieving the same objective.

What difference does it make which base case is used? In some cases, it definitely helps to focus attention on the worth of the base case itself, particularly if, as in the three-strikes case, it is controversial. In other situations, it simply provides a way of standardizing the background against which trade-offs are evaluated across the other alternatives in the matrix, as happens in the matrix in Table I-1. In effect, we ask how a variety of alternatives stack up when it comes to improving on the situation described by the base case.[26]

Once the base case is chosen, and the cells are filled in, and commensurability is pushed as far as can be done, what next? As economics teaches us, trade-offs occur at the margin. Trade-off analysis tells us something like this: "If we spend an extra X dollars for an extra unit of

26. When the base case is not the current situation but some array of hypothetical outcomes, it may contain errors. In using comparisons to the base case simply in order to compare the worth of other alternatives, these errors would be inconsequential if each of the alternatives were to be equally affected by the errors. But this will not always be true. For instance, suppose the federal government were to impose a $10/ton carbon tax in, say, 2025. It might matter, in comparing the alternatives in Table I-1 if, as a result, owners of existing buildings were to retrofit, and were to work on their least energy-efficient buildings first, while new construction were less affected. In that case, the first two options in Table I-1 would look a lot less attractive relative to the other alternatives, since relatively severe mandates would not be necessary.

Service Y, we can get an extra Z units of good outcome." This kind of analysis puts the decision maker in the position to answer the question "Does society (or do you) value Z more or less than X?" and then to follow the obvious implication of the answer: if yes, decide for another unit of Y; if no, don't.

Semantic Tip A linguistic device to help you stay focused on the margin is frequent use of the word *extra*. Note that this word appears three times in the example analysis in the preceding paragraph.

Some units of Service Y can be purchased only in "lumps" larger than one—sometimes much larger. Consider transportation services provided by highways and bridges. Y might be one passenger trip from A to B, but most transportation construction projects (highway enlargements, new bridge crossings) can be undertaken only for minimum bundles of Y that run into the thousands of trips. Or suppose that a police chief must choose one of two "lumpy" alternatives, such as $1 million per year for more overtime on the night shift or $250,000 per year for more rapid replacement of police cars. The first alternative is lumpy because the police union insists on a minimum overtime rate for all 150 officers on the shift, and the second is lumpy because the auto supplier charges much less per vehicle after some threshold number of vehicles. If, say, the projected decrease in burglaries from increased overtime were 200 per year and that from newer vehicles were 50, the trade-off confronting the decision maker at the margin is an extra $5,000 per extra burglary prevented. In this case the margin is a lumpy 150 burglaries and $750,000. (Criteria other than burglary prevention and cost-efficiency would, of course, be relevant to this problem.)

Stop! Focus, Narrow, Deepen!

Up to this point, progress on the Eightfold Path has mainly bred expansion: of problem elements, alternatives, and criteria. It may also have bred an undesirable formalism, such that lists of these items may have come to have a life of their own. The outcomes matrix, which ideally would have served as a sort of "rough draft with attitude," may have displaced the problem with which the project began. But the object of all your analytic effort should not be merely to present the client with a list of

well-worked-out options. It should be to ensure that at least one of them—and more than one, if possible—would be an excellent choice to take aim at solving, or mitigating, the problem.

At a minimum, this need to focus, narrow, and deepen your analysis of the most promising alternative(s) means that you must think very seriously about (1) the politics of getting this alternative legitimated and adopted, and (2) the design of the ongoing institutional features that will have the power and resources to implement the policy or program in the long run.[27]

STEP SEVEN: DECIDE!

This step appears in the Eightfold Path as a check on how well you have done your work up to this point. Even though you personally may not be the decision maker, you should at this point pretend that you are. Then, decide what to do, based on your own analysis. If you find this decision difficult or troublesome, the reason may be that you have not clarified the trade-offs sufficiently, or that you have not thought quite enough about the probability of serious implementation problems emerging (or not emerging), or that a crucial cost estimate is still too fuzzy and uncertain, or that you have not approximated carefully enough the elasticity of some important demand curve, and so on.

Think of it this way: unless you can convince *yourself* of the plausibility of some course of action, you probably won't be able to convince your client—and rightly so.

Of course, when you tell your story to your client or any other audience, you may not think it appropriate to make reference to your own decision. You may choose, instead, to simply limit your story to a clarification of the relevant trade-offs and leave the decision completely up to the audience.

Apply the Twenty-Dollar-Bill Test

You should at this point subject your favored policy alternative to the "twenty-dollar-bill test." The name of this test is based on an old joke that

27. For reasons of space, I do not discuss the first of these matters here, but see Appendix C for a very brief survey of pertinent institutional issues.

makes fun of economists. Two friends are walking down the street when one stops to pick something up. "What about that—a twenty-dollar bill!" he says. "Couldn't be," says the other, an economist. "If it were, somebody would have picked it up already." The analogy is this: *if your favorite policy alternative is such a great idea, how come it's not happening already?* The most common sources of failure on this test are neglecting to consider the resistance of bureaucratic and other stakeholders in the status quo, and the lack of an entrepreneur in the relevant policy environment who has the incentive to pick up what seems like a great idea and see it through. Failure on this test is not fatal, of course. Just keep fiddling until you invent a variant of your basic idea that will pass.

STEP EIGHT: TELL YOUR STORY

After many iterations of some or all of the steps recommended here—principally, redefining your problem, reconceptualizing your alternatives, reconsidering your criteria, reassessing your projections, reevaluating the trade-offs—you are ready to tell your story to some audience. The audience may be your client, or it may include a broader aggregation of stakeholders and interested parties. It may be hostile, or it may be friendly. Your presentation may be a one-time-only telling, or it may be merely the first effort in a planned long-term campaign to gather support behind a legislative or executive change. (For a discussion of the issues likely to be involved in such a campaign, see Appendix D, "Strategic Advice on the Dynamics of Political Support.")

Apply the Grandma Bessie Test

Before proceeding further, however, you need another little reality check. Suppose your Grandma Bessie, who is intelligent but not very sophisticated politically, asks you about your work. You say you are a "policy analyst working for. . . ." She says, "What's that?" You explain that you've been working on "the problem of. . . ." She says, "So, what's the answer?" You have one minute to offer a coherent, down-to-earth explanation before her eyes glaze over. If you feel yourself starting to hem and haw, you haven't really understood your own conclusions at a deep enough level to make sense to others, and probably not to yourself, either. Back to the drawing board until you get it straight.

Now consider the possibility that someone might actually wish to base a real decision or a policy proposal on your analysis. (It's been known to happen.) Even if you, as an analyst, would not have to deal directly with such a tough audience as Grandma Bessie and her kin (including, of course, Grandpa Max), it's likely that someone will have to do so. At the very least, therefore, you'll have to be able to explain your basic story to someone in sufficiently simple and down-to-earth terms that that someone will be able to carry on with the task of public, democratic education.[28]

Gauge Your Audience(s)

Assuming that you've passed the Grandma Bessie test, identify and assess the likely audience(s) that are more sophisticated and involved than Grandma Bessie.

First comes your client, the person or persons whose approval you need most—your hierarchical superior(s), perhaps, or those who are funding your work. What is the relationship between you and your client? What you say and how you say it should depend a great deal on whether your relationship is long term and on whether it is carried on face to face. In particular, how easy will it be for you to correct any misunderstandings that may arise?

Next, think about the larger political environment. Who do you think will "use" the analysis and for what purpose(s)? Will anyone pick up your results for use in an advocacy context? Would you regard this use of your results as desirable? Desirable if certain advocates use your work and undesirable if others do so? Do you want to do anything to segregate the elements of your analysis by the type of audience you might want it to reach—or not reach? Are you, perhaps inadvertently, using scare words that will alienate certain audiences?

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28. Sometimes this is referred to as the challenge of giving an "elevator speech." You and your boss, or some relevant other, find yourselves together in an elevator for too long a time to make do with just "Hi, how are ya'?" The boss asks how your project is going. You have maybe a minute to explain what you're up to and why he should be interested and perhaps persuaded. So have your "elevator speech" committed to memory and ready to go at a moment's notice.

If you are making a clear recommendation, make sure that you raise and rebut possible objections to it that might occur to various important audiences. Also make sure that you compare it to what you or others might regard as the next best course of action, so as to be ready to show why yours is better.

Consider What Medium to Use

You can tell your story in written or in oral form. In either case, communicate simply and clearly. The guiding principle is that, other things being equal, shorter is always better. In written presentations, good subheadings and graphics can make reading and comprehension easier. Visual aids such as flip charts, overhead transparencies, and computer-based slide projections often help in oral presentations.

Oral presentations require practice, self-discipline, and a little knowledge of some basic principles. The most basic of the basic principles are these: speak *very slowly and distinctly*; speak loudly enough to be heard throughout the room, even over distracting noises; speak in a lower register, which tends to increase perceived trustworthiness and credibility; do not fidget, but don't stand like a stick, either; make lots of eye contact with audience members and, in doing so, don't favor one side of the room over another. Speaking slowly and distinctly is probably harder than you think—and more important, too.

Give Your Story a Logical Narrative Flow

Your story's flow should be designed with the reader's (or listener's) needs and interests and abilities in mind. In both written and oral presentations, it should be evident to the audience what motivates the entire analysis. Therefore, it is best to open with a statement of the problem your analysis addresses.[29]

It is also important to *motivate* the more detailed steps in the flow of the analysis, that is, the sections, paragraphs, and sentences. Most readers will look for the motivation of any element in what immediately precedes

29. An unusually fine manual on how to give slide-based oral briefings is published by the RAND Corporation (1994).

it, which makes it important to avoid lengthy digressions. For these reasons, be wary of sections that you are tempted to label "Background." Similarly, the phrases "Before turning to . . ." and "It is first necessary to explain/understand the history of . . ." are usually signs of undigested material. Many readers will be alert to these danger signs, so you should be, too. Policy analysis, remember, is about the future. It is often not obvious how or whether history affects the future, and the burden should be on the writer or speaker to show exactly how this effect will come about.

A common, though not uniformly applicable, organizing framework is to begin with a good problem definition and then to treat each alternative you consider as a major section. Within each such section, you project the probable outcome(s) of implementing the alternative and assess how likely such outcome(s) are in the light of some causal model and associated evidence. Following these discussions, you review and summarize the alternative outcomes and discuss their trade-offs. This framework contains no special discussion of criteria; however, sometimes an explicit discussion of criteria is important. It might appear either just before or just after the presentation of the alternatives and their associated outcomes.

Some Common Pitfalls

Following the Eightfold Path too closely. Sometimes it helps to structure your narrative flow as though you were leading the reader by the hand down the Eightfold Path. But usually this approach is a mistake. The purpose of the Eightfold Path, remember, is to help you *think through* a complicated problem. It is not at all necessary to use it in telling the story, though some aspects of it sometimes help.

Compulsive qualifying. Don't interrupt the flow of an argument in order to display all the qualifications and uncertainties about some particular element in the argument. A linguistic way around this pitfall is to use adjectives or adjective phrases such as *most, on average,* and *more often than not* to state the generality, and then to return to the exceptions in the next section. (Or, if the exceptions and qualifications really can't wait, try a parenthetical sentence or a footnote.)

Showing off all your work. Don't include every fact you ever learned in the course of your research. Even if you've done a good and thorough job of research and analysis, most of what you have learned will prove to be irrelevant by the time you're finished. That is, you will have succeeded in focusing your own attention on what is really important and in downplaying what only appeared important at the beginning. You don't usually need to take your reader on the same wandering course you were obliged to follow.

Listing without explaining. Should you list every alternative policy that you intend to analyze in the report before you actually get around to providing the analysis? Such a list is a good thing when the alternatives are not numerous, when they are all taken seriously either by you or by your audience, and when they will prepare the reader's mind for the detailed assessment that will follow. However, if you have many alternatives to consider, the reader will forget what's on the list, and if some of the alternatives turn out to be easily dismissed upon closer scrutiny, you'll simply have been setting up straw men and wasting the reader's mental energy.

Similarly, be cautious about listing every evaluative criterion of interest before coming to the assessment of the alternatives being considered. Usually—though not always—there is not much to be said in a separate section about criteria that can't be better said when you're actually writing the assessment sections.

Spinning a mystery yarn. Start with the conclusion, the bottom line, the absolutely most interesting point you intend to make. Then present all the reasoning and evidence that you have to make your audience reach the same conclusions you have reached. In short, follow the opposite strategy from that which a novelist would follow.

Inflating the style. Avoid the pomposity and circumlocutions of the bureaucratic and the academic styles. (Essential reading: George Orwell, *Politics and the English Language.*) Also to be avoided: a chatty, insider's style—such as, "We all understand what creeps our opponents are, don't we?"

Structure Your Report

Unless the report is short, begin with an executive summary.

If your report is over fifteen to twenty pages long, say, a table of contents may well be helpful. If there are many tables and figures, either in the text or in the appendixes, a list of these items can be helpful, as well. Detailed technical information or calculations should appear in appendixes rather than in the text. However, enough technical information, and reasoning, should appear in the text itself to persuade the reader that you really do know what you're talking about and that your argument is at least credible.

Use headings and subheadings to keep the reader oriented and to break up large bodies of text; make sure your formatting (capital letters, italics, boldface, indentation) is compatible with, and indeed supports, the logical hierarchy of your argument.

Table format. Current professional practice is very poor with respect to the formatting of tables. Do not imitate it but strive to improve it. Every table (or figure) should have a number (Table 1, for instance, or Figure 3-A) and a title. The title should be intelligible; it is often useful to have the title describe the main point to be learned from the table (e.g., "Actual Risks of Drinking and Driving Rise Rapidly with Number of Drinks—but Are Greatly Underestimated by College Students"). Each row and column in a table must be labeled, and the label should be interpretable without too much difficulty.

Normally, a table either is purely descriptive or is designed to demonstrate some causal relationship. In the latter case, it is usually desirable to create a table that makes a single point (or at most two) and that can stand alone without need of much explanation in the surrounding text. It is usually better to use two or three small tables to make two or three points than to construct one massive table and then try to explain its contents by means of the text that surrounds it.

Tables usually require footnotes, and there should almost always be a source note at the bottom. Sometimes these notes refer to data sources used to make the table, and sometimes they attempt to clarify the meaning of the row or column labels, which are necessarily abbreviated.

Please do NOT imitate academic practice, which is to overstuff tables with all kinds of numbers and to mindlessly apply obscure column and row labels. Academic practice presupposes that all the data have been gathered "scientifically" and without serious bias; therefore, the presentation style aims to convey these facts. Unimportant data share space in academic tables with important data so as to permit the reader to see that the complete truth has been told, that the author has not cherry-picked the data to convey only what is interesting and has conveyed the full story about what is statistically significant as well as what is not. If these issues are important to you and your readers, by all means provide the full story. But do it in appendixes. In most cases, though, try to minimize the information provided in a single table.

References and sources. Include a listing of references and sources at the end of the presentation. Books and articles should be cited in academic style (alphabetical order by author). The main point is to provide bibliographic help to curious or skeptical readers who want to track down references for themselves. There are several acceptable styles, but a good model is the one used in the book review section of the *Journal of Policy Analysis and Management,* which is simple and direct.

The current trend is toward "scientific citation" in lieu of footnote references in the text. That is, cite the author's last name and year of publication in parentheses in the text; the reader then consults the references section at the end for the full citation. If you follow this practice, the reference section should list the author(s) and year *before* the title of the work and other publication details. Sometimes you will want to include a page number in the parenthetical citation, as well.

Legal citation style is quite different. If most of the references are legal, then it is advisable to cite all references in bottom-of-page footnotes. However, you can keep the scientific citation format within the footnotes.

Notes are easier to read if they appear on the same page as the referenced text—that is, if you display them as footnotes rather than as endnotes.

Using a Memo Format

If your analysis is to be delivered in a memo, you should present it within a standard memo format, as follows:

[Date]

To: [Recipient name(s), official position(s)]

From: [Your name, position. Sign or initial next to or above your name.]

Subject: [Brief and grammatically correct description of the subject]

[The first sentence or two should remind recipient of the fact that she or he asked you for a memo on this subject, and why. Alternatively, you could explain why you are submitting this memo on this subject to the recipient at this time.]

[If the memo is long, you might open and close with a summary paragraph or two. If you open with a long summary, the closing summary can be short.]

[If the memo is long, consider breaking it up with subheads.]

Develop a Press Release

Most policy analyses do not become the subjects of press releases or of radio or television sound bites, but some do. Others become candidates for such treatment, and all can profit, even in their extended form, from the analyst's reflecting on how to condense the essential message. Hence, it will probably serve an analytic purpose—and sometimes a political one—if you sketch out a press release or a few ideas for sound bites. You may also want to think strategically and defensively to see how an opponent might characterize your work in a press release or sound bite.

PowerPoint

PowerPoint slides often supplement oral presentations, and indeed sometimes replace written reports altogether as nonverbal means of communication. The latter practice does economize on staff time to some extent, but it has the drawback (in my eyes, at least) of forcing the reader to imagine the connective issue that oral presentations normally

provides. In any case, my comments on PowerPoint as supplementation will be brief and rather personal, as plenty of full-scale manuals are available.

- Keep it simple: have each slide present a separate point; use phrases, not sentences; and use only two or at most three colors.
- Avoid cutesy icons and "cool" moving animals.
- Think of the viewer's needs: to see letters and numbers at a fair distance, and to not be bored by having you, as presenter, simply read what is on the screen.
- Display the slide for long enough so that the viewer could actually read and absorb its contents—especially important for tables and graphs.
- Include slides at suitable intervals that summarize what has been said so far and point the way to what is yet to come.
- Make available to the audience, after the presentation—not during, as it is distracting—hard copies of slides (arranged six per page).
- Visual supplements, such as photographs, can nicely support all the words, provided they are carefully chosen and displayed.

PART

II

ASSEMBLING EVIDENCE

Consider the problems confronting you as a researcher preparing an analysis of water pollution control programs for Blue Lake. You know that there is a dirty lake; that federal, state, and local legislation is directed toward the goal of cleaning up the lake (or preventing it from getting much dirtier); and that a state environmental protection office in the area has something to do with administering some or all of the relevant antipollution policies or programs. But you need to know more. You need to map the present policies and programs, their political environment, the ways in which the bureaucracies function to implement them, and the criteria by which experts and nonprofessionals evaluate them. You also need to make some decisions about how *you* will evaluate them. Then you need to learn what data are relevant to these criteria and figure out how to obtain these data. If you are planning to recommend changes in existing programs, you must develop the evidence that will permit you to make reasonable projections of the likely outcomes. In addition, you must learn what sort of changes the present set of relevant actors may be prepared to make or are capable of making.

These are large challenges, but your resources in time, energy, money, and the goodwill of potential informants and interviewers are probably not at all large. Moreover, you would like to finish the study in no more than six months, let us say, and you do not want to waste the first five months simply getting your bearings. Where are you to begin? And having begun, how are you to proceed efficiently?

GETTING STARTED

The first step is simple: Start with what you know. This injunction may seem self-evident or trivial or both. In fact, it is common for people to act in contradiction of it. Confronted by a new and challenging research task, they expect to flounder anxiously for a few weeks or months. And, behold, they do, for feeling stupid makes you so. Rarely is this waste of time and energy necessary, however. A few facts, or even vague recollections, plus some intelligent reasoning can usually move the project onto firm footing surprisingly quickly. Suppose, for example, that you are asked to do a policy analysis of "the future of the Wichahissic bituminous coal industry," a subject as remote from your interest or previous experience as galactic spectroscopy. You might take stock by writing a memo to yourself as follows:

- I was probably asked to do this study because someone thinks the future of the Wichahissic bituminous coal industry is pretty bleak or else because it is looking up. If the former, the results will probably be used to justify some sort of government subsidy; if the latter, the results will be used for promotional purposes by the industry itself or by local merchants whose livelihood depends on the health of the industry.
- The future of any industry depends in part on market demand. The demand for coal has probably been declining, partly due to the availability of substitute fuels.
- Maybe high production costs imperil the health of the industry. Could it be that coal-mining technology is underdeveloped? If so, why? Perhaps the coalfields are running out and the technology has not been developed to handle poor, as opposed to rich, deposits.
- There were a lot of miners' strikes a few years ago. Are labor-management relations better or worse now? Are wage demands forcing the companies to go under?
- Coal transportation depends on railroads. So, if the railroads are sick, could coal be well?
- Coal is black and sooty, gives off a lot of smoke and has a nasty carbon footprint. Surely this is an ecological menace. Who, if anyone, is paying attention to this problem? Or is it really a problem?

Coal mining destroys the beauty, and probably the ecology, of the countryside. Is this really so? Might the Sierra Club have useful data on these questions?

- Perhaps coal is not sick, just bituminous coal. Maybe the anthracite industry is flourishing. Surely there is a trade association of coal-mining companies with data here. Call up the nearest big coal-mining company and find out its name and address from the public relations office.
- Perhaps coal is okay, but Wichahissic has a problem. But then again, Wichahissic does not seem to be as much in the news as Pokanoka, whose plight seems to be the archetype for "the depressed area." Check BLS (Bureau of Labor Statistics) for unemployment figures here.

Writing memos of this kind to yourself is useful not only at the beginning of a project but whenever you feel yourself beginning to drift toward panic or confusion. Following this initial stock-taking, you should think of yourself as designing, executing, and periodically readjusting a research strategy that will exploit certain predictable changes in your potential for gaining and utilizing information:

- *Locating relevant sources.* Over time, you decrease your uncertainty about what is worth knowing and how to learn it.
- *Gaining and maintaining access to sources.* (1) Over time, you augment your ability to arrange interviews with busy or hostile persons, and to obtain data that are not clearly in the public domain; (2) over time, you also—and unavoidably—use up your access to certain sources, and you must therefore conserve such exhaustible resources for use only when the time is propitious.
- *Accumulating background information as leverage.* Over time, you improve your capacity to interpret data and to force them out of reluctant sources, thereby increasing your background knowledge.
- *Protecting political credibility.* Over time, the research process itself creates an environment that will either help or hinder the adoption and implementation of your—or your client's—eventual recommendations.

The optimal strategy for managing any of these problems may conflict with the optimal strategies for dealing with the others. Therefore, after each problem is discussed in a separate section below, the final section of this chapter is reserved for a brief treatment of the trade-offs involved in trying to meet all strategic imperatives simultaneously. I assume throughout that the reader is an inexperienced policy researcher who has had academic training in the social sciences. Hence, I go to some lengths, at various points, to allude to differences between social science research methodology and the methods of policy research. I trust that the more experienced researcher will also find some profit in the arguments here, if only to conceptualize more clearly what she has already learned to do intuitively.

A further clarification about the intended audience is in order. You start your task with certain resources and constraints, some of which are derived from your own experience and personality and others from your institutional location. Although institutional location is especially important in designing an optimal research strategy, it is not discussed in this book. Suffice it to say that the resources and constraints of a legislative staff assistant are quite different from those of her counterpart in a bureaucratic setting and are even more dissimilar to those of a student working with a campus-based Public Interest Research Group (PIRG). The strategic advice offered here is intended to be sufficiently general to meet the needs of researchers in any of these circumstances, however.

LOCATING RELEVANT SOURCES

Unlike most social science research, most policy research is derivative rather than original. That is, it is produced by creative play with ideas and data already developed by others. Only occasionally does the policy researcher set out to generate new data or assume responsibility for inventing a bright policy idea from scratch. Instead, the researcher's role is preeminently discovering, collating, interpreting, criticizing, and synthesizing ideas and data that others have developed already. To be sure, social science research often works this way, too, but it also places a much higher premium on originality. In a sense, the policy researcher becomes an expert on experts—those scholars and persons of experience who are thought to be relatively sophisticated about the policy area.

Consulting Both Documents and People

In policy research, almost all likely sources of information, data, and ideas fall into two general types: documents and people. By *documents* I mean anything that has to be read: Web sites, journal articles, books, newspapers and magazines, government reports, statistical archives, interoffice memoranda, position papers, bulletins, and so on. By *people* I mean anyone, whether a single individual or a group, who is to be consulted in person. Research on any policy problem usually entails a canvass of both types of sources.

Avoid the pitfall of overemphasizing one type at the expense of the other. Sometimes you fall into the trap out of habit: if you start out interviewing experts, experienced administrators, and other informed persons, you continue doing so until you come to define "interviewing" as what your job is all about. You forget that the experts themselves typically have obtained a good deal of their expertise by studying documents, and that much of what administrators offer can also be found in agency reports, legislative hearings, published statutes and regulations, and so on.

Another reason for getting stuck in one medium and neglecting the other is an individual preference for less or more personal interaction—that is, for choosing to conduct your research via the Internet or in libraries (or files, in an organizational setting) or for concentrating on fieldwork instead. But it is usually desirable not only to consult both types of sources (documents and people) but also to consult them in alternating order: a spate of interviewing followed by a retreat to the Internet or the library followed by another round of interviewing, and so on. If for no other reason, there is probably a psychic economy in arranging and executing a fieldwork agenda in a consolidated time span, as there is in collecting and exploring a large body of documentary material.

In a more general way, however, one source should be used to locate another and this branching out can just as easily lead from one medium to the other as it can from source to source of the same type. More explicitly: people lead to documents as well as to other people, and documents lead to people as well as to other documents. There are thus four basic branches on the tree of knowledge, each of which I discuss in turn.

People leading to people. Often one informant leads spontaneously to another by remarking during the course of an interview or a conversation, "Have you seen X yet? She's very knowledgeable about. . . ." This information can be stimulated by your asking questions such as "Who else would be a good person to talk to about. . . .?" or the more specific "Who would be a good person to see in Agency Y?" For reasons of tact, you might frame the question more tentatively: "Do you think it would be advisable to talk to X—or do you think that would not be advisable?" Sometimes it is a good idea to ask the informant explicitly if his name can be used in seeking an appointment with the person he has suggested. This gives him an opportunity to protect himself if he does not want his name to be used and an opportunity to encourage name-dropping if he believes it will serve his interests. (That is, A may wish B to know that A has spoken of him as "a knowledgeable person," or words to that effect.) Make sure that the informant provides sufficient contact information for you to locate anyone he recommends seeing.

Knowing whom to stay away from is often an important by-product of inquiries such as these. If the informant is trusting and wishes to be helpful, he may volunteer a cautionary aside such as, "If you do go to see X, you'll probably find her reserved if not unsympathetic." Unless X is a very important step in the developmental sequence at that moment, this may very well be a clue not to approach her until better groundwork has been laid for such a meeting. Another important by-product of such inquiries is a file of information on who is friendly, or antagonistic, to whom. Such information will be useful in constructing a map of political and administrative feasibility for any new program that you may eventually propose.

People leading to documents. Just as you can ask informants whom else to see or talk to, you can also ask them what else to read and how to obtain it. In visiting informants in their offices, you can sometimes get useful hints by scanning the bookshelves and the papers on tables and desktops for titles and authors or agency names. Also, take away from the interview all the documents that the informant is willing to give you, even if you are not sure how relevant they are. The chances are good that you will turn up some interesting new material in the collection you eventually develop, and, in any case, you may avoid a trip to the library

should you later wish to quote these documents or to report precise bibliographic information. Finally, put yourself on mailing lists, so as to be on the receiving end of whatever stream of reports, bulletins, newsletters, circulars, and so on are distributed by organizations operating in the policy area. Many agencies keep budgetary and other numerical information in electronic spreadsheet form; ask if the files can be sent to you or, better yet, copy the files to a USB flash drive before you leave the office.

Documents leading to documents. Anyone who has ever written a substantial academic research paper in history or the social sciences has probably learned how to use one document to discover another through Web links, footnotes, and bibliographies. The same procedures work in policy research. In addition, a researcher frequently uncovers references that are incomplete from a strictly academic point of view but that may still be useful for policy research. These include references to agencies or organizations (and even individuals) that have an ongoing responsibility for or interest in the policy area, some of whom can be expected to sponsor studies, reports, position papers, and so on that may prove invaluable.

Once research is under way, documents lead to documents in a relatively straightforward manner and without much difficulty. The problem is in knowing where to start when the research effort is just beginning. The easiest place to begin is the Internet, where Google or some other search engine can be used to find the sites of advocacy groups putting forth their views of the problem and possible solutions. These sites probably contain valuable information and are a useful source of ideas and further leads. Because they are likely to be one-sided, however, you should try to find advocacy sites with opposing views.

But advocacy groups are just a beginning. More useful are the Web sites of policy think tanks, such as the Brookings Institution and the American Enterprise Institute. These are relatively mainstream institutions that produce large numbers of policy-relevant papers annually in almost all policy domains. The best of these papers connect concepts from the social sciences (often by noted scholars) with applied problems, and they often provide an overview of some policy area. Brookings is sometimes said to be a "liberal" think tank and AEI "conservative." There is some truth in these characterizations, but such labeling is not as important as the fact

that each of these institutions cares about its reputation for sound analytic work. It might be fair to say that they have political "orientations" rather than "biases." The same is generally true of the "liberal" Center on Budget and Policy Priorities, the "conservative" Heritage Foundation, and the "libertarian" Cato Institute. In the environmental area, the leading think tank is Resources for the Future, which favors a benefit-cost approach to environmental policy.

The Web sites of various governmental oversight institutions can be very helpful once you have in mind a particular legislative or regulatory issue. The Congressional Budget Office (www.cbo.gov) does hundreds of studies per year and posts many online. The Government Accountability Office (www.gao.gov) does the same.

Do not be satisfied with only the sites that are accessible by means of a public-domain search engine. If you have access to the online resources of a university (or governmental) library, use it. University or government-wide libraries typically subscribe to databases that can provide access to full-text newspaper and magazine articles (Lexis-Nexis), as well as to abstracts and full-text publications in scholarly journals (JSTOR, in particular). *The CQ Researcher Online,* published by CQ Press, provides access to feature-length journalistic articles dating back to 1991. *National Journal* is similar to *The CQ Researcher.*

Because Internet sources are so accessible, it is easy to forget about books (until the day they are all online, of course). Unfortunately, electronic search procedures do not work as well for finding good and appropriate books as they do for finding articles and relatively ephemeral materials. The best way to locate relevant book-length sources is to find out what the experts and advocates recommend. You can check the bibliographies in journal articles or—following the "people leading to documents" strategy—ask them.

Documents leading to people. Once having read, or read about, the work done by certain experts, academic or otherwise, you may wish to consult with them face-to-face or by telephone. You should be wary, however, of mistaking the nominal author of a study for the real one, particularly when that author is a person or group in officialdom. The nominal authors of Supreme Court decisions, to take an extreme example, are the Associate

Justices, but the real authors are usually their clerks, who in turn probably draw most of their arguments from the briefs filed by the lawyers on the case. Similarly, you should look behind the agency official whose name appears on the cover of a report, to locate the staff member(s) who did the work and may be named on the inside pages or referred to in a preface.

Seeking Secondhand Information

To find out what Senator A is doing or thinking about a policy problem, you need not necessarily ask the senator herself. Tens or hundreds of individuals may know the answer, or at least part of the answer. Such secondhand information must be used cautiously and checked constantly for bias or error. But it is not in any a priori sense inferior to information obtained firsthand, which may have its own biases and factual errors. To use a legal analogy, one relies for "truth" on witnesses rather than on the defendant, who, after all, cannot easily or prudently be asked to testify against himself. Sometimes it makes sense to obtain firsthand information as a supplement to the other, particularly if there is reason to think that failure to do so might ultimately jeopardize the credibility of the final research product.

The use of secondhand sources is especially important in seeking political feasibility data. Suppose, for example, that you are planning to recommend that emergency ambulance services be centralized under the city police department, and you want to estimate the probable reaction of the fire chief to such a recommendation. You could ask the fire chief himself, but he might not be willing to tell the truth, especially if he were going to hold out his acquiescence in return for better terms or for some reciprocal benefit. That is, he might in principle be willing to go along with the change—he might even be enthusiastic about it—but for bargaining purposes he might not be prepared to say so. On the other hand, he might really be against it but not be willing to admit that, lest people call him an obstructionist. In either case, the fire chief is not a reliable source of this information. Eventually it might be desirable to ask him his opinion directly, but you could probably learn as much or more by asking instead a variety of secondhand sources, such as a veteran city hall reporter, rank-and-file firefighters, someone in the city manager's office, and someone from the police department.

Finding Multiple Sources of Firsthand Information

Suppose that you wish to know about the past relationship between the police and fire departments. Have they been relatively cooperative, antagonistic, or indifferent? If for some reason you do not wish to ask the fire chief, it is always possible to ask the police chief, since she has also been a partner to these relations. Her view or interpretation of the relationship may differ from that of the fire chief, but she is as much a participant and her knowledge just as direct.

This principle has numerous applications. If you want to know what happened at a particular meeting to which you were denied admission (or to which you could not go for other reasons), there are many participants to query. If you want to know how one particular participant behaved at that meeting, you do not necessarily have to ask that participant. You can ask others who attended. If you wish to see a memorandum sent by Smith to Jones, you can ask either Smith or Jones, depending on which one you believe will be more agreeable—or you can obtain a photocopy from a third party.[1]

Searching for Sources and Searching for Knowledge

At the beginning of a policy research project, you face a dual uncertainty: about what you think you ought to know and about where you can turn to learn it. These are interdependent questions, in the sense that the reduction of one type of uncertainty is both a consequence of and a condition for the reduction of the other.

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1. The notion of systematically using secondhand sources and the notion of finding multiple sources for firsthand information are foreign to the spirit and practice of much social science research, which typically assumes that when you want to know the mental states or the conduct of a given individual, the best source is that individual. Such research then worries about how to devise measuring instruments and interviews that will register these facts about the individual with the least distortion. Often this is quite appropriate for the questions requiring basic and original research, when the object is to get pure data for pure understanding. But in policy research, the problem is to get a sufficient understanding of the world to be able to make estimates about alternative courses of action. Since there is much uncertainty about the future, and so many uncontrollable variables that will enter into future action, too much precision about the past and present frequently gets in the way.

Consider first what happens as you clarify your ideas about what you think you ought to know. Simultaneously, you are able to exclude certain sources you would otherwise have consulted and, because you know better what your objectives are, you are able to intensify your search for sources of greater relevance. This is the classic research model, in which ends determine means—that is, a constantly evolving set of knowledge objectives gives shape to the strategy of source selection and consultation. It is as applicable to policy research as to any other sort of social inquiry.

Its exact opposite is also applicable. Because the cost of searching for adequate sources is so high in time and energy, when you find a rich source it is wise to mine it intensively, even if that decision slightly alters your original knowledge objectives. If you wish to make recommendations to the state legislature concerning the reduction of criminal recidivism rates, for instance, the most relevant data source (recidivism in that particular state) may not be as rich—and therefore as useful—as data from the bureau of criminal statistics run by some state that does an especially good job of collecting such data.

One danger in this sort of pragmatism is that you may spend too much of your time on what appears to be a rich source, not knowing that there are much richer ones just around the corner. That is why it is wise to invest a good deal of time initially in canvassing a variety of possible sources and developing a broad overview of both the policy area and what means there are to learn about it. After this initial survey, it is possible to return to sources that look unusually rich. This procedure also guards against the second, and more important, danger in letting the sources guide you: you might lose sight of more desirable and feasible knowledge objectives. In the final analysis, there must be a balance between the classic model of ends (knowledge) dictating means (sources) and the pragmatic model of ends evolving out of the means one has at hand.

GAINING ACCESS AND ENGAGING ASSISTANCE

Gaining access can be a problem. If you wish to interview Assembly Member Jones, you must persuade Jones's appointments secretary that you are on serious business and that in any event you will not be put off. You must arrange an appointment for a not-too-distant date and persist

even after Jones breaks the first appointment and fails to show up for the one made in lieu of that one. If you may wish to interview Jones a second time, you must take pains to keep this possibility open, and perhaps to foster it by your conduct during the first interview.

You may need to engage the active assistance of some informants, especially those who stand at the gateway to an agency's performance and budgetary data. Often these data are in a raw state—that is, the data are in the files but need to be collated and tabulated. Sometimes the data are in a semiprocessed condition; that is, they have been collated and tabulated, but they have not been put in a format intelligible to the researcher. (They are still in a format that is intelligible to the program managers, but this format does not fully reveal the meaning of the data to the researcher.) In such a case, you may wish to know about seeming inconsistencies in the classification of cases, or about the meaning of certain class designations that the managers have developed for their own decision making.

Finally, there are data that have been prepared for public use but have not been processed completely or adequately for your purposes. Suppose that the intramural evaluation staff of a state penal institution, for example, has issued its annual report on releases and recidivists, but you cannot tell from the report how reliably they have ascertained the prior arrest and conviction records of the so-called first offenders. Did they rely on probation officer reports? On prison records? Records from other states? The error structure of an agency's data is often not known to the agency, and if it is, it may not be made known to the public. In this case, as in the case of raw and semiprocessed data, interpretive assistance is needed from the agency itself. How much assistance it is willing to give may depend, in part at least, on how well you have established rapport with the agency and its personnel.

Getting an Appointment

Why should any informant grant you, a mere policy researcher, an interview? American manners and mores provide the most compelling reason—it is part of our definition of courtesy. If someone talks to you, even through your appointments secretary, you are supposed to talk back. Of course, the more powerful, busy, or politically defensive the personage

besought, the less will be the force of simple courtesy. In such cases, you might try to appeal to a sense of noblesse oblige or, if you have a prestigious institutional affiliation, to a willingness to exercise your caste privileges. In addition, many people simply feel flattered by the interest of an outsider—even a policy researcher—who wants to listen to them.

More reliable than these appeals to courtesy or vanity, however, is an appeal to political self-interest. Try to indicate that the outcome of your research is likely to have a bearing on the interviewee's (or her agency's) political fortunes and ambitions. It would therefore be prudent for her to be cooperative, to arrange for you to hear her (or her agency's) point of view, and indeed to use the interview setting to assess the relevant political implications of your work. Of course, it may require some fast talking over the telephone, when you call for an appointment, in order to set her mind thinking in these directions. In dealing with an appointments secretary, who will probably be even less sensitive to your political cues, you may have to make your points indelicately explicit. Instead of relying on the vagaries of a telephone conversation or an appointments secretary, it may be useful to write a letter requesting an interview, followed up by a telephone call.

Your informants will often be acquainted with one another and will occasionally talk among themselves about you and your work. Since you want such discussions to serve your interests rather than to work against them, you should try to develop a reputation as a competent, knowledgeable, and energetic researcher who is likely to produce something of intellectual or political significance. The best way to develop such a reputation is actually to be such a person, but, in addition, certain stratagems may prove useful. Attempt, for instance, to become a familiar face, by attending meetings and conferences that your potential informants attend, and by loitering around office cafeterias or after-hours places that they frequent. Try to impress people with your ability to gain entrée to meetings that are only quasi-public in nature, and by talking in public places to important personages. All this familiarity will backfire if you appear pesky or inept, so some judiciousness is in order. Also, you should appear to be learning quickly and critically while in these settings, rather than observing passively and dully. A notebook or laptop computer, in which you enter notes fast and furiously, is a good stage

prop as well as useful in its own right. Likewise, animated conversation, preferably observed rather than overheard, can enhance your appearance in these settings. But do not be indiscreet by becoming a bearer of information from one interviewee to another.

Fieldwork does not proceed rapidly or smoothly. For the most part, you are a hostage to other people's schedules. You can expect delays of several days to several weeks between the time you request an appointment and the appointment date—and even longer if your informant eventually breaks the appointment and reschedules it for a few weeks later. (Sometimes it seems that research is mainly idle waiting!) This problem is particularly acute if delay in seeing one informant becomes a bottleneck to seeing others. To minimize idleness, it is a good idea to have two or three independent streams of interviewing running simultaneously, so that a bottleneck in any single stream cannot halt your work altogether.

Cultivating Access

Securing repeated access to an individual or agency presents different problems from securing a one-time-only appointment. Courtesy is of almost no use here; the political motive, conversely, is critical. Since the political impact of your work on certain individuals and organizations will almost certainly be adverse, some doors will inevitably be closed to you. Beyond a certain point, there is nothing to be done about them, except to seek alternative means of entry. A perceived political affinity helps, but not much. Repeated access depends, instead, on building personal rapport. This takes time, especially if you are not inclined to appear more friendly and congenial than you really feel. Rapport follows most of all from simple exposure. Think of yourself as an anthropologist who has to spend several months living among the tribe you are studying before being allowed to observe certain sacred rituals and practices.

At the risk of sounding patronizing, I will nevertheless note here that the researcher should observe the basic courtesies. Be on time. Dress appropriately, which generally means with the same degree of formality as the interviewee or just a little less. Be friendly without being overly familiar or presumptuous. If you tape interviews—always a good idea, in order to preserve a record—set up your equipment with minimal fuss

and explain that the tapes are for your own reference only. State that you will turn off the tape whenever the informant wishes you to do so.[2]

Almost invariably, whoever actually assists you in collating and interpreting agency data will see himself as "doing you a favor," regardless of how insistent his superiors have been that he make his services freely and generously available to you. As part of the protocol for such a "favor," you must reciprocate with expressions of gratitude for his "going out of his way." An even more cooperative informant might mail you a copy of a speech she has recently given, knowing that it will be of interest to you. Or she might see to it that you are put on the list of invitees to a banquet at which you will be able to meet a number of potential informants in an informal setting. To a certain extent, this sort of assistance can be encouraged simply by letting people know that it will be welcomed. It can be facilitated by offering telephone and fax numbers or e-mail and postal addresses where you can be reached or where messages can be left for you. It may even be useful to have business cards printed with this information; relative to other research expenses, this one is quite small and can return high dividends.

Exhausting Access

Access can be exhausted, too, not just cultivated and built up. Whereas in some cases repeated exposure helps the researcher to build rapport, in others exposure simply tears it down. In the extreme instance, one exposure is all the relationship will bear; this commonly occurs when the informant is defensive or antagonistic, or when she is extremely busy and cannot easily be imposed upon. Other instances are intermediate: the informant is willing to grant two but not three interviews—or three but not four. When you suspect that access to an informant may be exhausted relatively quickly, defer interviewing her until later in the research process, principally because your accumulated knowledge will then support a more productive interview.

Usually, deferring interviews with such informants inflicts no hardship on the researcher, since in the earliest stages, research can be conducted by

2. If you come to sensitive material in the interview, remind the interviewee of your earlier offer to turn off the tape recorder.

talking with the legion of lower-level officials and administrative assistants, public relations officers, and so on. Potentially useful information sources are to be found among retired officials and among agency officials who are part of a dissident faction.[3] These are rich sources at any time, but they are especially valuable in the early stages of research when it seems advantageous to defer your approach to more highly placed figures in the political establishment.

The researcher's reputation is also susceptible to being exhausted. It is perhaps not in danger of being lost, strictly speaking, so much as it is vulnerable to being transformed into a liability. Instead of being thought of as fair-minded, discreet, intelligent, and self-possessed, you may begin to be regarded as a partisan, a tale-bearer, a dope, or a dupe. The best way to avoid acquiring such an undesirable reputation is to eschew partisanship and indiscretion and, as I have already indicated, to actually be intelligent and self-possessed.

CONDUCTING A POLICY RESEARCH INTERVIEW

Policy research, in its completed form, becomes a political resource. Whatever its merits or demerits as a piece of rational analysis, it amounts to more than that. It may become a justification for certain parties to attack others or to defend themselves against attack and, hence, can be a weapon of persuasion in a war of propaganda. Although the tone and format of published policy research are typically neutral and disinterested, everyone recognizes that the research may be and often is used for political purposes, either by the author or by others. As a result, informants are highly sensitive to the political implications of whatever they tell you. How an informant treats you depends in large part on how she thinks your work will be brought to bear on her personal or political interests.

Being wary of the possible political implications of what they might reveal, informants may be reluctant to talk freely and honestly. You should assume that all interviewees confront this problem, even though you may

3. My former Goldman School colleague William Niskanen relates that colonels twice passed over for promotion to general were a favored source for civilian policy analysts like himself in the U.S. Defense Department.

not know to what degree. In more extreme cases, it may be necessary to use various subtle kinds of leverage against the interviewee. Before turning to the problem in its most severe forms, though, I will sketch a basic strategy for conducting policy research interviews in general.

Energizing and Steering the Conversation

The interview process is an interaction carried on between the informant and yourself. In this process the principal source of energy should be the informant. Your tasks are, first, to encourage the informant to talk and to keep on talking, and, once a suitable momentum has been attained, to steer, to redirect, to slow down, or to cross-examine.

In addition to the political motivation, informants will talk because they have a story to tell. It is safe to say that many politicians, administrators, and important staff feel (correctly) that much of their best and most valuable work, which is being done behind the scenes, is unnoticed and underappreciated. They will be surprisingly eager to use you as their conduit to the outside world. Some also want to make their "side of the story" better understood than they think it is—and, if you haven't heard it from others yet, you may be surprised at how interesting it is.

In most social science research involving interviews, it is assumed that the interviewer is, as much as possible, a neutral instrument for recording data emitted by the respondent. However, this is generally an inappropriate model for policy research interviews. Here the informant assumes that you as an interviewer are anything but a neutral instrument—and it would be foolish for you to try to appear in such an ill-fitting disguise—since the whole object of your research is to arrive at some policy recommendations. Thus, you need not fear probing the informant with provocative and even argumentative questions or comments—or to answer questions in return. Such exchanges can cause an informant to sharpen her wits and tone up her memory, and they may raise her psychic metabolism sufficiently to infuse energy into the whole interview process. If this is done with proper finesse, the informant will appreciate the stimulation. Your finesse as an interviewer, of course, consists of being argumentative without sounding (or being) closed-minded or hostile. It is a good idea to introduce contentious remarks in such a way that the informant, should she wish to do so, can retreat gracefully from the matter at

hand into another topic—thus keeping her energy level up rather than dropping into an embarrassed reticence.

Most interviews are conducted at the informant's place of work. Sometimes, however, a more informal setting, such as a restaurant or café, should be chosen. Your method of note-taking should be compatible with such an informal setting—perhaps on the back of an envelope handily stored in your pocket for just such occasions.

Apart from energizing the informant, your other main function in the interview process is to steer her onto topics of interest to you. How can this be done?

Sometimes you must interfere in the informant's conversation stream simply to reestablish your right to speak, temporarily slowing down the informant without making her lose too much momentum. This can be done by interrupting with a short string of easily answered factual questions pertaining to the subject matter she has been discussing. The content of these questions, or at least the last one in the string, should be suitable to work as a transition to the next topic you have in mind. Suppose, for example, that you are interviewing the integrated-social-services coordinator in your county, who is telling you about her agency's relations with the county's chief administrative officer (CAO). Having heard enough on this subject, you now want to steer her onto her agency's current budget request to the U.S. Department of Housing and Urban Development (HUD). The conversation might go like this:

INFORMANT: . . . so you see we've had a devil of a fight with the CAO all the way. Maybe it's not her fault, of course, the Board of Supervisors being so conservative and the CAO needing support for her reappointment . . .

RESEARCHER: [Interrupting] Yes, she is up for reappointment this year, isn't she?

INFORMANT: Yes.

RESEARCHER: Well at least she doesn't control your budget, does she?

INFORMANT: True enough.

RESEARCHER: But HUD does—and how are your relations with them? Do you get pretty much what you ask for from them, in the way of a budget, I mean?

The point is not to disguise from the informant the fact that you are trying to steer her away from one topic and onto another, although sometimes this is desirable and should be attempted. The point is really to help her move from one topic to another without having to lose momentum or to feel awkward. Indeed, she will sometimes feel trapped on a topic that she herself would prefer to leave, and your job at such moments is to help her maneuver off the subject. If you cannot think of where you wish to lead her next, just think of a subject that is not implausible and that is not too demanding emotionally or intellectually. While you go in slow motion through that topic, both you and the informant will have a chance to collect your thoughts and feelings preparatory to moving to the next matter of serious concern.

Involving an informant in discussions of personalities is a delicate matter. The informant must be reassured that you are not turning the interview into a gossip session, that she is not a purveyor of gossip, and that you are not a seeker of it. This can be done by first introducing the name of the personality in a neutral, usually factual, context:

RESEARCHER: A few moments ago you mentioned the Southside Community Health League. Dr. Green has been head of that for about a year now—or is it two?
INFORMANT: Probably closer to two.
RESEARCHER: Maybe it just seems shorter because I remember Dr. Black, his predecessor, so vividly.
INFORMANT: Yes, Black was quite a leader there.
RESEARCHER: Seems people have been more critical of Green—though I have heard quite complimentary things from some sources.
INFORMANT: Yes, he's pretty controversial. He's certainly a competent administrator and has been pretty nice to us—though we deal mainly with his deputy, Mr. White.
RESEARCHER: How come?

Thus the conversation is turned to personalities by a sequence of small steps, in which each participant encourages the other and in which both assume responsibility for whatever gossipy quality may eventually

threaten to intrude. Since personalities are such a sensitive topic, it is even a good idea to sprinkle your conversation with allusions to people about whom you may have no desire to question the informant. When you do want to pursue a discussion of a particular personality, this procedure makes the discussion seem less of a departure from the normal course of topics.

If the informant has unpleasant things to say about the personality under discussion, you may want to take pains to establish your own social, personal, and political distance from that individual. In the example just given, for example, the researcher has referred to "Dr. Green" rather than "Bill Green" and has indicated his distance by suggesting that he is unfamiliar with certain particulars of Green's career. If the informant has flattering things to say about the individual in question, you may choose to follow a contrary course, though it is always a little risky to appear very close to anybody, lest it arouse suspicions of partiality.

Leveraging the Defensive Informant

Occasionally you encounter an informant who is irrevocably committed to a defensive posture, for whom "No comment" is the primary safeguard and calculated evasion is the fallback position. Try to diagnose this problem very early in the interview and then reassess your goals for the interview in light of it. Concentrate on gaining information about specific questions that this informant is able to answer but that are probably not answerable by any other source. Since so much of your energy will have to go into cracking the informant's defenses, focus on some very specific objectives and begin to probe for them right away.

Once these preliminary assessments are out of the way and the interview has turned to specifics, the use of leverage is in order. First, let the informant understand that you are aware of his defensive posture, and signal that you do not intend to be put off by it. You might try to communicate that his defensiveness will not help him, that you know too much already to be shunted aside, and that you have access to other sources who have already told you much and to still others who will be willing to tell you more. Indicate that information from these sources may be more prejudicial to his interests than his own revelations would be, and that he therefore has nothing to lose, and perhaps something to

gain, by giving honest answers. A certain amount of bluffing may sometimes be necessary, though this tactic carries obvious risks. It is always better to actually know as much as you pretend to know, and to have access to the sources you claim to have access to, than merely to bluff.

Here is a sample of such an interview, with the head of a prominent local insurance company whom the researcher is pressing hard:

RESEARCHER: One thing I'd like to get more information about is the problem insurance companies have writing policies for merchants in so-called ghetto areas.

INFORMANT: [Silence. Pause.]

RESEARCHER: I mean, there may be problems because these policies are risky business propositions.

INFORMANT: [Silence. Pause.]

RESEARCHER: People say they are risky, anyway. Do underwriters in this area consider them risky?

INFORMANT: I can't really say for sure.

RESEARCHER: Well, some people in the Black Merchants Association claim that insurance companies won't write policies for them at all, that they've been classed as "unacceptable risks."

INFORMANT: I don't really know—insurance writing is the science of risks, isn't it?

RESEARCHER: [Decides that informant will provide no information on insurance industry doctrines or practices in general, or on the local underwriters in particular. Guesses that informant will be unwilling to discuss the doctrines or rules applied by his own company, and decides therefore to concentrate solely on gathering information about the practices of the informant's company.] Perhaps I can clarify my question by being more concrete. In your own Bedrock Casualty Company, are applicants ever turned down because they are thought to be unacceptable risks?

INFORMANT: I can't say for sure. I'm not that close to the operating details of our very large company.

RESEARCHER: Of course. [Signaling she will not be put off] You, or perhaps your secretary, could arrange for me to talk to someone at that level, though, couldn't you? [Seeking a different leverage point] But tell me about the category of "unacceptable risks." Does Bedrock Casualty tell its salespeople that the company will insure any premises provided the insured pays a high enough premium? [Shifting the terms of the question to throw informant off guard] Or is there a limit on how high a premium the company will set?

INFORMANT: Well, we do not like to charge exorbitant premiums, of course . . .

RESEARCHER: [Interrupting] So within the existing limits on premiums there might in fact be businesses too risky to insure—hence "unacceptable"? [Holding to offensive] How about cancellations? Has Bedrock canceled or refused to renew any policies of ghetto merchants even though they have not filed any claims recently? This is another thing the Black Merchants Association has been complaining about.

INFORMANT: [Deciding researcher knows more than he had thought and seeking preemptive protection against the Black Merchants Association's allegations] Well, yes, we have canceled a few, in the more riot-prone areas, and refused to renew other policies in that area. We had no choice; we stood to lose a lot of money in case of any trouble.

RESEARCHER: [Graciously ignoring this "confession," and trying to induce the informant to tell his side of the story] Of course, that's quite understandable. I think most people recognize this problem. [Now taking aim on a single statistic, the proportion of all Bedrock policies in ghetto neighborhoods canceled or not renewed in the last two years] In the past, have you written many policies in that area?

INFORMANT: Yes, we've done quite a bit, in the past anyway.
RESEARCHER: You still do insure some business over there, don't you?
INFORMANT: Yes, we do, though as I say, I'm not too close to the operating details . . .
RESEARCHER: [Interrupting] Could you estimate what proportion of your policy holders from, say, two years ago you continue to insure? Is it 80 percent, 20 percent? Just to give me some rough idea.
INFORMANT: Well, it would certainly be a lot closer to 80 than 20 but I really don't know.
RESEARCHER: [Deciding that this would be an interesting datum and that it is worth pursuing vigorously] Can we find out?
INFORMANT: Not easily. It's not in any files anywhere in that form, and it would be awfully difficult to find out.
RESEARCHER: [Not believing that it would be very difficult, deciding to contribute her own labor to searching the files, if necessary, and resorting to a bluff] People have the impression that Bedrock is less inclined to write policies for ghetto merchants than other companies in this area. I don't know where the facts come from—but I think some lawyers connected with the Black Merchants Association have been looking into legal aspects . . .
INFORMANT: What? I'm sure we are no worse, or different, than any other company in town! I'd like to see these so-called facts!
RESEARCHER: If I get any further clarification on that, I'd be happy to let you know. Meanwhile, I'd be willing to help out in whatever way you like in getting this information together concerning your own company's record in this field.

Let us interrupt this scene without a conclusion because, however it turns out, the researcher has done the best she could. The president of Bedrock Casualty may deliver the information sought, or he may not.

Good interviewing strategy and tactics do not guarantee success, especially when the odds are weighted against the researcher to begin with.[4]

One common ploy used by a defensive informant is to reel off masses of irrelevant statistics and facts, which can easily swamp a naively data-worshipping researcher. Another ploy is to ramble garrulously about side issues, while running out the clock on whatever time limit has been set for the interview. Your best defense against these evasive tactics is to be able to recognize them for what they are.

If your own leverage fails—and if the elusive information is sufficiently important to you—you may be able to use someone else's. A graduate student researcher may have little leverage with determinedly defensive bureaucrats, for instance, but a legislator, or her staff assistant, will almost certainly have more. Hence, as a last resort, you might persuade a sympathetic legislator to help out. Sometimes a newspaper reporter or an established group can be of assistance. The local medical society, for example, may be able to get information from the county hospital administrator about hospital policies that no academic researcher—and perhaps not even a county supervisor—could get.

A significant constraint on using leverage is the desirability of maintaining cordial relations with whatever agency or individual is being pressured, for you run a clear risk of alienating the objects of your leveraging tactics. With respect to a given study, this problem can be mitigated by postponing the more offensive tactics until relatively late, when the study is less vulnerable to being undermined by the offended party. The problem is more difficult, however, when you envision a long-term relationship—lasting well beyond the conclusion of the present research

4. The researcher's bluffing tactic in this scene is of debatable morality. Although I believe it would be unethical in most circumstances, there are occasions when it can be justified. This is one of them. In this case, the Bedrock president seeks to withhold proprietary information. Does he have a right to do so? Normally, yes. But this right has to be weighed against the injustice of depriving ghetto merchants of a nearly essential prerequisite for doing business when they might be perfectly willing to meet reasonable price terms for acquiring the insurance (perhaps with government or philanthropic assistance). The researcher here has an arguable right to try to combat this injustice. Given that right, does she also have the right to use deception? The use of explicit deception on the part of the researcher is balanced by the use of implicit (covert) deception on the part of the insurance company's president.

effort—with the agency or individual under scrutiny. Certain information may have to be sacrificed in order to preserve a modicum of goodwill for the future.

USING LANGUAGE TO CHARACTERIZE AND CALIBRATE

The basic medium of the interview is spoken language embedded in a conversational context. Such a medium, when used as a representational device, presents reliability and validity issues (in psychometric terms).

Semantic Tip The simplest issue—to see, though not necessarily to resolve—involves the language of characterization. If an informant says, "Yes, this is a frustrating job," you have to interpret both the nature and intensity of the word *frustrating,* and do so in a way that permits you to calibrate the result against some larger frame or benchmark. This can be done by asking a series of questions designed to do the calibrating. One shortcut is to start by offering up your own characterization and see how the informant reacts to it: "If I had this job, I would find it awfully frustrating, I think." This quickly establishes a benchmark of some kind—"awfully frustrating"—for you and the informant to use. Of course, there is the problem of knowing whether you and your informant mean the same thing by the expression, since your frustration thresholds may differ. But you're off to a good start.

An improvement on the previous example would be to create two such benchmarks—that is, to describe a whole continuum with anchors at both ends and perhaps a verbal midpoint. For example: "Would you say that your reaction to proposal X was extremely skeptical—as I've inferred from what you already have said—or was it relatively favorable. . . . or was it maybe 'wait-and-see'?" This approach has the added advantage of respecting virtually any position your informant holds and of communicating your willingness to find anchoring words based in the informant's own history. Or you could anchor one or both ends in what "other people" have supposedly been saying.

To be sure, by characterizing the available options in this way, you are putting words into other people's heads and sometimes into their mouths. Before you proposed "extremely skeptical," your informant may never have thought of the proposal in this way, and so you run the risk,

by asking the question, of having created such a thought out of thin air. But that risk comes from using language as a medium; it can't be avoided. Even when you use the ostensibly neutral and clinical language that survey researchers and reporters use, you are putting words into people's heads and mouths. More provocative characterizations, when used as benchmarks, are on a logical par with the more neutral alternatives offered by survey instruments and professional journalists.

PROTECTING CREDIBILITY

Like social science research, policy research is eventually subject to criticism on intellectual grounds. But unlike social science research, it is even more vulnerable on political grounds and, indeed, is vulnerable to attack by the very subjects of the study. In social science research, the subjects rarely become significant critics of the product, but in policy research their criticism is inevitable. Therefore, the researcher should take steps to protect the ultimate political credibility of his work from politically motivated as well as strictly intellectual attack.

Defending against Politically Inspired Criticism

In contrast to that of social science research, the primary goal of policy research is not intellectual enlightenment (either yours or that of your professional colleagues), although enlightenment is inevitably a by-product. Instead, the goal is to improve your understanding of a policy problem, and of possible means of coping with it, to the point at which it becomes possible to advocate a responsible course of action. Thus, policy research takes aim at broad and complex phenomena, and so it is typically satisfied with very gross approximations of "truth," in contrast to social science research, which typically seeks more refined interpretations of narrowly circumscribed problems. The gross and approximate character of policy research is an open invitation to politically inspired criticism. How can you, as the researcher, protect yourself?

For one thing, you should attempt to touch base with any party (or any institutional interest) who might later try to undermine the report by claiming to have been ignored. Indeed, it is a good idea to preempt such claims by quoting that party in the report, as evidence of a sort that the

party's views were taken into account. For instance, if you are going to recommend alterations in the way superintendents are selected in a given school district, it would be best to interview representatives from the local association of school administrators and from the local chapters of the National Education Association and the American Federation of Teachers. Spokespersons for these groups may have interesting opinions to contribute to the research project, but even if they do not, by consulting them you gain protection against their criticisms should they decide to oppose the recommendations in your report. It may even be useful to send out a preliminary copy of the report to these interests for reviews.

Second, you should seek out "experts" or others with political or intellectual authority to whom you can attribute views, opinions, estimates, and so on, about which you feel especially uncertain. Quoting published sources is one way of making such attributions, and including quotations from interviews is another. In addition, you should line up experts who will be willing to speak up in support of your work once it becomes public. Sources who are quoted in the report as having a view on this or that subject become natural targets for inquiring journalists or political decision makers; these sources have an incentive to defend their quoted views when questioned.

Third, you should pay special attention to potential opponents and identify which propositions they are likely to attack. These target points should be bolstered in advance by expert quotations, and some polite reference should be made to the existence of counterarguments—without giving them too much space or prominence. The very opponents who can be expected to raise objections later should be quoted, to defuse any claims that their arguments or positions were ignored. (There may be additional psychological advantages to the balanced or two-sided presentation, simply as a subtly persuasive form of propaganda directed at the reader.)

Statistics can be useful for buttressing credibility. Employed for this purpose, they play a documentary rather than an informational role. Statistics can document the validity of generalizations that political opponents might otherwise challenge, even though their truth is abundantly evident through more impressionistic sources.

Preparing for Premature Exposure

Politicians and policy researchers work on different timetables. The former often call for "results" well before the research is in any sense finished. Even when no one demands it, however, unexpected opportunities often do present themselves before your research work is close enough to being finished that you can seize the auspicious moment to present your results.

One possible strategy is to map out (as much as possible) the timetable of potential political demands and to arrange your research timetable in at least partial correspondence. Another strategy is to prepare yourself as soon as possible with answers to the crudest kinds of questions that might be asked of you. Since these are generally the kinds of answers politicians need and want anyway, you may as well formulate them early in the course of your research. Finally, it is important, early on, to line up your supporting experts, as well as to touch base with potential opponents. Since, once again, these contacts must be made eventually, there is good reason to make them sooner rather than later.

STRATEGIC DILEMMAS OF POLICY RESEARCH

By way of summary and conclusion, let us consider the question: Which informants should be approached when? Answering this question forces a useful review of most of the issues discussed earlier.

We may divide the "when" part of the question into "relatively early" and "relatively late" in the course of the research project. Approach the following informants relatively early:

- Persons who are likely to facilitate your search for rich information sources
- Powerful persons who directly or by your reputed connection with them will facilitate your access to sources
- Knowledgeable persons who will provide you with the information you need to hedge against premature political exposure of your work, and whose information will contribute to your capacity to exert leverage against defensive interviewees
- Friendly experts who will contribute to your political credibility in case of premature political exposure

- Potential opponents with whom you touch base in order to hedge against premature political exposure

Approach these informants relatively late:

- Hostile or defensive informants against whose tactics a prior build-up of leverage is desirable
- Busy informants to whom you might lose access permanently once you have seen them, or about whom you are not sufficiently informed to interview early
- Potential opponents, especially if powerful, who might try to forestall your access to others and thereby cripple your research efforts
- Administrators who have knowledge of potential trouble spots but who will be unwilling to point them out until it appears to be in their self-interest

There is one obvious contradiction between these two lists—approach potential opponents early and late—and several others that are not quite so obvious. Often the busy and the defensive informants are also in the best position to facilitate the search for sources, open doors, and provide useful information. Top agency administrators, for instance, may have plentiful experience with the policy problem under investigation and may be able to provide easy access to sources, but they also have a vested interest in maintaining the status quo or something very close to it. In any event, they may not take kindly to having their activities scrutinized too carefully by an outsider. Other similar examples can easily be called to mind. There is in principle no way to reconcile these incompatible prescriptions of whom to approach early and whom late. You will have to consider the full details of your particular situation and then balance the risks and rewards inherent in any given choice. There is no way of avoiding such trade-offs; you should simply make them consciously rather than inadvertently.

PART

III

"SMART (BEST) PRACTICES" RESEARCH: UNDERSTANDING AND MAKING USE OF WHAT LOOK LIKE GOOD IDEAS FROM SOMEWHERE ELSE

It is only sensible to see what kinds of solutions have been tried in other jurisdictions, agencies, or locales. You want to look for those that appear to have worked pretty well, try to understand exactly how and why they may have worked, and evaluate their applicability to your own situation.[1] In many circles this process is known as "best practices research." Simple and commonsensical as this process sounds, it presents many methodological and practical pitfalls. The most important of these is relying on anecdotes and on very limited empirical observations for your ideas. To some extent, these are—one hopes—supplemented by smart theorizing. This method is never perfectly satisfactory, but in the real world the alternative is not usually more empiricism but, rather, no or thoughtless theorizing. Part III helps you to avoid the pitfalls and offers tips on how to get the most payoff from your search for best practices.

DEVELOP REALISTIC EXPECTATIONS

Semantic Tip First, don't be misled by the word *best* in so-called best practices research. Rarely will you have any confidence that some helpful-looking practice is actually the best among all those that address the same

1. Readers interested in a more social scientific exposition of many of the points in Part III should consult Bardach 2004.

problem or opportunity. The extensive and careful research needed to document a claim of "best" will almost never have been done. Usually, you will be looking for what, more modestly, might be called "good practices."

But even this claim may be too grand. Often you can't be sure that what appears to be a good practice is even solving or ameliorating the problem to which it is nominally addressed. On closer inspection, a supposedly good practice may not be solving the problem at all. Inadequate measurement, plus someone's rose-colored glasses, was simply producing the illusion of problem mitigation. It may also turn out that, even if good effects have truly occurred, the allegedly good practice had little or nothing to do with producing them. All these are known technically as *internal validity problems*. The discussion that follows assumes such problems have been satisfactorily—though not perfectly—resolved and concentrates only on the *external validity problem* of extrapolating from a setting in which a good practice has indeed worked well to settings that differ in little-understood but important ways may lead to weak, perverse, or otherwise damaging results.

ANALYZE SMART PRACTICES

A "practice" is a tangible and visible behavior. When you can ask a program manager what her practice is in addressing some problem, she can answer with a description of what she does. Typically, though, a practice is also an expression of some underlying idea—an idea about how the actions entailed by the practice work to solve a problem or achieve a goal. Some such ideas are particularly clever, and I shall explain further what I mean by this. The practices that embody them I call "smart practices."

Finding the Free Lunches

One way of being clever is by getting something for nothing. Contrary to the dictum that there is no such thing as a free lunch, creative policymakers and policy implementers invest quite a lot of energy in looking for just such comestibles. Often, they are successful. To understand how this can be, consider the free lunch cornucopia produced by the natural sciences and engineering. The energy stored in the chemical bonds in a cup of gasoline can run a car for a few miles if only you know how to access that energy and channel it. Pulleys and levers supply mechanical

advantage. Bacteria happily eat and destroy the organic crud in a city's wastewater almost for free. All these materials, devices, and conditions amount to getting a lot of "something" for nothing or for relatively little. The source of all these boons is simply Mother Nature.

In the social world, the sources of something for nothing are usually less tangible and less directly gifts of Mother Nature, but they are no less real. The "invisible hand" of the market creates social value where once there was only individual pursuit of self-interest, and, metaphorically at least, it operates without charge. Alphabetical ordering permits people to find information in a fraction of the time it would have taken had there been no such ordering. Queuing at bus stops is easy to understand and usually fair, and it makes life better for everybody.

In the world of policy and management, there are no doubt fewer and less delectable free (or nearly free) lunches than in the marketplace or in an information storage facility or at a bus stop. But they are there. All the "opportunities" described in Box I-1 (p. 8) have this latent potential to generate something of public value relatively cheaply. (On the nature of "public value," see Moore 1996.) You might say that the difference between the (high) value created and the (low) cost, and risk, of producing it represents a free lunch.[2]

Opportunities don't deliver up their latent value without some additional work, however. This work is done by practices that take advantage of their potentialities, and these practices typically cost something and are subject to various vulnerabilities, as well. However, the smarter these practices are, the more value they can manage to extract at lower cost and risk.

The following list offers some examples of candidates for smart practice status—candidates, that is, because to my knowledge they have not been subjected to the extensive empirical testing needed to confirm such status:

- *A "high-expectations" welfare-to-work program.* Implemented in the early 1990s, the Greater Avenues to Independence (GAIN) program I studied in Riverside County, California, was a prototype for the

2. Risks come in several varieties; see the section in Part III, below, titled "Describe Generic Vulnerabilities."

1996 federal welfare reform act. Unlike most other welfare-to-work programs, the Riverside program set high expectations about work for GAIN participants in two senses. In many different ways, it signaled to participants that program staff had confidence in (high expectations of) their ultimate success in getting a job and getting off welfare. This confidence was intended as an antidote to many participants' low self-esteem, and consequent low effort to reattach themselves to the labor force. Staff also signaled—and expressed in program rules about early and diligent job search, as well as through a variety of formal and informal pressures—that "society expected" welfare participants to shape up and take responsibility for their own financial well-being. The Riverside GAIN program designed its recruitment, training, performance appraisal, and other administrative systems to support this high-expectations philosophy (Bardach 1997). In effect, the high-expectations model took advantage of the natural energy to solve their own problems that program managers assumed to be latent in the program participants.

- *Reading One-to-One.* This tutoring program for children in grades 1–3 who have fallen far behind in learning to read English was created by George Farkas, at the time, of the social sciences faculty of the University of Texas at Arlington. It was first tried out in Dallas and then spread to Houston and a number of other cities. The program involves systematic instruction in phonemic awareness, one-to-one tutoring by a well-trained tutor, and highly structured feedback and supervision. Like all phonemics-based programs, it recognizes that English orthography does not map sounds in a systematic or logical way and that it is at some point necessary for learners to master the decoding and encoding rules actually in use. It takes advantage of the fact that children's early failures in reading that come from neglect of phonemic awareness are reversible by regular tutoring. It also takes advantage of the emotional bonding that comes from the one-to-one tutoring relationship and of the increased motivation after the student experiences some successes. The simplicity and systematization of the teaching materials, teaching methods, and administrative oversight system make the program easily replicable and keep the costs relatively low (Farkas 1998).

- *Sharing maintenance responsibilities for a neighborhood park between the local parks department and the residents of the neighborhood.* Nonprofit organizations often spring up to provide services of a nonstandard sort not provided by the public agency (e.g., same-sex schools, abortion clinics). An extension of this basic idea is a partnership in which the public sector supplies certain resources that are not only supplementary but also complementary. In many a setting, the city government provides the parkland and the neighbors provide some or all of the labor to make the land more serviceable in some way. This practice takes advantage of two interesting potentialities: the potential for gains from trade between two parties, and the use of what is in effect bartering, in a situation where there are administrative and political barriers to organizing the transaction in cash.
- *The "expenditure control" budget.* Adopted first in the city of Fairfield, California, this practice was publicized by David Osborne and Ted Gaebler (1992) in their influential book, *Reinventing Government.* As originally conceived and implemented, this budgeting strategy gave each department the same basic mission and the same budget as in the previous year (with an inflation adjustment) but abolished the line-item specification of expenditures, permitting the department to keep any savings and reinvest them in other mission-related activities. This approach took advantage of the superior technical and operational knowledge of program implementers relative to that of elected officials and bureaucrats in fiscal-control agencies.
- *Milestone payments to nonprofit service contractors.* In 1992 the Oklahoma Department of Rehabilitation Services began paying nonprofit contractors for meeting rehabilitation milestones, defined in performance terms, that mental health clients could achieve en route to higher levels of employability.[3] The clients participated in assessing whether the milestones had been met, and the contractors helped to define generic milestones and other aspects of the program.

3. This program was a 1997 finalist in the Ford Foundation/Kennedy School of Government (KSG) Innovations in American Government competition. My source for information about it was the Innovations program files.

The milestone system also permitted contractors to claim reimbursement from the state on a more accelerated schedule than they had previously been able to do, thereby taking advantage of the power of self-interest to motivate better performance from the nonprofits. It also provided greater transparency than more traditional fee-for-service arrangements, under which the funding agency did not know much about the quality of the service provided.

- *A cooperative project between rehabilitation and recycling programs.* Hennepin County, Minnesota, arranged for mentally disabled clients of the county vocational rehabilitation program to sort and recycle discarded auto batteries, an item of concern to the county's environmental management agency.[4] The two programs thus took advantage of production complementarities between human and physical "assets" that they could deploy.

Semantic Tip I have made a point, in describing supposedly smart practices, of saying that each practice "takes advantage" of something. This is a linguistic device for ensuring that, in analyzing how the practice works, we focus on how the practice aims to exploit, or take advantage of, some latent opportunity for creating value on the cheap.

Breaking Loose from Conventions and Assumptions

Another way of being clever is not so much technical—finding those free lunches—as ideological and psychological. It involves disrespecting conventional boundaries. In the world of public policy and management, this practice sometimes involves challenging assumptions that are anchored in value commitments. For example, since the late 1980s we have begun to shake loose the assumption that just because some good or service is "good for the community" and ought to be *financed* through taxation, it ought also to be *produced or delivered* by government employees. Instead, we now contemplate contracting out to the nonprofit or even the profit-seeking sectors such traditionally "governmental" functions as primary education, correctional institution construction and

4. This project was a Ford/KSG semifinalist. See Borins 1998, 200; also, I had personal communication with Hennepin County program managers.

management, and welfare-to-work programming.[5] In this case, we are challenging the assumption that governmental provision necessarily embodies a social expression of the value of community. Taxpayer financing may do so, but governmental provision does not.

Another value-oriented smart practice may be to simply articulate the values that underlie a program and make it effective. Riverside's high-expectations welfare-to-work model, for instance, was one of relatively few programs prior to the mid-1990s that decided it was proper to articulate the value premises that underlay its approach to case management.

OBSERVE THE PRACTICE

In free-lunch-type situations, we can say that the smart practice is "whatever takes advantage of—or exploits—the latent opportunity to create value on the cheap."[6] But let us try to say more about how to characterize this "whatever."

Characterizing the Features of a Smart Practice

The basic mechanism in a smart practice is its means of directly accomplishing useful work in a cost-effective manner. A smart practice is made up of (1) the latent potential for creating value (from Box I-1, for instance), plus (2) the mechanism for extracting and focusing that potential. In the six examples described earlier, I indicated the basic mechanisms by saying what each of the practices "takes advantage of." For instance, the shared maintenance for parks takes advantage of potential gains from trade and the opportunity to use barter as a substitute for cash payment.

But there is more to a smart practice than this basic mechanism (Bardach 2004). Some characteristic secondary features of a smart practice are the following:

- *Implementing features,* which directly embody the basic mechanism. In the Oklahoma milestones case, for instance, they are the payment schedule, payment amounts, and payment conditions. In the

5. Whether or not contracting-out is a smart practice, it is highly controversial, I might add.

6. With minor adjustments, the same analysis can also be applied to practices whose "smartness" derives from their departure from convention.

Hennepin County recycling/rehabilitation program they are the stock of recyclable materials, the pool of mentally disabled clients, and the interagency understandings that link them.

- *Supportive features,* which are primarily those resources used to bring the implementing features into being—for instance, a budget and an institutional structure. Other supportive features that have a less directly instrumental role but may nevertheless be important might include the culture of the organization or the broader political environment.
- *Optional features,* or those that just happen to be of interest to actors in the site where the practice is observed but may not necessarily be valued elsewhere. For instance, in the Oklahoma milestones case, the feature that allows vendors to participate in the design of the program seems to me optional—although nice!

Distinguishing Functions and Features

Semantic Tip In adapting a seemingly smart practice from a "source site" for application at a "target site," you want to be rigorous in replicating the logic—the "how"—of the basic mechanism, while leaving maximum flexibility as to the specific means to carry it out. To do this, distinguish between the *functions* involved in getting the mechanism to work and the particular *features* that embody those functions. For instance, in the milestones program, the functions include setting the milestones and verifying the claims of achievement. These actions are part of the defining logic of the practice—they cannot be omitted without changing the very essence of the program. However, exactly what features are chosen to implement these functions or to support the implementation strategy is another matter. With regard to the high-expectations welfare-to-work program, two essential functions are creating a moral climate: favoring responsibility and instilling self-confidence that such responsibility can be met. Exactly what design features should be chosen to implement and support these functions is a more open-ended question, though.

Semantic Tip Here is a linguistic hint to help you separate features and functions: Functions should be formulated as gerunds, verb-like nouns ending in "ing"—as in the actions defined above as *setting, verifying,*

creating, and *instilling*—while the features that perform these functions can be indicated by pure nouns.

An exception to this principle of formulating functional language arises when you really need or want to specify a particular method for carrying out a function. In the milestones case, for instance, you might intentionally refer to a contract as a specific means of defining expectations among the parties and to documents as a means of attesting that the milestones have been met.

Allowing for Variation and Complexity

Because smart practices are internally complex, context-sensitive, and capable of being used by different parties to pursue slightly different bundles of goals, how we talk about them should reflect these qualities.

Characterization should be generic and flexible, not prescriptive and overly precise. Consider the expenditure control budget described earlier. Does the practice there require giving *all* the savings back to the department, or would, say, 50 percent qualify? If the basic idea is to provide incentives to spend wisely, returning 50 percent may suffice. Probably the best characterization, therefore, would be "allowing the department to retain *enough* of the savings for its staff to feel motivated to create the savings in the first place."[7] It would then be up to whoever implements the expenditure control budget to determine what "enough" means in the local context.

It *should* be left to local implementers to figure out the details of the generic practice that make sense in their own context. Allowing for local adaptation of nonessential features not only serves common sense but also encourages greater buy-in by the locals to a practice that in some sense is being imported from elsewhere or, worse yet, imposed from outside.

Characterization of the basic mechanism of a smart practice is not necessarily simple; it can be complex. My list of examples of candidate smart practices included only relatively simple practices, so as not to cause

7. This interpretation is asserted by the researcher-observer; it is not necessarily something that has been done in practice or endorsed by any practitioners.

confusion. However, some smart practices are multifaceted, and thus not easy to summarize in a few sentences or even paragraphs. Michael Barzelay analyzed what he called the "postbureaucratic paradigm" for managing statewide overhead and control functions in Minnesota state government. He considered trying to reduce the many aspects of this postbureaucratic paradigm—which I would also call a smart practice, albeit a very large one—to a few "core ideas" such as service, customer focus, quality, incentives, creating value, and empowerment. However, he concluded, "the major concepts . . . are not organized hierarchically, with one master idea at the top," but are instead arrayed as "an extended family of ideas" (Barzelay 1992, 115–117).

A related management reform paradigm, called by many the "new public management" (NPM), emerged in New Zealand in the mid-1980s as another such extended family of ideas and practices. Noting that it "is not reducible to a few sentences, let alone a slogan," one observer (Borins 1998, 9) goes on to state its key ideas, as follows:

- Government should provide high-quality services that citizens value.
- The autonomy of public managers, particularly from central agency controls, should be increased.
- Organizations and individuals should be evaluated and rewarded on the basis of how well they meet demanding performance targets.
- Managers must be assured that the human and technological resources they need to perform well will be available to them.
- Public-sector managers must appreciate the value of competition and maintain an open-minded attitude about which services belong in the private, rather than the public, sector.

Specimens of a smart practice in the real world look rather different from one another and require careful interpretation. You should try to find multiple exemplars, or specimens, of a smart practice to get a sense of its robustness and efficacy when (1) it is being implemented under different supportive (or antagonistic) conditions, (2) it comes with different optional features attached, and (3) it employs supposedly equivalent but nevertheless somewhat different means to perform the required functions. Ideally, you would be able to find social scientific evaluation studies of

practices that supply both data and theoretical interpretation regarding such matters. In most cases, however, such evaluations will not exist. Normally—or perhaps at best—you will find writings or speeches by practitioners describing successes in a few places, accompanied by only sketchy descriptions of what was done or the difficulties of implementation. You will need to think very hard and reason very carefully about how you want to conceptualize (that is, define) the smart practice of interest and to assess the support requirements you think are most important. You need to do this even before you get to thinking about how the practice might work in the particular context(s) you have in mind (see the later discussion of this point under "But Will It Work Here?").

DESCRIBE GENERIC VULNERABILITIES

It should be part of standard professional practice in describing smart practices to explain not only how and why they work but also how and why they fail, collapse, backfire, and generally make people sorry they ever tried them. That is, we should be told the nature of their *generic vulnerabilities.* A generic vulnerability is a potential weakness of the practice that is somehow connected with its basic causal structure. It may have to do with a high sensitivity to small errors in execution, or with the environment in which the practice is being implemented (e.g., an environment that imposes certain insupportable stresses).

Of course, all political and implementation environments are stressful to a certain degree, and we can reasonably include in the definition of a particular smart practice those features necessary to safeguard it against the more predictable and potentially damaging stresses. Without such safeguards, an otherwise smart practice can become a very dumb practice. For instance, although privatizing certain municipal service functions is a smart practice when would-be private suppliers operate in a competitive market, it might become a very dumb practice under these circumstances: (1) if it were carried out in an environment monopolized by a single supplier; (2) if the bidding process were very corruptible, and corrupt interests were to discover this fact; (3) if inappropriate performance measures were stipulated in the contract; or (4) if the municipal contract management procedures were overly rigid or overly lax. To take another example, a high-expectations welfare-to-work program is vulnerable to

the condition of the local labor market: if unemployment is high and jobs are scarce, high expectations may produce in participants more defeatism about themselves and more cynicism about the "responsibility" that society is urging on them. A government/neighborhood partnership for park maintenance is, in a generic sense, vulnerable to, among other things, temptations on the part of policymakers to slowly shift more and more of the burden onto the neighbors while reallocating budgetary funds to other departments.

Generic vulnerabilities are only the *potential* for trouble, it should be remembered. Whether the troubles materialize depends on the nature of the local environment in which the smart practice is implemented and on the success of various parties who are aware of the vulnerabilities in designing and implementing successful countermeasures. Contracting processes, for instance, can be designed to minimize corruption, albeit at some cost. And neighbors entering into a partnership with the city regarding parks maintenance can insist on putting the terms of the partnership in writing and holding a well-publicized press conference to announce them. Even if such a document had no legal standing, it might give neighborhood representatives some useful political leverage in later years.

Two particular types of vulnerability are especially worth attending to. One pertains to likely failures of general management capacity—such as a low general level of leadership talent or the lack of a "good government" ethos that would make it easier to implement this or any other practice successfully. The other pertains to weaknesses intrinsic to the particular practice itself—such as a service delivery program's susceptibility to conflict over whether to give priority to this or that catchment area or needy subpopulation, or a safety-oriented regulatory program's inability to determine whether to err on the side of injury-tolerant leniency or costly stringency.

BUT WILL IT WORK HERE?

Assuming that you have sufficiently understood the essence of the generic smart practice, including its generic vulnerabilities, and have mapped the variety of supportive features that could increase its odds of success, in the end, you must still ask: "Assuming that this practice is indeed

smart in some contexts, is ours a context in which it can work well enough to warrant trying it?" Answering this question intelligently entails looking both at the source contexts, where the practice appears to have worked well, and at your own target context, where it is being considered for adoption.

Assessing the Target Context

Within your target context, a careful assessment of the present situation is in order, of course, but a static answer based on this assessment is not enough. You need to think also about what might be done at reasonable cost or risk to improve the prospects of the smart practice in the target context, were it to be implemented there. These actions fall into the following two categories:

- *Safeguarding strategies.* Consider the generic vulnerabilities of the smart practice: are the most dangerous of them likely to cause unacceptable trouble in your context? For instance, if excessive rigidity in the contract management process is a generic vulnerability of partnering with a nonprofit agency, are your contract management institutions known to be unusually rigid? And if so, is there anything you can do to offset this problem? Might you, for instance, find someone in the contract management bureau who can serve as a special protector and expediter? Or, if you cannot do that, can you find some way to structure the contract terms so that the contractor is held accountable for achieving general results rather than for following specific procedures?
- *Enhancement strategies.* Consider what I called earlier the "supportive features" that can help a practice to work better: What supportive features will be put into play? How well are they likely to perform? Can you do anything to improve them? For instance, can you attract top-notch personnel to manage this program or undertake this project? Can you obtain more stable funding than annual appropriations? Can you mobilize the press to take positive notice of what you are doing? Can you count on the support of key stakeholders and relevant political constituencies—or at least on weak action from opponents?

Evaluating the Source Contexts

If you have to search very hard for smart practices that might be usable in your own situation, the chances are that such practices are not widespread. This means that the specimens you locate will come from jurisdictions, agencies, or locales where policymakers and administrators tend to look more favorably on novelty and innovation than is usually the case. Hence, their overall managerial capacity may be better than average—and perhaps better than the one in your own locale.

If the source contexts are largely pilot or demonstration programs, you need to be particularly cautious, because (1) pilot program implementers often bring more enthusiasm and talent to bear on their work than the average program implementers, and enthusiasm and talent count for something; (2) the political and financial conditions at the pilot sites are probably more favorable (or less unfavorable) than those at the average site; and (3) bureaucratic resistance to a pilot program is typically less intense than to a permanent change that threatens existing values, status, job security, or work routines.

How cautious should you be in extrapolating from successes observed in pilot or demonstration contexts? No systematic research exists to answer this question. However, a RAND Corporation analysis of a variety of juvenile crime prevention programs discounted the effectiveness levels attained in the pilot contexts by 15–40 percent when estimating a "scaling up penalty" that would apply when implementing the programs on a wide scale (Greenwood et al. 1995). Although the RAND analysts offered no explicit reasoning for choosing the penalty factors that they did, their choices do seem reasonable.

If you are analyzing the possibility of implementing a smart practice not just in some known local context but on a wide scale, you should be concerned about more than the fact that pilot program results may be much better than average. You should also be concerned about the existence of many *below-average* sites where the smart practice would be implemented—some of them perhaps quite a bit below average. In an era when it was much less common than it is today to think about the federal devolution of program and policy responsibilities to state governments, federal policymakers—particularly political liberals—often worried about the

"Mississippi problem." Mississippi was the rhetorical symbol of the poor, backward, and probably racist jurisdiction that would almost surely wreck or pervert any smart practice it was given responsibility for implementing.

BACK TO THE EIGHTFOLD PATH

Given the typical shortfall of good evidence relative to theory and speculation when it comes to assessing a smart practice, there is a danger of unwarranted optimism. Indeed, a common criticism of the best practices research tradition is that it becomes excessively enthusiastic about what appear to be good ideas before their worth is sufficiently tested.[8]

But how much testing is "sufficient," anyway? The answer has to be framed partly in terms of the costs of displacing what might actually be a better practice—perhaps even the practices currently in use (described earlier as "letting present trends continue"). However, if you are reasonably confident that current practices are ineffective or harmful, the costs of wrongly abandoning them in favor of the new and untried may not be so high after all. Thus, although the new and untried should bear *some* burden of proof, it should not be an excessive one. The correct approach is to treat the risks and uncertainties involved in adopting some seemingly smart practice as comparable to the uncertainties associated with all the other alternatives under consideration.

Of course, the costs of change—negotiation, insecurity, hard feelings, and so on—must also be counted against bringing in a new and seemingly smart practice. But such costs must be counted against any change, not just change to accommodate smart practice. Moreover, if institutions and people are very stuck in their ways, there may be benefits to change as such, not merely costs.[9]

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8. Unfortunately, excessive enthusiasm for experiments that eventually fail gives even appropriate enthusiasm for experimentation a bad name.
9. Alternatively, if institutions and people are forever being reformed and reinvented and remodeled—as occurs in many public school systems—there may be benefits to stability, consistency, and focus.

APPENDIX

A

SPECIMEN OF A REAL-WORLD POLICY ANALYSIS

The following text is excerpted from the policy brief "Mandatory Minimum Drug Sentences: Throwing Away the Key or the Taxpayers' Money?" prepared by the RAND Corporation. It is provided as an example of a policy document and was chosen for its thorough and focused analysis as well as its concise presentation. My annotations appear in the numbered notes below the text. The notes of the authors of the brief are indicated by asterisks.

PREFACE

In response to public concern over disparity of sentencing by judges and brevity of terms served by criminals, state legislatures and the Congress have written into law minimum sentences for specific crimes. In this report, we estimate the cost-effectiveness of mandatory minimum sentences for crimes related to cocaine distribution. These estimates are made relative to the cost-effectiveness of spending additional resources on enforcement without mandatory minimums and on drug treatment.[1] Our central effectiveness measure is reduction of the nation's cocaine

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Source: Jonathan P. Caulkins, C. Peter Rydell, William L. Schwabe, and James Chiesa, "Mandatory Minimum Drug Sentences: Throwing Away the Key or the Taxpayers' Money?" (Santa Monica, Calif.: RAND Corporation, 1997).

1. Cost-effectiveness analysis requires comparison. Often we compare the cost-effectiveness of some new state of the world with the old, existing one. But in this case the researchers compare several alternative new states of the world.

consumption, although we also examine reduction of cocaine-related crimes, along with decrease in cocaine spending, which is related to such crimes.[2]

Because this report may be read by people with diverse interests, it is divided into two parts.[3] Readers interested principally in narcotics control and criminal-justice policy may wish to stop at the end of Part I. Part II has been prepared mainly for those also interested in the role and techniques of mathematical modeling in policy analysis, although some effort has been devoted to make it understandable to those not expert in this area.

This research was supported by a gift from Richard B. Wolf of Richland Mills and by funding from The Ford Foundation. This study was carried out within RAND's Drug Policy Research Center. The center's work is supported by The Ford Foundation, other foundations, government agencies, corporations, and individuals. It carries out extensive assessments of drug problems at local and national levels. Those interested in further information should contact the center at RAND's Santa Monica address.

SUMMARY

In recent decades, the American public has responded favorably to political leaders and candidates who have espoused longer sentences for the possession and sale of drugs. Among the more popular sentencing extensions are "mandatory minimums," which require that a judge impose a sentence of at least a specified length if certain criteria are met. For example, federal law requires that a person convicted of possessing half a kilogram or more of cocaine powder be sentenced to at least five years in prison.

Mandatory minimums have enjoyed strong bipartisan support from elected representatives and presidential candidates.[4] To these proponents, the certainty and severity of mandatory minimums make them better

2. These different "measures" are our "criteria." Note that by making one "central" and two others obviously less so, the authors implicitly are differentially weighting the criteria.

3. They are "telling the story" to two different audiences—which amounts to telling two different, though related, stories. Presumably the authors could have issued separate reports, but the chosen format keeps complementary analyses together.

4. An important step in telling the story: establishing key features in the political environment.

able to achieve incarceration's goals than are more flexible sentencing policies.[5] Those goals include punishing the convicted and keeping them from committing more crimes for some period of time, as well as deterring others not in prison from committing similar crimes. Critics, however, worry that mandatory minimums foreclose discretionary judgment where it may most be needed, and they fear mandatory minimums result in instances of unjust punishment.[6]

These are all important considerations, but mandatory minimums associated with drug crimes may also be viewed as a means of achieving the nation's drug control objectives. As such, how do they compare with other means? Do they contribute to the central objective—decreasing the nation's drug consumption and related consequences[7]—at a cost that compares favorably with other approaches? In this report, we estimate how successful mandatory minimum sentences are, relative to other control strategies, at reducing drug consumption, drug-related crime, and the total flow of revenue through the cocaine market. The latter is a worthy objective in itself—America would be better off if money spent on drugs were spent on almost anything else—and it is also associated with drug-related crime.

We focus on cocaine, which many view as the most problematic drug in America today.[8] We take two approaches to mathematically modeling[9] the market for cocaine and arrive at the same basic conclusion: *Mandatory minimum sentences are not justifiable on the basis of cost-effectiveness at*

5. The proponents are projecting outcomes. The authors of this report imply that they do not necessarily accept these projections and that this analysis will do its own.
6. Proponents and critics clearly do not weight the evaluative criteria in the same way. The authors imply that they hardly even notice one another's criteria.
7. This description of the central objective of drug control policy establishes "drug consumption" as the critical numerator in the cost-effectiveness analysis, though others are to be considered as well.
8. Narrowing the focus keeps the analysis manageable. The authors must justify the way they choose to narrow the focus, however. The shorthand version here is to call it "the most problematic drug," though without specifying what that means.
9. Not all models are mathematical. The phenomenon being analyzed here is complex, and formal modeling is both possible and desirable. Deciding on the values for particular parameters, such as the price elasticity of demand for cocaine, the cost to dealers of being caught, and the effectiveness of treatment, to name just a few, is somewhat speculative. The authors will use what evidence can be found in the research literature, however.

reducing cocaine consumption, cocaine expenditures, or drug-related crime.[10] Mandatory minimums reduce cocaine consumption less per million taxpayer dollars spent than does spending the same amount on enforcement under the previous sentencing regime.[11] And either type of incarceration approach reduces drug consumption *less* than does putting heavy users through treatment programs, per million dollars spent. Similar results are obtained if the objective is to reduce spending on cocaine or cocaine-related crime.[12] A principal reason for these findings is the high cost of incarceration. (Note these findings are limited to relative cost-effectiveness. As mentioned above, mandatory minimums have been justified—and criticized—on other grounds.)

Reducing Consumption: More Enforcement against Typical Dealers

First, we estimate the cost-effectiveness of additional expenditures on enforcement against the average drug offender apprehended in the United States (whether that apprehension is by federal, state, or local authorities). In this approach, we track the flows of users among light-use, heavy-use, and no-use categories, and we analyze how overall cocaine market demand and supply respond to price. That is, if more money is spent on enforcement and incarceration, costs to dealers are increased, and so is the street price of cocaine; higher prices mean lower consumption.[13] If more money is spent on treatment, consumption is reduced for most clients while they are in the program, and, for some, after they get out. We estimate the changes in total cocaine consumption over time for an additional million dollars invested in the alternatives considered. These changes, discounted to present value, are shown in Figure A-1.

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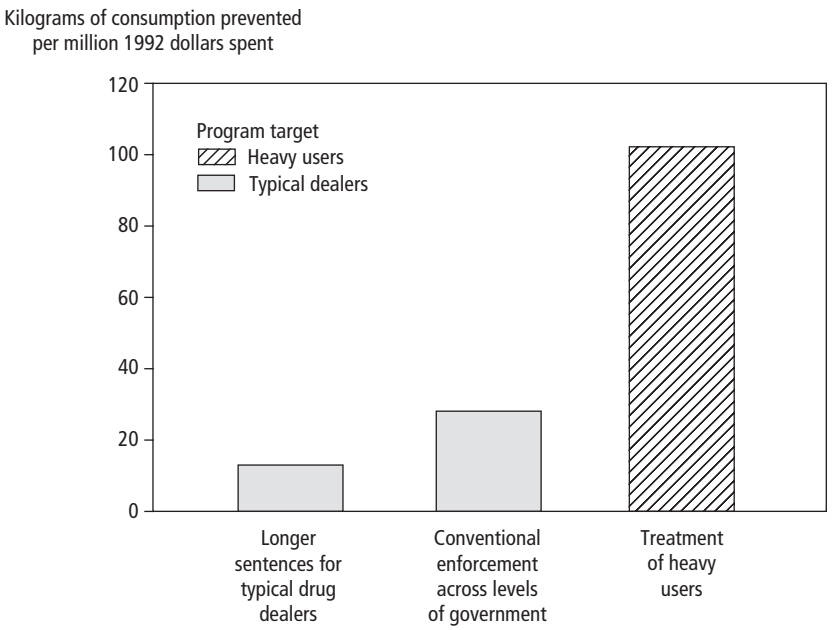
10. The headline comes about as quickly as it possibly can. In italics, too.
11. This restatement of the study's primary conclusion establishes "million taxpayers' dollars spent" as the critical denominator in the cost-effectiveness equation.
12. No matter which criterion is chosen, it just so happens that treatment turns out to be a better investment than tougher incarceration procedures.
13. Note the use of market theory to lay bare the heart of "the drug problem." You do not often see a newspaper account of this subject that refers to price movements, demand, and supply. Yet the "laws" of supply and demand apply, in some sense, to drug markets as much as they do to the market for green beans. It is almost impossible to project the effects of alternative antidrug interventions without taking into account how the market mediates whatever is done.

FIGURE A-1 **Benefits of Alternative Cocaine Control Strategies**



The first two bars in the figure show the results of spending a million 1992 dollars* on additional enforcement by agencies at various levels of government against a representative sample of drug dealers. As shown by the first bar, if that money were used to extend to federal mandatory minimum lengths the sentences of dealers who would have been arrested anyway, U.S. cocaine consumption would be reduced by almost 13 kilograms. If, however, the money were used to

* All cost calculations in this report are in 1992 dollars. The choice of a reference year for cost figures is arbitrary. We choose 1992 to facilitate comparison with the results of earlier analyses. To convert costs in 1992 dollars to costs in 1996 dollars (the latest year for which inflation data are available), multiply by 1.119. To convert kilograms of cocaine consumption reduced per million 1992 dollars spent to kilograms reduced per million 1996 dollars spent, divide by 1.119.

arrest, confiscate the assets of, prosecute, and incarcerate *more* dealers (for prison terms of conventional length), cocaine consumption would be reduced by over 27 kilograms.[14] Spending the million dollars treating heavy users would reduce cocaine consumption by a little over 100 kilograms.

Note we are estimating the impact of an *additional* million dollars. The results can be extrapolated to multiples thereof, but not to extremely large changes in spending. They certainly do not suggest that the most cost-effective approach is to shift all drug control resources from enforcement to treatment. Note also that we refer in the figure to "longer sentences" rather than to "mandatory minimums."[15] Data on drug dealers arrested at state and local levels are insufficient to isolate those associated with drug amounts sufficient to trigger mandatory minimums. Instead, we analyze a hypothetical policy of applying the mandatory minimum sanction—longer sentences—to all convicted dealers.[16]

The values shown are dependent, of course, on various assumptions we make. If the assumptions are changed, the values change. But for changes in assumptions over reasonable ranges, do the values change enough to make longer sentences more cost-effective than either of the other alternatives? We find they do not.

As an example, the values shown are dependent on the time horizon in which one is interested. The reason for this is as follows. When faced with extended sentences, drug dealers will want more income today to compensate them for the risk of increased prison time. As a result, cocaine prices will go up and consumption will go down. Benefits from

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14. Note the importance of defining "the margin" where the policy operates. The policy is twice as effective if you can restrict "the margin" to dealers who would not have been arrested anyway.

15. The political rhetoric might oversimplify by talking about "tougher" approaches to dealing, but the authors here distinguish two different forms of "tougher." Even more forms exist, of course.

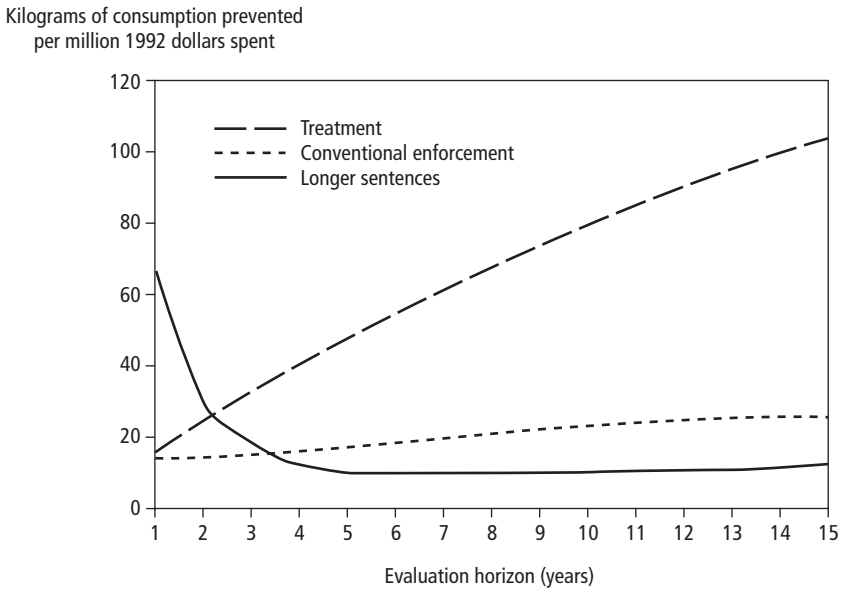
16. All policies that deal with the future are "hypothetical." Why do the authors go out of their way to use this term explicitly here? Probably because they wish to distinguish the alternative they are analyzing from empirical specimens existing in the real world. They are more interested in a "generic" strategy based on mandatory minimum sanctions, a sort of composite of what does exist and what might exist in a more ideal form.

reduced consumption will thus accrue immediately, while the costs of the extended prison terms will stretch out into the future. In contrast, if more users are treated this year, the costs accrue immediately, while the benefits in terms of reduced consumption by those who stay off cocaine stretch out into the future. Figure A-1 takes account of these different allocations of costs and benefits across future years in that future costs and benefits are discounted annually, out to 15 years—a time horizon typical in analyzing public policy. Beyond that point, any further costs and benefits count as zero. What if that terminal point were moved closer? What if one had not just a discounted interest in anything beyond the immediate future, but no interest? If the time horizon is set early enough, the effect is to "zero out" both the future stream of costs from mandatory minimums and the future benefits from treatment. Figure A-2 shows the relative cost-effectiveness of the three programs analyzed when time horizons are set at various points, from 1 to 15 years. At 15 years, the lines match the heights of the bars in Figure A-1. The time horizon must be reduced to only about three years before mandatory minimums look preferable to additional conventional enforcement, and close to two years before they look preferable to treatment. Hence, mandatory minimums appear cost-effective only to the highly myopic.[17]

We also analyzed the implications of changing other assumptions. For example, dealers would want to be compensated for the increased risk of imprisonment they would incur in the event of increased enforcement. But the typical person would demand less compensation for being imprisoned five years from now than next year, and we assume drug dealers are even more "present-oriented." What would happen, though, if dealers wanted more risk compensation, and if they discounted future costs less heavily than we assume? Longer sentences would seem more burdensome than we assume, dealers would demand a higher premium for handling cocaine, the price of cocaine would rise even more with increased enforcement spending, and consumption

17. A bit of wit and rhetoric! Who says you have to be dry and boring in telling your story? The authors can get away with it here because their result is extremely robust—and because they are well-known and respected analysts in this field.

FIGURE A-2 **Benefits of Alternative Cocaine Control Strategies for Different Time Horizons**



would fall even more. Consumption would also fall more than we expected if users were more responsive to price increases, i.e., if demand were more "elastic." We attempted to swing the balance toward extended incarceration by simultaneously increasing risk compensation by one-third, cutting the dealer discount rate by two-thirds, and increasing the elasticity of demand by 50 percent.[18] The general profile of our results did indeed change. The cost-effectiveness of longer sentences tripled, while that of additional conventional enforcement doubled, and that of treatment rose by about a quarter. However, longer sentences remained the least cost-effective alternative, and treatment the most.

18. This is another version of "sensitivity analysis."

Reducing Consumption: More Enforcement against Higher-Level Dealers

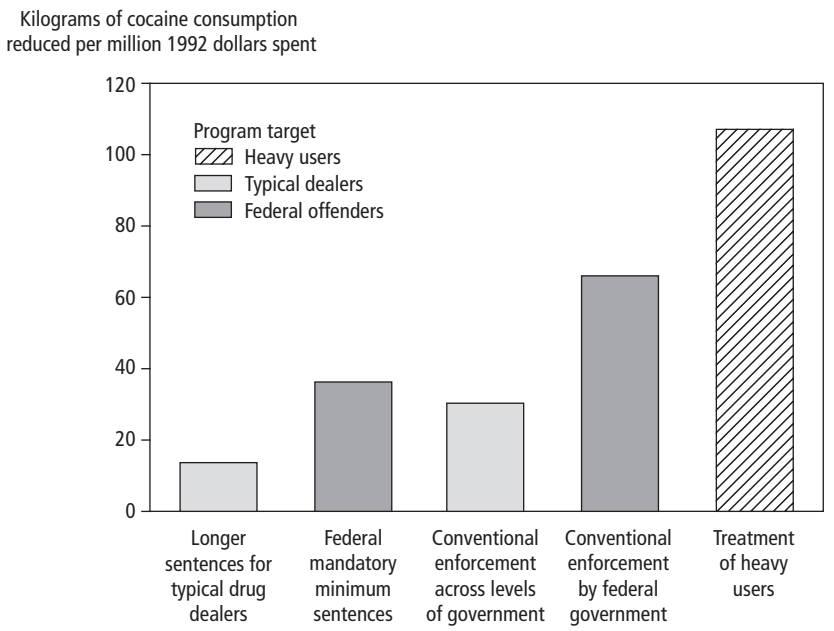
The first two bars in Figure A-1 represent enforcement approaches applied to a representative sample of all drug dealers arrested. Perhaps mandatory minimum sentences would be more cost-effective if they were restricted to somewhat higher-level dealers. By "higher-level dealers," we mean those who operate at higher levels of the drug distribution system, who make more money and thus have more to lose from more intensive enforcement. To approximate such a restriction, we limit the set of offenders analyzed to those who are prosecuted at the federal level and possess enough drugs to trigger a federal mandatory minimum sentence.

The results are shown in Figure A-3. There, the darkest bars represent the reduction in cocaine consumption from spending an additional million dollars in enforcement against the federal-level offenders just defined. The light bars are those from Figure A-1. Reading from the left, each light/dark pair of bars represents the same kind of program. The distribution of long sentences is the same for the first two bars, and the kinds of additional enforcement actions funded (arrest, seizure, prosecution, and incarceration for conventional sentence lengths) are the same for the next two bars.

As shown by the darker bars in Figure A-3, the consumption change achieved per million dollars spent on mandatory minimums is closer proportionately to that achieved through the other alternatives. While longer sentences for a representative set of all dealers have 46 percent of the effect of additional conventional enforcement against such dealers, federal mandatory minimums have 57 percent of the effect of additional conventional enforcement at the federal level.[19] And, obviously, federal mandatory minimums do better relative to treating heavy users than do longer sentences for all dealers. To the higher-level dealers considered in this analysis, time in prison carries a greater cost, and amounts of cocaine

19. These percentages are calculated from numbers to be read off Figure A-3. One might wish the authors had somehow warned the reader that these numbers cannot be read off what is actually drawn in A-3.

FIGURE A-3 **Benefits of Alternative Cocaine Control Strategies**



and other assets seized through increased enforcement are also larger. Thus, risk compensation must be higher, and the higher resulting cocaine prices drive down consumption more. Nonetheless, at any given level of government, or against any given type of dealer, mandatory minimums are less cost-effective than conventional enforcement.

Why is that the case?[20] Drug enforcement comprises two types of components, each of which is costly for taxpayers and each of which contributes to keeping drugs expensive: (1) arrest and conviction, which impose costs on suppliers principally through the seizure of drugs and other assets, and (2) incarceration of convicted defendants. Amid

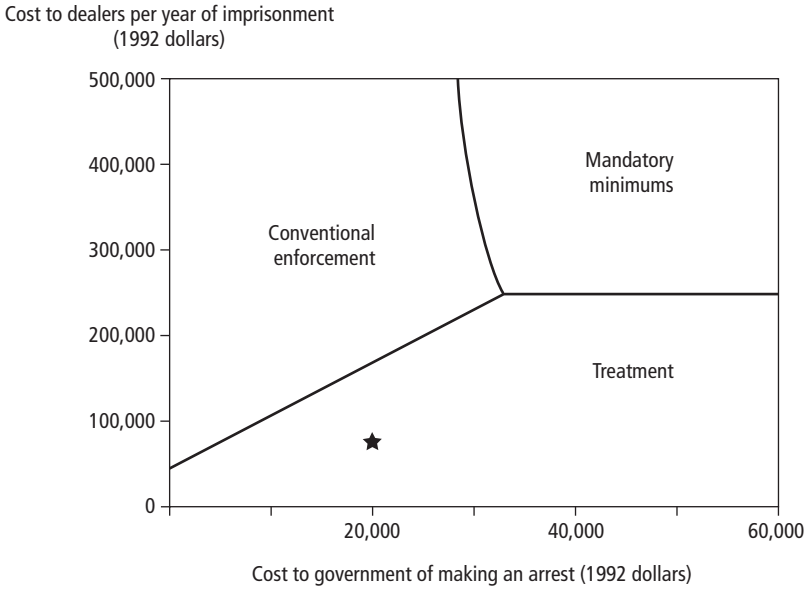
20. Nice use of rhetorical question to vary the pace and tone.

complaints about the "revolving door" of justice, some overlook that arrest and conviction impose costs on dealers. In fact, on average, arrest and conviction impose greater costs on dealers per taxpayer dollar spent than does incarcerating dealers. Since mandatory minimums alter the mix of these two components of enforcement in favor of incarceration, they dilute or reduce the efficiency of enforcement relative to simply expanding both components proportionately.

As with the light bars, the precise heights of the dark bars in Figure A-3 depend on various assumptions. Again, these include assumptions about such uncertain values as the compensation dealers would demand for increased imprisonment risk, the rate at which dealers discount future costs, the responsiveness of buyers to shifts in cocaine prices, what it costs to arrest a dealer, and the value of drugs and other assets seized. To test the sensitivity of our results to these assumptions, we vary the assumed values of factors such as these one at a time over substantial ranges. In all cases, conventional enforcement is more cost-effective than mandatory minimums, and treatment is more than twice as cost-effective as mandatory minimums. Even when assumed values are varied two at a time, large departures from assumed values are required for mandatory minimums to be the most cost-effective approach. In Figure A-4, for example, the government's cost of arresting a dealer and the compensation a dealer wants for risking a year of imprisonment are varied simultaneously. The star shows the values assumed for the results in Figure A-3. As Figure A-4 shows, mandatory minimums would be the most cost-effective alternative only if arrest costs were to exceed $30,000 and a dealer were to value his time at some $250,000 or more per year. Such dollar values would typify only those dealers at a fairly high level in the cocaine trade and who are unusually difficult to arrest.** For dealers costing less to arrest, cocaine control dollars would be better

** Even for these dealers, it is possible that conventional enforcement would be more cost-effective than mandatory minimums. That would be the case if the range of conventional sentences could be matched to the range of offenders so that the highest-level dealers received very long sentences.

FIGURE A-4 **Which Program Is More Cost-Effective at Reducing Cocaine Consumption Under Different Assumptions?**



Note: Star indicates values assumed for dark bars (federal offenders) in Figure A-1.

spent on further conventional enforcement. For dealers demanding less risk compensation, the money would be better spent treating heavy users than on enforcement against such dealers.[21]

Long sentences could thus be a smart strategy if selectively applied. Unfortunately, because mandatory minimum sentences are triggered by

21. The uninitiated reader needs more help in interpreting Figure A-4 than the authors provide. The figure is divided into three regions. Each region contains combinations of values for the two parameters "cost to government" and "cost to dealers." The boundaries between the regions indicate where the parameter combinations imply different winners in the cost-effectiveness competition that the authors have set up. Thus, mandatory minimum sentences win only when the parameter combinations fall in approximately the northeast quadrant, that is, when the costs are high both to dealers and the government. In other RAND publications, this sort of mapping is called "threshold analysis." I call it, in Part I above, "break-even analysis."

quantity possessed and because those thresholds are low, they are not selectively applied to high-level dealers. (Indeed, anecdotal evidence suggests that high-level dealers can sometimes avoid mandatory minimums more easily than their subordinates. High-level dealers have more knowledge about their organization to use as bargaining chips with prosecutors. Furthermore, such dealers often do not physically possess their drugs, as is required for a mandatory minimum to take effect; they hire others to incur that risk. To the extent that this occurs, mandatory minimum sentences would be even less effective than these results suggest.)

Reducing Cocaine-Related Crime

Of course, cocaine consumption is not the only measure of interest. Many Americans are worried about the crime associated with cocaine production, distribution, and use. Using data on the causes of drug-related crime and our cocaine market analysis, we quantify the approximate crime reduction benefits of the various alternatives. We find no difference between conventional enforcement and mandatory minimums in relation to property crime; the former, however, should reduce crimes against persons by about 70 percent more than the latter. But treatment should reduce serious crimes (against persons as well as property) the most per million dollars spent—on the order of 15 times as much as the incarceration alternatives would.

Why do we get these results?[22] Most drug-related crime is economically motivated—for example, undertaken to procure money to support a habit or to settle scores between rival dealers. Fewer crimes are the direct result of drug consumption—crimes committed "under the influence." However, we find very little difference between conventional enforcement and mandatory minimums in their effects on the money flowing through the market, and thus very little difference in their effects on economically motivated crime. We do find, as shown in Figure A-3, appreciable differences in consumption effects, and thus appreciable differences in effects on crimes committed under the influence. The latter are more likely than are economically motivated crimes to be crimes against persons.

22. Another well-placed rhetorical question.

Treatment, however, has an enormous advantage over enforcement in reducing the economic value of the cocaine market—larger even than that shown in Figure A-3 for reducing cocaine consumption. Why is that?[23] When a treated offender stays off drugs, that means less money flowing into the market. But when a dealer facing the risk of a longer sentence raises his price, say one percent, to compensate, buyers will reduce the amount of cocaine they purchase. The best evidence suggests that reduction will be something on the order of one percent.[24] Thus, the total revenue flowing through the cocaine market stays about the same, and so do the incentives for economically motivated drug-related crimes. Therefore, the effect of the enforcement alternatives is limited almost entirely to the relatively small number of crimes committed under the influence. Treatment, however, has an advantage against those crimes similar to that shown in Figure A-3 and an even greater advantage against the larger number of economically motivated crimes.

Conclusion

Long sentences for serious crimes have intuitive appeal. They respond to deeply held beliefs about punishment for evil actions, and in many cases they ensure that, by removing a criminal from the streets, further crimes that would have been committed will not be. But in the case of black-market crimes like drug dealing, a jailed supplier is often replaced by another supplier if demand remains. And not all agree whether mandatory minimums satisfy American standards of fairness and justice. Even those who believe they do must ask themselves to what extent might it be desirable to give up some punishment of the guilty to gain some further reduction in cocaine consumption—consumption that

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23. And yet another!

24. So they base their model's parameter estimates on some sort of evidence after all! Because this report "Summary" is a summary of the logic of their analysis, the authors do not trouble the reader with the details of how these projections were made, that is, how their model is constructed and its parameters assigned numerical values. These will appear in the full report. The word *evidence* here perhaps is intended to reassure the reader that, although the analysis herein is "hypothetical," as the authors indicated above, the hypotheses are to the extent possible based on a body of accumulated evidence.

can victimize the innocent.[25] This trade of punishment for drug use reduction must be considered because long sentences are expensive and cocaine control resources are limited. As we show, if reducing consumption or violence is the goal, more can be achieved by spending additional money arresting, prosecuting, and sentencing dealers to standard prison terms than by spending it sentencing (fewer) dealers to longer, mandatory terms. (And that is to say nothing of what might be achieved by redirecting resources from enforcement to treatment—admittedly, a more difficult reallocation because those programs might be run by completely different agencies.) We find an exception in the case of the highest-level dealers—those who value their time most highly and are hardest to apprehend—where sentences of mandatory minimum length appear to be the most cost-effective approach. However, current mandatory minimum laws are not focused on those dealers.

25. The authors confront readers with a starkly defined trade-off.

APPENDIX

B

THINGS GOVERNMENTS DO

The following list of things governments do is meant to stimulate creativity and give you ideas. The way to use it is to think about your policy problem and then go down the list, asking yourself: "Might there be any way to use this approach on this problem?"

The "Why You Might Do It" discussion that accompanies each list of "What You Might Do" is necessarily brief. It is intended principally to be suggestive.

I. TAXES

A. What You Might Do

1. Add a new tax
2. Abolish an old tax
3. Change the tax rate
4. Change the tax base
5. Improve collection machinery
6. Tax an externality

B. Why You Might Do It

The most common conditions to which taxes are a solution are those in which there is inadequate government revenue for some purpose and—probably more important—those in which the structure of market prices fails to capture the true economic opportunity costs. If market prices are wrong, there are usually deeper structural reasons, such as oligopolistic

power or government overregulation of some input, which might bear correcting by other means as well.

Naturally, too many taxes can also be a problem, if they are inhibiting useful economic or social activity.

II. REGULATION

A. What You Might Do

1. Add a new regulatory regime or abolish an old one
2. Write new standards or remove old ones
3. Tighten or loosen existing standards
4. Ban or prohibit something entirely
5. Improve the scientific and technical basis for writing standards
6. Close or open loopholes
7. Add, train, or better supervise enforcement personnel
8. Improve targeting of enforcement to catch bad apples, or to increase deterrence, or to increase resource efficiency
9. Raise or lower the level of effective sanctions
10. Tighten or loosen appeals procedures
11. Change reporting and auditing procedures
12. Add, subtract, or improve complaint mechanisms for workers or the public

B. Why You Might Do It

Distinguish three quite different types of regulation. One aims at prices and outputs in natural monopolies, for instance, the historical regulation of local telephone service by a public utilities commission. As this example suggests, technological change (e.g., cell phones, broadband) can undermine natural-monopoly production and render this form of oversight irrelevant.

A second type—sometimes called "social regulation"—is common in regard to health and safety issues. It aims to correct imperfections arising from poor market information or from excessive frictions resulting from the use of civil law (usually tort or contract) remedies. Drug safety regulation by the FDA is an example. Bank solvency regulation also fits this category. Two sorts of problems are common in this type of regulation:

too little regulation and too much. Scientific uncertainties, technical difficulties of measurement, and political pressures typically lead to both of these problems under varying conditions.

A third type of regulation concerns entry, exit, output, price, and service levels in supposedly oligopolistic industries (e.g., transportation). Administering this type of regulation presents large problems of collecting information and of coordinating the outputs of many firms. Politically, there are often problems of anticompetitive "capture." The deregulation movement that has gathered political momentum since around 1978 has led to a new appreciation of how much beneficial competition there might be in these industries if government were simply to let go.

Most air and water pollution regulation is thought of as social regulation. However, administratively (and sometimes politically), it is more like the third type of regulation, inasmuch as the principal laws now on the books involve government agencies in coordinating the outputs of a variety of firms.

III. SUBSIDIES AND GRANTS

A. What You Might Do

1. Add a new one
2. Abolish an old one
3. Change the level
4. Change the marginal rate
5. Introduce, abolish, or change a formula by which subsidies are allocated
6. Modify the conditions of receipt or eligibility
7. Loosen enforcement
8. Tighten enforcement

B. Why You Might Do It

Incentive effects. Subsidies and grants are often used to stimulate activities that neither markets nor nonprofit or voluntary action appears to produce in adequate quantity or quality. They also play important roles in the system of intergovernmental relationships—when one level of government wishes to encourage another level of government to do certain

things—and in the system of relationships between governments and nonprofit organizations.

Wealth effects. Grants and subsidies also transfer resources to people or organizations or levels of government in order to make the recipients wealthier.

Some design problems. It often happens that you want to create incentive effects but not wealth effects, or vice versa. For instance, you may wish to make poor people wealthier via grants and subsidies but without diminishing work incentives. Or you may wish to encourage businesses or universities to undertake more research and development of a certain kind but without unduly enriching them or allowing them to use the subsidies inefficiently.

Note that subsidies and grants are typically administered with various guidelines or conditions attached. The threat to remove a long-time grant or subsidy for violation of the guidelines or conditions can act as a type of regulatory sanction, thus making certain grants and subsidies into a peculiar regulatory hybrid.

IV. SERVICE PROVISION

A. What You Might Do

1. Add a new service
2. Expand an existing service
3. Organize outreach to potential beneficiaries not now using the service
4. Better customize an existing service to a particular subpopulation
5. Provide vouchers for a particular service so that people may choose from an array of competitive service providers
6. Link two or more existing service delivery systems to take advantage of potential synergies or to make life easier for service recipients
7. Reduce service users' difficulties in accessing the service by
   a. going online
   b. computerizing intake and eligibility processes
   c. simplifying forms
   d. colocating services
   e. permitting appointments by phone

f. facilitating personal inquiries and complaints
g. improving payment options

B. Why You Might Do It

Services come in two basic flavors. *Desired services* are those that people want, such as parks and good schools. *Paternalistic services* are those that people may or may not want but that outsiders want them to have because there is some potential payoff to the outsiders (e.g., rehabilitative services for the mentally ill, organized shelters for the homeless, job search services for individuals on welfare). It is a lot easier to design a service provision system for desired services than to do so for paternalistic services.

V. AGENCY BUDGETS

A. What You Might Do

1. Add a lot to the budget
2. Add just a little to the budget
3. Hold the budget at last year's level
4. Cut the budget a little
5. Cut the budget a lot—to the point of beginning to terminate the agency
6. Shift allocations from one budget item to another

B. Why You Might Do It

You may want to adjust an agency's budget according to whether you like what it does. In addition, how you manipulate an agency's budget sends political signals about the degree of satisfaction or dissatisfaction with the agency's performance and so may be thought to have incentive effects as well as wealth effects. It is not easy to use the budget as a means of creating incentive effects, however.

VI. INFORMATION

A. What You Might Do

1. Require disclosure
2. Direct government rating or certification

3. Standardize display or format
4. Simplify information
5. Subsidize production of information
6. Subsidize dissemination of information

B. Why You Might Do It

Information production, dissemination, and validation may be suboptimal due to the declining average (and sometimes marginal) cost nature of the activity. Information consumption may be suboptimal due to the hidden costs of consumption (such as time spent reading or hearing or interpreting or sifting or verifying).

VII. THE STRUCTURE OF PRIVATE RIGHTS

A. What You Might Modify or Create

1. Contract rights and duties
2. Property rights
3. Liability duties
4. Family law
5. Constitutional rights
6. Labor law
7. Corporate law
8. Criminal law
9. Dispute-resolving institutions other than litigation and courts

B. Why You Might Do It

In recent years, two of the biggest issues drawing the attention of policy analysts and economists interested in legal institutions are the economically efficient incidence of risk—it should fall on the party that can manage it at the lowest social cost—and the costs involved in administering any adjudicative system. Since private-law duties and rights do a lot to allocate risk (e.g., if your product exposes the user to risk and ultimately injury, you may be liable for damages, unless perhaps the user abused or misused it or agreed to assume the risks of use), adjusting laws is sometimes a powerful policy intervention mechanism. Also, much creative

thinking has gone into finding ways to reduce the administrative and adjudicative costs.

In addition to these economic matters, there is also concern about compensation for harm. Laws can be changed so as to shift wealth—in some prospective, actuarial sense or in a real, present-time sense—among different interests or classes of people.

The wealth-shifting and risk-shifting effects of legal changes may both work in the desired direction, or they may work at cross-purposes. In addition, both may work together with, or at cross-purposes with, the desire to reduce administrative and adjudicative costs.

VIII. THE FRAMEWORK OF ECONOMIC ACTIVITY

A. What You Might Do

1. Encourage competition
2. Encourage concentration
3. Control prices and wages (and profits)
4. Decontrol prices and wages (and profits)
5. Control output levels
6. Decontrol output levels
7. Change tax incentives up or down
8. Provide public jobs
9. Abolish public jobs

B. Why You Might Do It

Supporting more government intervention. On the supply side, there may be monopoly or oligopoly problems. On the demand side, consumers may be relatively nonmobile or otherwise vulnerable to exploitation—and the same may be true of workers.

Supporting less government intervention. You may decide that political forces have captured the government administrative apparatus and perverted the intent, or that the information costs to government entailed in doing the job well are simply too high, or that technology has changed and made an older form of government intervention less appropriate or effective or efficient.

IX. EDUCATION AND CONSULTATION

A. What You Might Do

1. Warn of hazards or dangers
2. Raise consciousness through exhortation or inspiration
3. Provide technical assistance
4. Upgrade skills and competencies
5. Change values
6. Professionalize the providers of a service through training or certification or licensing

B. Why You Might Do It

People may be unaware of a problem or an opportunity. They may be careless or unfeeling. There may be too many untrained or unskilled people in jobs demanding too much responsibility.

X. FINANCING AND CONTRACTING

A. What You Might Do

1. Create a new (governmental) market
2. Abolish an existing (governmental) market
3. Alter reimbursement rates
4. Change the basis for reimbursement (e.g., cost-plus, price per unit, sliding scale dependent on quantity, performance bonuses or penalties)
5. Lease governmentally held resources
6. Alter user fee structure
7. Redesign bidding systems
8. Change contract enforcement methods
9. Furnish loans
10. Guarantee loans
11. Subsidize loans
12. Set up a public enterprise
13. Dismantle a public enterprise
14. "Privatize" a hitherto public enterprise
15. Modify insurance arrangements
16. Change procurement practices

B. Why You Might Do It

Capital and/or insurance markets may be working inefficiently. The governmental contracting and procurement machinery may not be operating well—it may be too rigid, or too corrupt, or too expensive, or too slow.

XI. BUREAUCRATIC AND POLITICAL REFORMS

A. What You Might Do

The number of possibilities is too great to list. It ranges across such activities as reorganizations, replacing top supervisory personnel, improving information systems, and raising wages and salaries.

B. Why You Might Do It

The substantive reasons are too numerous to list. We should note, though, that in many policy contexts there are important political and symbolic considerations for undertaking bureaucratic and political reforms. The political considerations often involve enhancing the power of one social interest or point of view at the expense of another. The symbolic considerations often involve ducking the really hard or impossible problems at the social level in favor of doing something readily seen in a domain over which government appears to have control (that is, its own operations).

APPENDIX

C

UNDERSTANDING PUBLIC AND NONPROFIT INSTITUTIONS: ASKING THE RIGHT QUESTIONS

Policy analysis, properly done, requires you to think not only about the technical aspects of governmental action but also about its institutional aspects—that is, the institutions that implement policy. Whether implementation goes well or poorly depends in part on whether the relevant institutions want to facilitate or impede the policy at hand. But motivation is not the whole story; capacity is at least as important. Here I want to draw attention primarily to the aspects of organizational structure and process that bear on capacity, and I do so not by offering a detailed exposition but by posing some (41) questions that the analyst ought to be asking.

MISSION

1: What is the mission of the agency?

- As expressed in authoritative sources?
- As understood and enacted by agency managers and employees?

ENVIRONMENT

2: What support/opposition does the agency have for its mission, and for itself, in its "authorizing environment"—that is, the totality of actors whose legal and nonlegal attitudes and actions determine agency legitimacy in the polity?

- Evidence from budgetary allocations?
- Other evidence?

3: Is the task environment relatively placid, changing predictably, or changing unpredictably? Examples of what is meant by these terms:

- *Placid*: telephone company in 1975
- *Changing predictably*: hospitals in the 1970s, before managed care but in the era when changing technologies were introduced and when overcapacity was looming
- *Changing unpredictably*: telecommunications companies today; hospitals today, facing changes in the insurance marketplace, in technology, and in government policies

Note that the less predictability and the faster the pace of change, the greater the need for getting information from the organization's field people rapidly; allowing them to make at least some decisions on their own; and making grand strategic shifts from the center.

4: Who are the agency's main competitors for resources and/or domain of legitimate action?

5: Does the agency have a comparative advantage—or disadvantage—in meeting the competition?

6: Does the agency face rivals who don't merely compete but are downright hostile to aspects of the agency's mission or philosophy?

PERFORMANCE MEASUREMENT

7: What metrics are available to tell us how effectively and efficiently the agency is performing?

- Producing outputs and outcomes?

Outputs are what you can operationally count as a result of the agency's productive work, such as number of students graduated, number of acres of forest thinned, number of passengers carried per day. *Outcomes* are consequences of the outputs that we actually value per se, such as greater employability of those students, greater fire resistance of those forests, reduction in transportation time or in pollution levels or increases in transportation satisfaction.

It is usually (much) harder to measure outcomes than outputs.

Outcomes are the product of more than the agency's outputs. Hence crediting or blaming the agency for the quality of the outcomes is not straightforward.

8: Compared to what benchmarks or standards?

- Other similar organizations?
- The same agency in previous years?
- An absolute standard?

9: What additional metrics would you, ideally, like to see?

10: Who are the agency's "customers," if any? Are they being well served? What is their opinion?

- It is easy to see a park user as a "customer" of the parks department.
- But is a taxpayer a customer of the IRS?
- Is the student a customer of the school? Or is her family?

TECHNOLOGY

Technology is a slightly fuzzy word, more easily defined by example than by abstractions.

11: To what extent does the agency use a service-delivery technology? A regulatory technology? A people-changing technology? A project technology?

- *Service-delivery technology:* a transportation agency's provision of vehicles and other facilities for use by patrons; writing and mailing Social Security checks; issuance of annual auto registration plates or stickers
- *Regulatory technology:* command-and-control activities, such as environmental inspection and enforcement; OSHA regulations; restaurant sanitation inspections
- *People-changing technology:* education; probation; child protective services
- *Project technology:* issuance of a land-use plan; construction of a convention center; immunization of all youngsters against this year's strain of flu

12: Is it a strong or a weak technology?

- A *strong technology*—such as writing Social Security checks—is replicable and works in all contexts.
- A *weak technology*—such as counseling probationers—is not easily replicated and is sensitive to social context and individual-level competency.

The structure and process you use to run an agency will depend to some degree on the type of technology you are implementing, partly for technical reasons and partly for political reasons: you get into trouble if you adopt a regulatory attitude when you should be serving a "customer," and vice versa.

13: Is the agency's authority structure appropriate to the agency's mission, technology, and human resources?
14: Is the agency's internal division of labor appropriate to the agency's mission, technology, and human resources?
15: Does the agency have effective means—formal and/or informal—to create working relationships across unit boundaries?

PRODUCTION/DELIVERY PROCESSES

16: What is (are) the principal process(es) the organization uses to implement its production technology(ies)—that is, to produce its outputs?

This question is complicated because it focuses on processes that connect the organization's activities, the human and physical materials it works on, and the way in which it transforms materials.

- In environmental and other kinds of command-and-control regulation, we have processes of "standard setting, inspections for compliance with standards, and the threat and actuality of punishment for noncompliance," a complicated form of deterrence.
- In a welfare program, the process involves determinations of eligibility and amount.

FRONT-LINE WORKERS AND CO-PRODUCERS

17: Are the front-line workers doing a good job? Are they competent? Motivated? Adequately supported by the organization?

18: What systems of incentives, supervision, and support are in place to motivate them, help them, and hold them accountable? Are the means of recruiting them suited to getting individuals with the right qualifications?

19: Does the organization make full use of the talents and information residing at the front-line level?

20: To what extent does the agency also rely on "co-producers"—people and organizations that share in the production process without being employed by the agency?

- Welfare recipients are co-producers, along with the welfare agency, to the extent that they assist, and are assisted by, the agency in the recipients' efforts to find jobs.
- Parents co-produce their children's education along with the children's teachers.
- Along with the environmental regulatory agency, complying firms co-produce environmental improvement.

21: Does the agency manage its co-producers well? Do they provide the proper tools? Information? Motivation?

PARTNERS AND OTHER OUTSIDERS

22: To what extent does the agency rely on public and not-for-profit partners to accomplish its mission? Does the agency manage these relationships effectively?[1]

23: Does it rely heavily on for-profit vendors? Does it manage these relationships effectively?

24: Does it effectively manage its relationships with governmental "overhead" (or "control" or "staff") agencies—such as the Departments of Finance or Budget, Personnel, Procurement, Audit, and so on?

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1. For an extensive discussion, see Bardach (1998).

CENTRALIZATION/DECENTRALIZATION

25: If the organization delivers services at multiple sites (as in a school district), does it have an effective balance of centralization and decentralization?

26: Does it use its internal budget-making procedures to structure incentives for performance improvements and cost reductions?

CULTURE AND COMMUNICATIONS

27: Does the agency have a relatively "strong" or "weak" culture?

- *Strong culture:* the U.S. Navy; the local fire department; the Forest Service; the California Legislative Analyst's Office
- *Weak culture:* many contemporary public health departments; many inner-city public schools

28: Is the culture relatively hierarchical or egalitarian? Rules-oriented or performance-oriented, or both? Where do efficiency and cost minimization fit in its culture?

29: Are communications within the agency relatively unconstrained by hierarchy and/or by subunit boundaries? Are people relatively unafraid to speak their minds, or are they circumspect and cautious? Is entrepreneurship encouraged or discouraged?

30: Do senior managers attempt to "lead through culture"? How?

31: Are creativity and innovation valued within the agency? Does the agency make systematic efforts to stimulate creativity and innovation?

POLITICS

32: Are there factions within the organization? If so, are they based on professional, ideological, or bureaucratic cleavages? On other factors?

33: Does factional competition or conflict degrade organizational performance or—by stimulating effort and healthy competition—improve it?

34: How do senior managers deal with the existence of factions?

LEADERSHIP

35: Who, if anyone, is a leader in this organization?

36: How does such a person gain and preserve legitimacy?

37: How effective is (are) the leader(s)?
38: What functions do they play in the organization?
39: What strategies do they use to carry out their leadership functions?

CHANGE

40: Is there a culture of *continuous improvement*—a term originally associated with the Total Quality Management (TQM) movement—and learning from mistakes?
41: Does the agency have the capacity and motivation to scan the environment for signs of opportunity or danger? If such signs are present, can the agency adapt effectively?

APPENDIX

D

STRATEGIC ADVICE ON THE DYNAMICS OF GATHERING POLITICAL SUPPORT

This *Practical Guide* is largely about the intellectual aspects of policy analysis done in the public interest. Its lofty focus should not obscure the fact that the adoption of policy occurs through a process that is often untainted by much intellectuality at all and is subject to the pushing and hauling of many sorts of stakeholders, not all of them concerned with "the public interest."

All policy is political, whether the politics takes place in a back room or within a legislature, an organization, or a community. You must build support and neutralize opponents. To do this, at the interpersonal level, you must make arguments, frame and reframe "the facts," call in favors, imply threats. At the organizational and institutional levels, you must mobilize allies, manipulate arenas and calendars, offer (and extract) concessions, and negotiate side-payments.

All these issues of attitude and influence involve a good deal of calculation and estimation: which agency's budget will grow larger; whose turf will be diminished? How much weight, or influence, do these supporting and opposing interests carry with the key decision makers anyway? I ignore all such questions here, although in your work you must both ask them and develop the information to answer them. The elementary answers are fairly obvious, however, and the sophisticated answers would take up too much space. (Example question: will agencies support policies that expand their budgets and powers? Elementary answer: yes. Sophisticated answer: usually yes, but probably not if such expansion risks changing internal power relations drastically or exposing the agency to possible failure and

criticism, etc. Even more sophisticated answer: . . . [this I leave to your imagination and experience].)

One might say that these matters of attitude and influence are instances of static analysis. Journalists' and political scientists' accounts of the legislative process are rich in such instances. I limit my discussion here, though, to dynamic analysis of the process, which involves questions of sequence (what you should do before, or after, you do some other thing) and timing (what to do "early" or "late" in the projected course of a months- or possibly years-long campaign).[1]

The assumption here is that one can make a list of generic "things to do" based on general knowledge of how such campaigns play themselves out, then postulate a generic flow of threats and opportunities over the course of such a campaign, and, finally, map the list of "things to do" into this flow with the object of maximizing the chances of winning. More precisely, you want to do the mapping not only with winning in mind but also with the idea of conserving political and other resources so that they will be available for other campaigns.

As a basic example, let us consider the case of a political entrepreneur trying to get a bill passed by a legislative body. The general outline of the process and of entrepreneurial strategy should apply to roughly analogous situations as well, such as trying to win approval from senior management to try some organizational innovation.

Start with the idea that you need to accumulate *Support*[2] from a variety of *Interests* (construed very broadly, and including individuals as well as groups or organizations) up to the point that you have *Enough Support* to swing the balance toward legislative victory for some *Proposal*. For the sake of concreteness, think about passing a bill to remove an existing statute requiring mandatory minimum sentences for drug users and

1. For a more elaborate discussion of dynamic analysis in general, see Bardach (2006); and also a very early effort, Bardach (1972). For an effort to describe the dynamics of building an interagency collaborative, see Bardach (2008).

2. From here on, I capitalize terms—and italicize them on first occurrence—that could be integrated into a formal model and, in that context, would deserve precise definition. There are relatively few such terms, and they would make an economical but, I believe, powerful model. For our purposes here, however, the context and the everyday meanings of the terms make the concepts clear enough.

low-level dealers, while retaining them for high-level dealers, as would be implied by the RAND analysis in Appendix A.

Assume that there is a hazily perceived and somewhat movable *End-date*, months or years off and linked to *Allies*'[3] willingness to plug along before concluding that the cause is lost and that other drug policy issues now deserve their attention and other *Resources*. The basic rule is this: if your Proposal accumulates Enough Support at the moment of the End-date, you win; otherwise you lose. What sequencing and timing strategies and tactics should you deploy?

Sequencing

First consider the problem of sequencing, in particular whether getting some Interests on board first will make it politically easier to approach others subsequently. Who might these primary Interests be?

- Persons with drug-policy expertise who agree with the RAND analysis, as well as persons or groups with a reputation for soundness, judgment, and ideological compatibility, might clear the way for Interests concerned about the practicality and efficacy of your Proposal.
- For Interests with an internal hierarchy, such as a state substance abuse agency or a political party organization, getting Support from experts or influentials lower down might require getting clearance from individuals higher up in the hierarchy.
- Access to particularly *Weighty* individuals, such as the chair of the Assembly Committee on Criminal Justice, might require working through a chain of introductions and connections.

Timing

One aspect of timing involves trying to stimulate bandwagon effects: get some Weighty Interests on board early in order to create the impression that success is inevitable, which will (1) draw in Interests concerned primarily with being on the winning side and, (2) Neutralize, at least for the time being, Interests who might otherwise go into active opposition.

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3. Allies are Supporters who are also active in trying to woo potential new Supporters and in attempting to Neutralize actual or potential Opponents.

Other aspects of timing are more subtle. Suppose that you have a rough but generally reliable time-profile (or map) of *Opportunities* and threats that tend to emerge relatively early or relatively late in the course of a campaign. You are thus able to time your actions so as to capitalize on the Opportunities and Neutralize the threats. You are also able to (roughly) plan to expend certain Resources early in order to capitalize on the Opportunities that come early on and then vanish forever, and to conserve certain *(Depletable) Resources* for the threats that you can anticipate toward the middle and end of the process.[4] And, if you are lucky, you may never have to expend those Resources at all.

For instance, early in the campaign you want to win over those Interests who will be enthusiastic Supporters and active recruiters—that is, real Allies. They will help you with raising money and gaining access to other such tangible Resources as office space, talented staffers, strategic advisers, and communications experts.

Unfortunately for you, repealing mandatory minimum sentences is not a policy Proposal that engages a natural constituency of Resource-rich potential Allies. You might find a few drug-policy and criminal-justice policy experts, some grassroots ethnic advocacy groups (who observe that their ethnic confreres are disproportionately locked up under the current laws), possibly the state university system (which sees scarce budget dollars diverted from higher education to build more prisons for ever-growing populations of prisoners), and perhaps the odd taxpayer group concerned with the budget and the tax burden more generally. But, whatever the limitations of their endowments, these are the sorts of Allies with *Marketing Resources* that you will need to go into business. In fact, you need them so much in the early days of the campaign that you will need to expend cash, call in political *Debts*, and ask for political *Favors* (that is, go into Debt yourself).

These early days represent a significant Opportunity for utilization of your scarce Resources for one very important reason: the *Opposition* will not yet have mobilized. (The Opposition is likely to include, among

4. As a logical matter, you would also be able to plan to Neutralize any threats that emerged early and seize Opportunities that emerged late. But as an empirical matter, I do not think these possibilities important enough to discuss here.

others, politicians who find demagogy on "law and order" a useful electoral tool; contractors and subcontractors who profit from the prison-building boom; rural communities for whom prisons are a valuable source of employment; the prison guards union.) You and your Allies will be able to hold the stage yourselves, make your pitch—that is, Tell Your Story—and hype the bandwagon aspects of your coalition's progress.

Why is the Opposition silent? It takes time for its members to organize themselves, and some may be temporarily occupied with more pressing matters anyway. Most important, they know that most such attempts at significant policy change simply die of their own accord, and so they may not need to go out of their way to kill this one. Indifference, skepticism, the comfort of the known, and the veto-enabling character of our political institutions (e.g., checks and balances) pose a high barrier to change. Although these Opposition skeptics are right, they nevertheless are giving you a brief moment in the sun, which you would be wise to seize, even if it means taking certain risks.

As the Support for your Proposal visibly rises, however, the Opposition manages to organize a countermobilization. It succeeds in stalling your efforts to persuade Interests that are still uncommitted and even manages to Neutralize a few of the Interests you thought you had won to your cause.

Now is the time to expend some of the Depletable Resources[5] you have been conserving and perhaps to borrow a little against the future as well. What are these Resources?

- First, Debts—owed to you (and your coalition Allies) in exchange for past Favor*s* you have done the indebted parties—that you can now call in.
- Second, policy *Concessions* you can make—that is, amendments to your Proposal. In this case, you might offer to enlarge the definition of "high-level dealer" beyond what you had originally proposed.

5. A Depletable Resource is one that, when used, is used up. Examples are money and Debts that are called in. Requests for Favors establish future liabilities; and the capacity for honoring them is in some sense Depletable, the exceptional case being that of reinvestment of Favors in such a way that overall capacity is augmented, much as business loans can lead to larger profits and even more successful enterprise.

- Third, normative expectations about the contributions of Allies that you can implicitly enforce—for instance, "as we are all in this together, it would be helpful if one of your people could make a call on Representative X."
- Finally, Debts that you can create (up to some limit, of course, which is why this is a Depletable Resource) by asking Favors.

But note well: although expending all such Resources is costly, Concessions may be doubly costly, because a Concession on policy usually represents either a goal or an objective foregone and also, possibly, a seeming breach of loyalty with Allies who have already signed on in the hopes of passing the very element of the Proposal that you are giving up. (Perhaps the ethnic advocacy Interests who signed on early will be severely alienated by your enlargement of the pool of "high-level dealers.") Hence, in this recovery phase, you stand a very good chance of raising fears among all your Allies that their hearts' desires are also in jeopardy.

Given that you can anticipate these coalition-fragmenting developments, you can take one or more prophylactic measures: build in potential Concessions (bargaining chips) of relatively low value to you and your Allies early in the contest—such as starting with an extremely restricted definition of "high-level dealers"—so that they may be ceded during the recovery phase; accumulate a surplus of Allies and Supporters as a buffer against defections by the angry and disappointed during the recovery phase; develop a reputation for integrity that can withstand suspicions of carelessness and disloyalty.

At some point, the Proposal is embodied in a bill, and the contest over the bill gets structured by the procedures of the legislature—its committees, its rules, and its calendars. The *Attentive Public* expands as well. Earlier, it had included mostly Interests concerned about the policies and Resources pertaining to drugs and criminal justice. Now it includes legislators (and staff) who are concerned about the Proposal's possible uses in partisan, institutional, and interpersonal competition. The relevance of Marketing Resources declines relative to that of more political Resources, which can be brought to bear on the manipulation of legislative procedures and the augmentation of Support or the Neutralizing of

Opposition by the use of *Side-payments*. Neutralization is especially useful—for instance, promising to support the prison guards' union in its next bid for a wage increase.

Also, as the contest approaches its increasingly less obscure End-date, and the margin of possible victory or defeat becomes thinner and clearer (in contests destined to be close), both Allies and Opponents engage in riskier maneuvers in regard to an increasingly heterogeneous and volatile Attentive Public, with somewhat unpredictable effects. In this *End-game* phase of high risk and uncertainty, you want to have a goodly store of highly *Fungible Resources*, such as callable Debts and *Good Will*, which also happen to be Depletable. Hence, it is prudent to conserve these more political and Fungible Resources until this time, even though they might have been of some use in earlier phases as well. To put it epigrammatically, if the Speaker of the Assembly owes you a Favor, it's the ace of trumps, and don't play it until you absolutely need to.

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