## 1 Introduction

And we are here as on a darkling plain Swept with confused alarms of struggle and flight, Where ignorant armies clash by night.

> —Matthew Arnold "Dover Beach"

## THE PROBLEM

The conceptual, intellectual, and professional underpinning of the policy sciences have been well articulated since at least 1951 when Lerner and Lasswell first coined the phrase and offered working definitions which remain touchstones to this day. Since then, the number of proponents and practitioners of the policy sciences has grown almost geometrically, although some might claim disproportionally in terms of value and product. Numerous "market tests" manifest this growth and apparent acceptance. Virtually every major university has a training program in public policy analysis, and it is the rare governmental unit that does not have its own analytic group or ready access to such capabilities. The question facing the policy sciences, then, is not so much one of survival, but survival in what form and in what directions. That is, what shape and merit will the policy sciences assume as they transition from academic fancy to institutional fact? Moreover, what changes must be undertaken if the policy sciences are to be considered a legitimate and respected discipline rather than a helter-skelter collage of ad hoc methodologies suitable only for particular, idiosyncratic analyses? Finally, what challenges must they confront to overcome the most damaging (and contradictory) charges currently lodged against them, either haughty irrelevance or spineless pandering? In short, what is the destiny of the policy sciences and, more concretely, how can we as policy scientists affect that fate?

For two reasons, these straightforward questions cannot—indeed, should not—be blithely answered. The first reason is that they are not easily answered. Throughout their incubation and maturation, the policy sciences have deliberately sought out issues of the most intractable nature and lashed themselves to the highest normative and epistemological standards. The arms race, social welfare, energy policy, environmental disputes, and health issues are examples of subjects which illustrate the breadth and difficulty of the policy sciences' movement. As if this were not enough, the task of the policy sciences, as defined by Lasswell and Kaplan, is to provide "intelligence pertinent to the integration of values realized by and embodied in interpersonal relations," which "prizes not the glory of a depersonalized state or the efficiency of a social mechanism, but human dignity and the realization of human capacities." Surely no easy charges.

The policy sciences, whatever their internal disputes, have rarely wavered from this lodestar concern with fundamental societal issues and basic values postures. One cannot understand the civil rights movements or social welfare transfer policies without a clear appreciation of their underlying normative preferences: namely, that all persons should have equal opportunity regardless of their race, creed, sex, or religion. Environmental disputes show similar bases and cleavages. This is not to claim that knowledge of opposing value positions results in amiable policy resolutions. Understanding of the other's claims has not reduced the acrimony between the pro- and anti-abortion camps; as Robinson points out, protagonists in the energy disputes scarcely speak the same language,<sup>3</sup> and Thompson argues that they might even emanate from different cultures. 4 This last topic is a particularly striking example since the physical reserves of petroleum or the generation of electricity should seemingly be amenable to objective quantification and policy recommendation, yet this has proven not to be the case. The point remains: the policy sciences have consciously directed themselves to addressing the most difficult problems facing society.

This is not to argue that the policy sciences are consciously or inherently Sisyphean or its practitioners masochists, just that they deliberately deal with problems that have scant pretention to easy solution. This hallmark thus obscures the answer to the question of whither the policy sciences, for there are few easy avenues if the policy sciences hold true to their original mandates. Yeats' 1920 poetic vision is apropos:

And what rough beast, its hour come round at last, Slouches towards Bethlehem to be born?<sup>5</sup>

The second question, not totally divorced from the first, is what are the proper means to these ill-defined ends? The answers to this question can be just as perplexing as those ascribed to the first set of concerns. The "conventional" means (e.g., cost-benefit analyses and management information systems) have already been employed and, in some cases, discarded except for use in a few circumscribed instances. Most analysts are aware of the strengths, limitations, and appropriate applications of various approaches offered by organization theory, economics, political science, operations research, and social psychology, even if they might be loathe to abandon them to multidisciplinary analytic enterprises. 6 It is the synergetic syntheses of these and new approaches which must be thoughtfully melded if the full contextual complexity of contemporary issues is to be successfully encompassed. But, again, these observations on their components do little to clarify the future of the policy sciences.

Lacking convincing responses to this challenge, the policy sciences would continue to operate under the damning shadow of practical irrelevance<sup>7</sup> and be utilized as little more than cosmetic support for decisions and policies already chosen. The complete lack of analysis prior to President Reagan's March 1983 announcement of his profoundly important (and expensive) Strategic Defense Initiative gives substance to this rueful possibility.<sup>8</sup> Specific examples can be cited of methodological requirements and possibilities. If values are central to policy analysis, how can they be explicitly incorporated?<sup>9</sup> Who are the "instructors" and the "students"? That is, who is doing the "learning," an arguable and

critical differentiation for a profession in which scholar and practitioner roles are often indistinct and interchangeable. Can risk analysis, as one example among many methodological candidates, play a contributory role?<sup>10</sup> Since the chosen approaches directly influence the proffered recommendations and ultimate value of the research to the public good, the answer to this set of questions will likewise be decisive in the future of the policy sciences.<sup>11</sup>

If one thing is certain about the yet-to-be, it is its assured uncertainties. Given the opaqueness of the future, how can we best describe and meet the challenges confronting the policy sciences in terms of their disciplinary growth, the approaches used, and the issues they will undertake? Setting cavalier speculation aside, we would best equip ourselves for such forecasting and molding by understanding the heritage, the evolution, of the policy sciences as we know and apply them today. This knowledge will at least give their practitioners a common basis for extrapolating future developments of the discipline in a contextual setting.

Therefore, understanding the discipline is central to our task, but it is not a forthright exercise. As noted above, the conceptual underpinnings of the policy sciences approach have been in hand (if not in heart) since the early 1950s. But like any newly emergent discipline, its track has been less than true in any linear sense of the term. Divergences rather than direction—meanderings in lieu of milestones—have marked its travels and travails. Its sporadic intellectual growth has seemingly been diverted, diffused, and perhaps subverted by a number of factors that have deflected it from the original goals and objectives and purposes that Lasswell, Dror, 12 and others foresaw. Successive editors of the bellwether journal Policy Sciences have commented on how this lack of continuity, exacerbated by changing issue landscapes, has threatened or maybe even deprived the policy sciences of their founding birthright and vision. 13 As the Cheshire Cat advised Alice as she wandered through Wonderland, if you don't know where you're going, "then it doesn't matter which way you go."

There is some argument that this condition not only should be expected but perhaps is even salutary, a normal progression that one might predict from a new discipline attempting to carve its identity out of shifting intellectual and topical environments. If previous approaches or disciplines could encompass and resolve

the perceived problems, there would be little need for such fumbling explorations; Copernicus would have never been persecuted had Ptolemaic astronomy accurately described the movements of the solar system, and Einstein would have remained an obscure patents clerk if Newtonian physics had withstood the tests of relativity. But, at base, this is a self-serving bromide for policy researchers whose long-term visions are uncertain or ambivalent. As the philosophers of science and the sociologists of knowledge document, the accretion of knowledge necessary to structure and communicate a discipline must accumulate around a shared analytic framework. 14 Lacking that, one has a disparate set of observations with little connection or overarching coherence; there is, in point of epistemological fact, no discipline. Hence, there can be scant chance for advancement. The ad hoc insights policy researchers might often reach can be criticized for a lack of underlying theory, for little empirical rigor, or, most tellingly, as politically sophistic (i.e., irrelevant and therefore valueless). For a discipline that defines and prides itself in terms of relevance and real world application, these charges, if true, would be fatal. Gulliver's descriptions of the policy research undertaken by the Grand Academy of Lagado are still instructive in this regard:

In the school of political projectors I was but ill entertained, the professors appearing in my judgment wholly out of their senses, which is a scene that never fails to make me melancholy. These unhappy people were proposing schemes for persuading monarchs to choose favourites upon the score of their wisdom, capacity, and virtue; of teaching ministers to consult the public good; . . . with many other wild impossible chimeras, that never entered before into the heart of man to conceive, and confirmed in me the old observation, that there is nothing so extravagant and irrational which some philosophers have not maintained for truth. <sup>15</sup>

These criticisms are, of course, neither irrelevant nor misplaced. There should be little doubt that the aggregation of societally relevant knowledge and its application to public policy issues is a difficult task, <sup>16</sup> many times even a thankless one. In the words of one representative federal bureaucrat, "'We might as well be candid: Federal program evaluations so far have been largely ineffective.' O.M.B. officials also report that evaluations, by and large, have not been timely, relevant, or accessible."<sup>17</sup> To ask policy

scientists to assume the additional burden of developing underlying integrating themes is perhaps unreasonable, not because it is unnecessary but because it adds a distracting, possibly insoluble problem to the already formidable complexities of knowledge utilization in the public policy arena. Indeed, Ascher argues:

The policy scientist's acknowledgment of a broader base of variations in actors' motivations and behaviors results in far greater skepticism regarding the ability to formulate explicit, generalizable models. . . . The policy sciences' approach provides a general framework for cataloguing, identifying, and exploring the implication of multiple objectives, but to be applied in specific instances rather than general laws. <sup>18</sup>

In such a fluid environment, one should expect to find what Polanyi had called "tacit" knowledge, that is, knowledge acquired through practice that is difficult to articulate or document articulately. Lindblom and Cohen refer to this as "ordinary knowledge" and claim that it is far more effective in terms of affecting policy decisions than knowledge derived from "professional [i.e., analytic] social inquiry." Even if the distinction were valid and could be maintained (assumptions Emmert points out are at best worrisome and at root unnecessary), this rationale, however reasonable, does not persuasively excuse the policy sciences from advancing from a feuilleton of topicality to a respected discipline of societally relevant and effective knowledge. A sorting out and stocktaking is necessary lest an intellectual sclerosis invade and disable the policy sciences.

Finally, this review is motivated by two assumptions: opportunity and imperative. The opportunity assumption is that the policy sciences as enunciated can make a difference in relieving social maladies and achieving consensual social goals. In Nathan's pithy advocacy, they "can be useful and used."<sup>22</sup> The imperative assumption is that it is almost certain that social ills, if left unattended, are not homeostatic or self-correcting. They will not graciously and equitably resolve themselves as a matter of course or courtesy; there is no "hidden hand" benevolently guiding public policy or alleviating injustices. More troublesome is the observation that many attendant policies might actually be counterproductive and worsen the very situations they were formulated and

implemented to correct. There is evidence that drug education programs increase rather than reduce drug use in the target populations.<sup>23</sup> Murray proposes that the Great Society's social welfare programs have resulted in black Americans "losing ground" in their search for racial equality. 24 If the costs of inaction and neglect increase the costs of curing, then this examination of the policy sciences' potential is past due.

Thus, to reiterate, one needs to ask what has motivated and shaped the growth of the policy sciences. What trends and conditions have influenced their development as both a discipline and a profession? And, further, how might one predict, guide, and perhaps even overcome the "market forces" that have heretofore shaped the amorphous body of the policy sciences?

## THE APPROACH

This monograph proposes to investigate the development of the policy sciences and their determinants by employing a Lasswellian framework.<sup>25</sup> This framework has two advantages. First, it has a certain internal cohesion which permits one to examine the policy sciences approach to social problems in a contextually rich yet structured manner. Second, it permits one to project future developments and ask what influence they might have. We are then, in essence, turning the policy sciences spotlight upon the policy sciences themselves to identify both their founts and futures, asking what they have done and what they might do.

At this point, it would be useful to provide some definitions. "Policy sciences," as used here, is an umbrella term describing a broad-gauge intellectual approach applied to the examination of societally critical problems. In Lasswell's terms, "The policy [sciences] approach does not imply that energy is to be dissipated on a miscellany of merely topical issues, but rather that fundamental and often neglected problems which arise in the adjustment of man in society are to be dealt with."<sup>26</sup> The policy sciences, as we shall see, are problem-oriented and contextual in nature, multidisciplinary in approach, and explicitly normative in perspective. They represent a variety of approaches to understanding and resolving issues of great public importance. As an explicit part of this charter, they include the ideological and value components which are an integral and operational part of politics and the political process. The policy sciences approaches necessarily encompass much more than the traditional applied social sciences because many contemporary policy problems involve critical components of the natural and physical sciences and new technologies.

"Policy analysis" is the most noted derivative and application of the tools and methodologies of the policy sciences' approach. In Dunn's words, policy analysis is "an applied social science discipline which uses multiple methods of inquiry and argument to produce and transform policy-relevant information that may be utilized in political settings to resolve policy problems."<sup>27</sup> Although there is some debate as to what precisely defines a policy problem, 28 policy analysis is generally considered a more discrete genus under the broader umbrella of the policy sciences phylum.<sup>29</sup> Quite often and unfortunately, they are used interchangeably. Similarly, "systems analysis," which many proponents claim to be synonymous with policy analysis, is even more a set of specific tools and applications, usually quantitative in nature. Systems analysis is more limited in what it encompasses and, subsequently, is able to address. 30 Within these broad categories, distinguished primarily by their investigations and purviews, there are a series of methodological tools, such as decision analysis, costbenefit analysis, econometric modeling, and survey research.

Finally, many policy scholars focus on the "policy process" or "policy cycle" as a vehicle for explaining in general how policies are conceived, chosen, executed, and evaluated. These multiple perspectives can be viewed as consonant, but should not be taken as identical. This represents a framework for placing the policy sciences' approaches in the operating political arenas. The juxtaposed policy process emphasis reflects Lasswell's early admonishment to focus on both "knowledge of the policy process and knowledge in the process." We will examine the policy process more closely in later chapters. However, it is important to note here that the policy sciences have drawn upon a number of policy decisionmaking models and the overall policy process as a medium for making their research and recommendations more relevant to the problem at hand. These models are descriptively and

procedurally richer than those usually found in political science and sociology because policy scientists require a clear understanding of how the policy process operates if their recommendations are to be effectively posed and utilized. To appreciate, let alone engage in, the policy symphony, one needs to interpret and manipulate both the score and the orchestration.

The basic theme of this monograph is that the evolution of the policy sciences can best be understood if one treats it as having been shaped by two separate but related sets of factors or conditions. The first set can be described as endogenous, that is, congeries of perceptions and methodologies drawn from psychology, sociology, many of the natural and physical sciences, law, political science, economics, and other contributing disciplines. The second set, or what one might term exogenous, is provided by real world, political events as they affected the policy sciences in terms of both the resulting choice of problems and the way in which the problems were approached. Historically, the two certainly interacted with and influenced each other, although it will be seen that too often they appeared like ships passing in the night. Still, for a successfully integrated and coherent policy science, the two must and did commingle. An economist might depict this relationship as one of "supply" (i.e., applicable tools) and "demand" (i.e., a need for these skills or a market). A more policy-oriented characterization—one adopted here—might be "advice" from the practitioner and "consent" from the policymaker. The following chapters will reflect this loosely posed paradigm.

Before beginning, the reader should be aware of two limitations of this study. First, it is based upon an unfortunate but patent set of parochialisms. Even though the general framework utilized here should be applicable across the broad range of cultures and polities, this discussion draws its illustrations almost exclusively from the American political milieu. At one time, this might have been more excusable because, for a variety of reasons, the policy sciences approach was largely an American phenomenon, as even the most cosmopolitan of the policy scholars, Yehezkel Dror, admits.<sup>33</sup> (Exceptions will be noted below.) This situation is certainly no longer true, if, indeed, it ever was; societally relevant knowledge is hardly an American national monopoly. Both in terms of policy-oriented scholars and research institutions (e.g., Sweden's

Secretariat for Futures Studies, the West Berlin Science Center, and Vienna's International Institute for Advanced Systems Analysis),34 Europeans are active, visible, and valuable participants in the policy sciences.<sup>35</sup> For instance, personnel affiliated with the West Berlin Science Center will soon publish their review of the development of policy research in the OECD nations, which differs from the American experience in some important ways, such as the role of university professors. 36 Still, for this discussion, this limitation should be recognized. It will be returned to in the conclusion of this monograph.

The second limitation is that this study makes little attempt to inventory, document, and sort out what is "wrong" with the policy sciences (e.g., too many case studies or a babble of nomenclature) or propose a grand, unifying field theory. This is not to denigrate such efforts by others. And they, too, will be partially addressed in the concluding section. However, these are not the fundamental concerns of the exposition presented here.

Even lacking these particular facets, the ensuing discussion of the policy sciences can be enlightening. The analysis and conclusions will not preempt or dissuade Arnold's armies from their eternal clashings, but they can strive to illuminate the darkness and dispel the ignorance. In a republican democracy, one of changing and colliding coalitions, one should not hope to eliminate all competition, but one can aspire to inform the struggles as competently, consistently, and completely as possible. That is a worthy goal for the policy sciences, one which is both relevant and attainable. This might fall short of Lasswell's vision that "these intellectual operations are capable of contributing, to a remarkable degree, to the 'breakthroughs' that occur in the decision processes of history."37 Without surrendering Lasswell's chalice, it is this more limited, still laudable objective which inspires the following discourse.

## **ENDNOTES**

1. Daniel Lerner and Harold D. Lasswell, eds., The Policy Sciences (Stanford, CA: Stanford University Press, 1951).

- 2. Harold D. Lasswell and Abraham Kaplan, Power and Society (New Haven: Yale University Press, 1950), pp. xii and xxiv, respectively.
- 3. John Bridger Robinson, "Apples and Horned Toads: On the Framework-Determined Nature of the Energy Debate," Policy Sciences 15, no. 1 (November 1982): 23-45.
- 4. Michael Thompson, "Among the Energy Tribes: A Cultural Framework for the Analysis and Design of Energy Policy," Policy Sciences 17, no. 3 (November 1984): 321-339. Also see Aaron Wildavsky and Ellen Tenenbaum, The Politics of Mistrust (Beverly Hills, CA: Sage, 1981).
- 5. From William Butler Yeats, "The Second Coming."
- 6. See Hugh J. Miser and Edward S. Quade, eds., Handbook of Systems Analysis: Craft Issues and Procedural Choices (New York: Elsevier, 1987), for an enlightened discussion of the strengths and weaknesses of quantitative policy analyses.
- 7. Charles E. Lindblom and David K. Cohen, Usable Knowledge: Social Science and Problem Solving (New Haven: Yale University Press, 1979), argue that the success of "professional social inquiry" in alleviating societal problems is little better than random chance.
- 8. John Newhouse, "The Diplomatic Round: Summiteering," New Yorker, September 9, 1986, p. 50, describes the genuine astonishment that the President's speech produced in the Departments of State and Defense. Also see Peter deLeon, "The Influence of Analysis on U.S. Defense Policy," Policy Sciences 20, no. 2 (1987): 105-128.
- 9. For two views, see Aaron Wildavsky, "The Once and Future School of Public Policy," *Public Interest*, no. 79 (Spring 1985): 25–41; and Martin Rein, "Value-Critical Policy Analysis," in Daniel Callahan and Bruce Jennings, eds., Ethics, the Social Sciences, and Policy Analysis (New York: Plenum, 1983), chap. 5.
- 10. From different perspectives, positive and complementary answers are provided by Mary Douglas, Risk Acceptability According to the Social Sciences (New York: Russell Sage Foundation, 1985); and Bernard Fischoff et al., Acceptable Risk (New York: Cambridge University Press, 1981).
- 11. A convincing example of this duality is presented by William Ascher, "Editorial: Policy Sciences and the Economic Approach in a 'Post-Positivist' Era," Policy Sciences 20, no. 1 (April 1987): 3-10.
- 12. Harold D. Lasswell, A Pre-View of Policy Sciences (New York: American Elsevier, 1971); Yehezkel Dror, Design for the Policy Sciences and Ventures in the Policy Sciences (New York: American Elsevier, 1971).
- 13. Compare Garry D. Brewer, "The Policy Sciences Emerge: To Nurture and Structure a Discipline," Policy Sciences 5, no. 3 (Septem-

- ber 1974): 239–244; Peter deLeon, "The Policy Sciences: The Discipline and the Profession," *Policy Sciences* 13, no. 1 (February 1981): 1–7; Ronald D. Brunner, "Integrating Knowledge and Action," *Policy Sciences* 17, no. 1 (May 1984): 3–11; and Ascher, "Editorial."
- 14. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970); Karl Popper, *The Logic of Scientific Discovery* (New York: Harper & Row, 1968).

15. Jonathan Swift, "A Voyage to Laputa . . . ," in Gulliver's Travels (1726), from Carl Van Doren, ed., The Portable Swift (New York: Viking Press, 1948), pp. 404-405.

- 16. Bjorn Wittrock, "Social Knowledge, Public Policy, and Social Betterment: A Review of Current Research on Knowledge Utilization in Policy-Making," European Journal of Political Research 10, no. 1 (1982): 83–89.
- 17. Quoted in Martin Rein and Sheldon H. White, "Can Policy Research Help Policy?" Public Interest, no. 49 (Fall 1977): 119–136, at 120. More substantial evidence to this thesis is in Carol Weiss, ed., Using Social Research in Public Policy Making (Lexington, MA: Heath, 1977).
- 18. Ascher, "Editorial," p. 6. Also see Albert O. Hirschman, "The Search for Paradigms as a Hindrance to Understanding," World Politics 22, no. 3 (April 1979): 329–343; and Abraham Kaplan, The Conduct of Inquiry (San Francisco: Chandler, 1964).
- 19. Michael Polanyi, *The Tacit Dimension* (Garden City, NY: Doubleday, 1966); and Michael Polanyi, *Personal Knowledge* (Chicago: University of Chicago Press, 1977).
- 20. Lindblom and Cohen, Usable Knowledge.
- 21. Mark A. Emmert, "Ordinary Knowing and Policy Science: Making Ends Meet," *Knowledge* 7, no. 1 (September 1985): 97–112.
- 22. Richard P. Nathan, "Research Lessons from the Great Society," Journal of Policy Analysis and Management 4, no. 3 (Spring 1985): 423.
- Peter Kerr, "Experts Say Some Antidrug Efforts by Schools Harm More Than They Help," New York Times, September 17, 1986, pp. 1, 49.
- 24. Charles Murray, Losing Ground (New York: Basic Books, 1984).
- 25. The best example is Lasswell, A Pre-View of Policy Sciences.
- 26. Harold D. Lasswell, "The Policy Orientation," in Lerner and Lasswell, eds., The Policy Sciences, p. 14.
- William N. Dunn, Public Policy Analysis (Englewood Cliffs, NJ: Prentice-Hall, 1981), p. 35. A second representative definition is Thomas R. Dye, Understanding Public Policy (Englewood Cliffs, NJ: Prentice-Hall, 1987), pp. 7–8.
- 28. See, e.g., Aaron Wildavsky, Speaking Truth to Power: The Art and

- Craft of Policy Analysis (Boston: Little, Brown, 1979), "Introduction."
- 29. Garry D. Brewer and Peter deLeon, The Foundations of Policy Analysis (Homewood, IL: Dorsey, 1983), chap. 1.
- 30. Edward S. Quade, Analysis for Public Decisions (New York: Elsevier, 1982); and Miser and Quade, eds., Handbook of Systems Analysis.
- 31. Harold D. Lasswell, The Decision Process (College Park: University of Maryland Press, 1956); Brewer and deLeon, The Foundations of Policy Analysis; Judith May and Aaron Wildavsky, eds., The Policy Cycle (Beverly Hills, CA: Sage, 1978); and Randall B. Ripley, Policy Analysis and Political Science (Chicago: Nelson-Hall, 1985).
- 32. Harold D. Lasswell, "The Emerging Conception of the Policy Sciences," Policy Sciences 1, no. 1 (Spring 1970): 3. Emphasis in original.
- 33. Yehezkel Dror, Policymaking Under Adversity (New Brunswick, NJ: Transaction Books, 1986), suggests that the policy research and facilities are still almost exclusively Western phenomena.
- 34. A more complete review is Yehezkel Dror, "Required Breakthroughs in Think Tanks," Policy Sciences 16, no. 3 (February 1984): 199-225; at pp. 224-225.
- 35. For an overview, see Arnold J. Heidenheimer, "Comparative Public Policy: An Odyssey in Four Parts," International Social Science Journal 38, no. 2 (1986): 159-178.
- 36. Peter Wagner et al., eds., Social Science in Societal Contexts: The Policy Orientation and Beyond: National Experiences in Comparative Perspective (Cambridge: Cambridge University Press, forthcoming).
- 37. Harold D. Lasswell, Politics: Who Gets What, When, How (New York: World Publishing, 1958), p. 190. This quotation appears in a postscript prepared for the 1958 edition; Politics was originally written in 1936.