consequences. A hierarchy of outcomes is similar to an objectives tree (Chapter 5), except that outcomes are not objectives until they have been explicitly valued.

4. *Identification of attributes of outcomes.* Here the task is to identify all relevant attributes that make outcomes worthy or valuable. For example, each outcome may have different types of benefits and costs to different target groups and beneficiaries.
5. *Attribute ranking.* Rank each value attribute in order of importance. For example, if increased family income is an outcome of a poverty program, this outcome may have several value attributes: sense of family well-being; greater nutritional intake; and more disposable income for health care. These attributes should be ranked in order of their relative importance to one another.
6. *Attribute scaling.* Scale attributes that have been ranked in order of importance. To do so, arbitrarily assign the least important attribute a value of ten. Proceed to the next most important attribute, answering the question: How many times more important is this attribute than the next-least-important one? Continue this scaling procedure until the most important attribute has been compared with all others. Note that the most important attribute may have a scale value 10, 20, 30, or more times that of the least important attribute.
7. *Scale standardization.* The attributes that have been scaled will have different maximum values for different stakeholders. For example, one stakeholder may give attribute *A* a value of 60; attribute *B*, a value of 30; and attribute *C*, a value of 10. Another stakeholder, however, may give these same attributes values of 120, 60, and 10. To standardize these scales, sum all original values for each scale, divide each original value by its respective sum, and multiply by 100. This results in separate scales whose component values sum to 100.
8. *Outcome measurement.* Measure the degree that each outcome is likely to result in the attainment of each attribute. The maximum probability should be given a value of 100; the minimum probability should be given a value of 0 (that is, there is no chance that the outcome will result in the attainment of the attribute).
9. *Utility calculation.* Calculate the utility (value) of each outcome by using the formula:

$$U_i = \Sigma\, w_j u_{ij}$$

where

U_i = the aggregate utility (value) of the i'th outcome
w_j = the standardized scale value of the j'th attribute
u_{ij} = the probability of occurrence of the i'th outcome on the j'th attribute

10. *Evaluation and presentation.* Specify the policy outcome with the greatest overall performance, and present this information to relevant decision makers.

The strength of multiattribute utility analysis is that it enables analysts to deal systematically with conflicting objectives of multiple stakeholders. This is possible, however, only when the steps just described are carried out as part of a *group process* involving relevant stakeholders. Hence, the essential requirement of multiattribute utility analysis is that stakeholders who affect and are affected by a policy or program are active participants in the evaluation of policy performance.

METHODS FOR EVALUATION

A number of methods and techniques can assist analysts in evaluating policy performance. Nearly all of these techniques, however, may also be used in conjunction with other policy-analytic methods, including problem structuring, forecasting, recommendation, and monitoring. Thus, for example, argumentation analysis (Chapter 8) may be used to surface assumptions about expected relationships between policy actions and objectives. Cross-impact analysis (Chapter 4) may prove useful in identifying unanticipated policy outcomes that work against the achievement of policy-program objectives. Similarly, discounting (Chapter 5) may be as relevant to policy-program evaluation as it is to recommendation, given that cost-benefit and cost-effectiveness analysis may be used retrospectively (*ex post*) as well as prospectively (*ex ante*). Finally, techniques that range from graphic displays and index numbers to control-series analysis (Chapter 6) may be essential for monitoring policy outcomes as a prelude to their evaluation.

The fact that various techniques may be used with more than one policy-analytic method points to the interdependence of problem structuring, forecasting, recommendation, monitoring, and evaluation in policy analysis. Many methods and techniques are relevant to pseudo-evaluation, formal evaluation, and decision-theoretic evaluation (Table 7.5).

Only one of the techniques listed in Table 7.5 has not already been described. *User-survey analysis* is a set of procedures for collecting information about the evaluability of a policy or program from intended users and other stakeholders.[47] User surveys are central to the conduct of evaluability assessments and other forms of decision-theoretic evaluation. The major instrument for collecting information is an interview protocol with a series of open-ended questions. Responses to these questions provide the information required to complete the several steps in an evaluability assessment previously described: policy-program specification; policy-program modeling; policy-program assessment; and presentation of evaluability assessment to users. A sample interview protocol for a user survey analysis is presented in Table 7.6.

[47]See Wholey, "Evaluability Assessment," pp. 44–49.

Table 7.5 Techniques for Evaluation by Three Approaches

Approach	Technique
Pseudo-evaluation	Graphic displays Tabular displays Index numbers Interrupted time-series analysis Control-series analysis Regression-discontinuity analysis
Formal evaluation	Objectives mapping Value clarification Value critique Constraint mapping Cross-impact analysis Discounting
Decision-theoretic evaluation	Brainstorming Argumentation analysis Policy Delphi User-survey analysis

Table 7.6 Interview Protocol for User-Survey Analysis

Step in Evaluability Assessment	Questions
Policy-program specification	1. What are the objectives of the policy or program? 2. What would be acceptable evidence of the achievement of policy-program objectives?[1]
Policy-program modeling	3. What policy actions (for example, resources, guidelines, staff activities) are available to achieve objectives?[2] 4. Why will action *A* lead to objective *O*?[2]
Policy-program evaluability assessment	5. What do various stakeholders (for example, Congress, OMB, state auditor general, mayor's office) expect of the program in terms of performance? Are these expectations consistent? 6. What is the most serious obstacle to achieving objectives?
Feedback of evaluability assessment to users	7. What performance information do you need on the job? Why? 8. Are present sources of performance information adequate? Why? Why not? 9. What is the most important source of performance information you will need in the next year? 10. What key issues should any evaluation address?

Notes: [1]Answers to this question yield operational measures of objectives.

[2]Answers to these questions yield causal assumptions about the relation between actions and objectives.

Source: Adapted from Joseph S. Wholey, "Evaluability Assessment," in *Evaluation Research Methods: A Basic Guide*, ed. Leonard Rutman (Beverly Hills, CA: Sage Publications, 1977), Fig. 3, p. 48.

CHAPTER SUMMARY

This chapter has provided an overview of the process of evaluation, contrasted three approaches to evaluation, and presented specific methods and techniques used in conjunction with these approaches. The process of valuation is then distinguished from evaluation, and alternative ethical and metaethical theories are examined. Normative ethics and metaethics provide rationales for selecting criteria to evaluate policy performance.

LEARNING OBJECTIVES

- compare and contrast processes of monitoring and evaluation
- list characteristics that distinguish evaluation from other methods of analysis
- describe and illustrate criteria for evaluating policy performance
- contrast decision-theoretic evaluation and metaevaluation
- distinguish values, ethics, and metaethics
- describe and illustrate descriptive, normative, and metaethical theories
- analyze a case in "living wage" policies that involves issues of economic inequality

KEY TERMS AND CONCEPTS

value duality
effectiveness
efficiency
equity
responsiveness
appropriateness
multiattribute utility analysis
evaluability assessment
user survey analysis
values
norms
teleological (utilitarian)
deontolological
metaethics

REVIEW QUESTIONS

1. Compare and contrast evaluation and recommendation in terms of time and the types of claims produced by each policy-analytic method.
2. Many policy-program evaluations fail to recognize the latent purposes of evaluation, including a desire (a) to make programs look good by focusing on their surface characteristics ("eyewash"); (b) to cover up program failures ("white-wash"); (c) to destroy a program ("submarine"); (d) to engage in evaluation merely as a ritual that must be practiced to receive funding ("posture"); and (e) to postpone attempts to resolve problems ("postponement"). See Edward A. Suchman, "Action for What? A Critique of Evaluative Research," in *Evaluating Action Programs,* ed.

Carol H. Weiss (Boston: Allyn and Bacon, 1972), p. 81. What problems does this raise for defining the objectives against which performance is to be evaluated?

3. Compare and contrast formative and summative evaluation. Which of these two types of evaluation provides performance information that is likely to be of most use to policymakers? Why?
4. What are the strengths and limitations of cost-benefit analysis as an approach to evaluation? (see Chapter 15). In your answer refer to contrasts among pseudo-evaluation, formal evaluation, and decision-theoretic evaluation.
5. Select a policy or program that you would like to evaluate. (a) Outline the specific steps you would take to conduct an evaluability assessment. (b) Outline the steps you would take in doing a multiattribute utility analysis of the same policy or program. (c) Indicate which of the two procedures is likely to yield the most reliable, valid, and useful results.
6. Select a program with which you are familiar, either because you have read about it or because you were actually involved. Prepare a short paper that outlines a plan, strategy, and procedures for evaluating this program. Refer to Appendix 1 in preparing your answer.

DEMONSTRATION EXERCISE

Issues of a "living wage" turn on questions of poverty, inequality, and the distribution of income, wealth, and other social goods. Inequalities of various kinds have increased in the past twenty-five years, including the years in which Bill Clinton was president. Although conservatives refer to American society as an "opportunity society," it may also be described as an "inequality society."

Issues of economic inequality are particularly salient for education, at all levels. As the distribution of family income has become less equitable, families at the top of the income hierarchy invested five times as much in their children as their counterparts at the bottom. The low level of governmental support for child care, as compared with subsidies for public universities, means that in many cases it costs more to send a four year old to an early childhood education program than to send an eighteen year old to college. And most children who start out near the bottom of the income hierarchy end up there. Approximately 60 percent of children from poor families remain there.

Attempts to define inequality often use the analogy of a cake that can be cut into slices of differing sizes according to different rules.[48] These rules, along with their underlying justifications, deal with the distribution of such social goods as income, wealth, energy, education, and health care.

Some of the rules are the basis of theories of justice put forth by well-known political and ethical theorists including John Rawls[49] and Robert Nozick.[50] Rawls has given us a theory of justice that is largely, though not exclusively, based on what he sees as a

[48]For example, Deborah Stone, *Policy Paradox: The Art of Political Decision Making*. Rev ed. (New York: W. W. Norton, 2002), Ch. 2: Equity, pp. 39–60, and Ch. 3: Efficiency, pp. 61–85.

[49]John Rawls, *A Theory of Justice* (Cambridge, MA: Harvard University Press, 1971)

[50]Robert Nozick, *Anarchy, State, and Utopia* (New York: Basic Books, 1974)

fair distribution of social goods. For Rawls, the fundamental rule of fairness is "allocate social goods so that those worse off are made better off." Nozick, by contrast, has a theory of justice based on what he sees as a fair process for achieving social goods. Here, the rule is "allocate social goods in accordance with the rule that everyone has an equal opportunity to acquire such goods." Both theorists have had a significant influence on the way that many people think about values, ethics, and public policy.

The task in this demonstration exercise is, first, to choose one rule from each of the following three sets, A, B, and C:

SET A: RULES FOR DISTRIBUTING SOCIAL GOODS BASED ON WHO BENEFITS

1. Divide the cake equally among members of society (e.g., all workers will receive the same health benefits for themselves and their families).
2. Divide the cake so that the higher the rank, the larger the slice, although persons of the same rank receive equal slices (e.g., persons who achieve higher occupational rank because of merit will receive higher salaries).
3. Divide the cake so that different groups in society receive equal slices (e.g., minority groups who have suffered historical discrimination will receive preferences in admission to colleges and universities, so that student bodies are more representative of the proportion of minorities in the population).

SET B: RULES FOR DISTRIBUTING SOCIAL GOODS BASED ON WHAT IS BEING DISTRIBUTED

1. Divide the cake so that persons with caloric intake below some recommended daily standard receive larger pieces of cake to compensate for the caloric deficit (e.g., affirmative action programs give preference to minorities and women because they have suffered past discrimination in hiring and wages).
2. Divide the cake so that persons with preferences for carbohydrates, fats, vitamins and other kinds of nutrients receive pieces large or small enough to satisfy these preferences (e.g., in single-payer health insurance policyholders can choose their own physician, according to their own preferences, whereas in a managed-care health insurance system administrators assign a primary care physician to each policyholder).

SET C: RULES FOR DISTRIBUTING SOCIAL GOODS BASED ON THE PROCESS FOR DISTRIBUTING THE GOOD

1. Divide the cake according to a competitive process in which each person has a fair chance to obtain as many pieces as he wishes, with some having a competitive advantage or disadvantage at the start (e.g., all workers in a competitive market economy have an equal opportunity to compete for higher paying jobs).

2. Divide the cake according to a random process (lottery) in which each person has an equal probability of being selected to receive one or more[51] pieces of the cake (e.g., scarce social goods such as potentially effective anticancer drugs are distributed randomly in the course of a randomized clinical trial).
3. Divide the cake according to an electoral process in which the majority gets the entire cake (e.g., in a popular election with majority voting one and only one candidate is elected).

After choosing three of the above rules—one each from sets A, B, and C—apply each rule to the issue of whether or not the "living wage" policies described in Case 7 are justifiable. Justify your selection of each rule by drawing on normative ethical and metaethical theories of the kinds described in this chapter. Summarize the results of your analysis in a two-page policy memo addressed to a mayor or member of Congress in one of the cities or regions covered in the case.

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Case 7. Living Wage Policies in the United States

Millions of American families do not have sufficient income to meet basic needs for child care, housing, health insurance, and affordable housing. For many families, employment alone is insufficient to meet basic needs. Although "welfare-to-work" has been advocated as a solution, it appears that a more adequate social safety net may be needed.

Federal minimum wage policy and local policies designed to provide a "living wage" are potential solutions. Local living wage policies in the form of municipal ordinances have been adopted in more than forty U.S. cities.[52] Living wage policies set a wage floor above the federal minimum wage for designated workers. They are usually government workers and workers employed by businesses that

[51]Random sampling with replacement (a person selected is returned to the pool and can be selected again) permits the same person to receive more than one piece. Random sampling without replacement (a person selected is not returned to the pool) limits each person to one piece, if selected.

[52]See Jared Bernstein, Chauna Brocht, and Maggie Spade-Aguilar, "How Much Is Enough?" in *Basic Family Budgets for Working Families* (Washington, DC: Economic Policy Institute, 2000).

receive government grants, contracts, or subsidies. The wage floor is based either on a percentage (usually about 200%) of the federal poverty threshold, or on a model family budget that recommends amounts necessary for a minimally adequate standard of living. For example, in Pittsburgh and Allegheny County, Pennsylvania, estimates for a "living budget" that provides for a minimally adequate standard of living include expense floors for food, utilities including telephone, housing, health insurance, child care, transportation, and taxes. In 1996, the recommended minimal family budget for a two-parent family with two children was $2,598 per month, or $31,176 annually.[53] As of October 2001, there were living wage ordinances for seventy-one cities and regions (see Table 7.7). Following the table is an article on problems and issues surrounding the living wage movement.

Table 7.7 Living Wage Ordinances Currently in Place (October 2001)

	City and Year Enacted	Wages and Benefits	Employees Covered
1	Alexandria, VA; 2000	$10.21 index annually to the poverty line for a family of 4 with cost for health insurance	City employees, contracts, and subcontracts and other firms who benefit from over $75,000
2	Ann Arbor, MI; 2001	$8.70 with health $10.20 without, index annually	Subsidies or service contracts over $10,000
3	Ashland, OR; 2001	Wage and benefits package worth at least $10.75 an hour, indexed annually to inflation	City, service contracts, subsidies over $15,000
4	Baltimore, MD; 1994	$6.10 in 1996 to $7.70 in 1999, $8.20 in 2000	Service contractors; construction contracts over $5,000; includes subcontractors
5	Berkeley, CA; 2000	$9.75 and $11.37 without benefits	City, contracts, financial assistance recipients, and leaseholders of city land
6	Boston, MA; 1997	$7.49; adjusted annually by the higher of the federal poverty line for a family of four, CPI or 110% of the federal minimum wage	Subsidies (grant, loan, tax incentive, bond financing) over $100,000 for for-profits with over 25 employees and nonprofits with over 100 employees; includes subcontractors and leaseholders or renters of beneficiaries; exemptions for hardship
7	Buffalo, NY; 1999	$6.22 in 2000, $7.15 in 2001, $8.08 in 2002 (a dollar more without benefits)	Contracts and subcontracts over $50,000

(continued)

[53]Ralph Bangs, Cheryl Z. Kerchis, and Laurel S. Weldon, *Basic Living Cost and Living Wage Estimates for Pittsburgh and Allegheny County* (Pittsburgh, PA: University Center for Social and Urban Research, University of Pittsburgh, 1997). Figures are for 1996.

Table 7.7 Living Wage Ordinances Currently in Place (October 2001) *(continued)*

	City and Year Enacted	Wages and Benefits	Employees Covered
8	Cambridge, MA; 1999	$10.68 adjusted annually by CPI	Employees of the city, contract or subcontracts over 10,000, and firms that benefit from at least $10,000 annually
9	Chicago, IL; 1998	$7.60	Service contracts with over 25 employees; includes subcontractors; exemptions for nonprofits
10	Cleveland, OH; 2000	$8.20, increased to $9.20 Oct. 2002 (indexed accordingly thereafter on annual basis)	Contracts and subsidies over $75,000 with at least 20 employees (profit) and 50 employees for nonprofit with a wage ratio grater than 5:1
11	Cook County, IL; 1998	$7.60	Service contractors
12	Corvallis, OR; 1999	$9 adjusted annually by CPI	Contracts over $5,000
13	Dane County, WI; 1999	100% of poverty line for a family of 4	Service contracts and subsidies over $5,000
14	Denver, CO; 2000	100% of poverty line for a family of 4	Contract or subcontract over $2,000
15	Des Moines, IA; 1988, updated 1996 and 1998	$7 in 1988 to $9 in 1996	Subsidies (revolving loan fund, enterprise community business capital fund); exemptions for start-up or hardship
16	Detroit, MI; 1998	100% of poverty line for a family of 4 with health benefits; 125% of poverty line without benefits	Service contracts or subsidies (federal grant programs, revenue bond financing, planning assistance, tax increment financing, tax credits) over $50,000; includes subcontractors and leaseholders
17	Duluth, MN; 1997	$6.50 with health benefits; $7.25 without health benefits; adjusted annually by CPI	Subsidies (investment fund loans, enterprise zone credits, business loans and grants, tax increment financing land write downs, industrial part land write downs, lease abatements); includes subcontractors; exemptions for small employers and community development block grant recipients
18	Durham, NC; 1998	$8.14 (federal poverty line for a family of 4)	Service contracts; includes subcontractors
19	East Pointe, MI; 2001	100% of poverty line for a family of 4 with health 125% without (currently $8.23 and $10, respectively)	Contracts or tax incentives of at least $5,000

Table 7.7 Living Wage Ordinances Currently in Place (October 2001) *(continued)*

	City and Year Enacted	Wages and Benefits	Employees Covered
20	Eau Claire County, WI; 2000	$6.67 with health or $7.40 without	Contracts over $100,000
21	Ferndale, MI; 2001	$8.50 with health $9.75 without, index annually	Service contracts over $25,000
22	Gary, IN; 1991	Prevailing wage for similar occupations in the county and health care for employees working over 25 hr/wk	Subsidies (industrial revenue bonds, economic grants or other economic development incen tives); includes subcontractors
23	Gloucester County, NJ; 2001	The greater of $8.50 or the federal poverty level with health, addition $2.37 without	County contractors
24	Hartford, CT; 1999	110% of poverty level for a family of 4, with health benefits that requires employees To pay no more than 3% of annual wages (or equivalent)	Contracts over $50,000
25	Hayward, CA; 1999	$8 with health benefits; $9.25 without benefits; adjusted yearly by CPI; paid and unpaid leave	Service contracts over $25,000; includes subcontractors
26	Hudson County, NJ; 1999	150% of federal minimum wage	Service contractors
27	Jersey City, NJ; 1996	$7.50; 5 days vacation; $2,000 annually for health benefits	Contractors
28	Kankakee County, IL; 1999	$11.42 or 130% of the poverty level (whichever is higher), provide 80% of health and dental for full time employees at any new development, and offer pension or profit sharing	Companies benefiting from local 'Enterprise Zone' tax breaks
29	Los Angeles, CA; 1997	$7.50 with benefits; $8.50 without benefits; 12 paid days for vacation, sick or personal leave	Service contracts over $25,000 and a term over 3 months; includes subcontractors; exemp tions for first time recipients of financial assistance and employers with fewer than 5 employees
30	Los Angeles County, CA; 1999	$8.32 with health benefits; $9.46 without health benefits	Contractors
31	Madison, WI; 1999	100% of poverty line for a family of 4 in 1999; 105% in 2000; 110% in 2001	Certain contracts over $5,000 and certain subsidies over $100,000
32	Miami Beach, FL; 2001	$8.56 with health, $9.81 without benefits	City, and certain city service contract over $100,000
33	Miami-Dade County, FL; 1999	$8.56 with health benefits; $9.81 without benefits	County workers, service contractors, and airport licensees

(continued)

Table 7.7 Living Wage Ordinances Currently in Place (October 2001) *(continued)*

	City and Year Enacted	Wages and Benefits	Employees Covered
37	Minneapolis, MN; 1997	110% of poverty line for a family of 4 without benefits; 100% of poverty line with benefits	Subsidies over $100,000 in one year (economic development contracts; land sales at less than the fair market price, loans, bonds excluding conduit bonds, grants and city tax incentives); exemptions for community development corporations and small businesses
38	Missoula, MT; 2001	Match pay of lowest-paid full time employees of the City ($7.95) and provide health	Recipients of city economic development assistance
39	Multnomah County, OR; 1998	$9 (wage and benefits combined); adjusted annually by CPI	Service contracts; new and renewed contracts only
40	New Haven, CT; 1997	1997–98 100% of federal poverty line for a family of 4; increases annually to 120% of federal poverty line by 2001	Service contracts; includes subcontractors
41	New York, NY; 1996	Prevailing wage of similar occupations in the city	Service contracts; includes subcontractors; exemptions for nonprofits
42	North Hampton, MA; 1999	$7.49 with health benefits; $9 without benefits	Contractors
43	Oakland, CA; 1998	$8.00 with health benefits; $9.25 without benefits; adjusted yearly by regional CPI; 12 days paid leave	Service contracts over $25,000 or subsidies over $100,000; includes subcontractors
44	Omaha, NE; 2000	100% of poverty line for a family of 4 with health benefits; 110% without health benefits	City employees, contracts and subcontracts and other firms who benefit from over $75,000
45	Orange County, NC; 1998	$8	County workers
46	Oyster Bay, NY; 2001	$9 with health; $10.25 without	Janitorial or security contracts or subcontracts over $50,000
47	Pasadena, CA; 1998	$7.25 with health benefits; $8.50 with no benefits	Service contracts over $25,000
48	Pittsburgh, PA; 2001	$9.12 with health, $10.62 without	City, certain service contractors, recipients of subsidies and certain leaseholders (profit, at least 10 employees; nonprofit, at least 25)

Table 7.7 Living Wage Ordinances Currently in Place (October 2001) *(continued)*

	City and Year Enacted	Wages and Benefits	Employees Covered
49	Pittsfield Township, MI, 2001	$8.70 with health and $10.20 without, adjust for inflation annually	Service contract, and financial assistance over $10,000 (profit, at least 5 employees; nonprofit, at least 10)
50	Portland, OR; 1996	$6.75 in 1996; $7 in 1998; adjusted by cost of living increase received by city workers	Service contracts; exemptions for training or educational work
51	Richmond, VA; 2001	$8.50 with family health, $10.13 without	School board workers
52	Rochester, NY; 2001	$8.52 with health, $9.52 without	Contracts over $50,000
53	San Antonio, TX; 1998	$9.27 for nondurable goods manufacturing and service; $10.13 for durable goods manufacturing	Subsidies (tax abatements)
54	San Fernando, CA; 2000	$7.25, $8.50 with no health benefits; adjusted annually based on state employment retirement	Contracts or grants of more than $25,000
55	San Francisco, CA; 2000	$10 followed by 2.5% increases for the next 3 years and health insurance or penalty payments to City's public health system fund	City service contracts, nonprofits, and leaseholders at the San Francisco International Airport
56	San Jose, CA; 1998	Higher of prevailing wage (union scale wages) or $9.50 with benefits; $10.75 without benefits; adjusted annually based on federal poverty line, geographic cost of living differentials, or CPI	Service contracts over $20,000; exemptions for hardship to small businesses
57	Santa Clara County, CA; 1995	$10 with health benefits	Manufacturers who would not have located in the county without the rebate who create and sustain at least 10 full-time, permanent manufacturing jobs
58	Santa Cruz, CA; 2000	$11 with health, $12 without	City, profit and nonprofit city service contracts
59	Santa Monica, CA; 2001	$10.50 with health, additional $1.75 without (increasing to $2.50 in 2002)	Employers operating within Coastal Zone tourist district with revenues over $5 million
60	Somerville, MA; 1999	100% of poverty level for a family of 4	Employees of the city, contracts or subcontracts over $50,000, and firms that benefit from at lest $50,000 annually ($30,000 in 2001, $10,000 in 2003)

(continued)

Table 7.7 Living Wage Ordinances Currently in Place (October 2001) *(continued)*

	City and Year Enacted	Wages and Benefits	Employees Covered
61	St. Louis, MO; 2000	A wage sufficient to lift a family of 3 above the eligibility level for food stamps ($8.84 with health, $10.76 without)	Contracts over $50,000 and business development subsidies over $100,000
62	St. Paul, MN; 1997	110% of poverty line for a family of four without benefits; 100% of poverty line with benefits	Subsidies over $100,000 in one year (economic development contracts; land sales at less than the fair market price, loans, bonds excluding conduit bonds, grants and city tax incentives); exemptions for community development corporations and small businesses
63	Suffolk County, NY; 2001	$9 with health $10.25 without	Subsidies over $50,000 or service contracts over $10,000
64	Thompkins County, NY, 1998	$16,500 annually (phased in over 2 years)	Human service contractors
65	Toledo, OH; 2000	110% of poverty line for a family of 4 with health benefits; 130% without health benefits	Contracts over $10,000 (more than 25 employees) and subsidies over $100,000 (more than 50 employees)
66	Tucson, AZ; 1999	$8.26, $9.30 without health benefits	
67	Ventura County, CA; 2001	$8 with health, $10 without	All contractors and subcontractors
68	Warren, MI; 2000	100% of poverty line for a family of four or $8.83, 125% without health benefits	Contracts or tax breaks over $50,000
69	West Hollywood, CA; 1997	$7.25 with health benefits; $8.50 with no benefits; 12 paid days for vacation, sick or personal leave	Service contracts over $25,000 and a term over 3 months; includes subcontractors.
70	Ypsilanti , MI; 1999	$8.50, $10 without health benefits	Companies receiving city service contracts or assistance over $20,000 in a given year
71	Ypsilanti Township, MI; 1999	$8.50 with health care, $10 without	Companies receiving city service contracts or assistance over $10,000 ($20,000 for nonprofits) in a given year

Source: "Living Wage Successes." Association of Community Organizations for Reform Now, http://www.acorn.org/. Last updated October 2001.

*The Living Wage Movement: Pointing the Way toward the High Road**

by Jared Bernstein

Despite a surging economy, many low-income working families continue to struggle. Their average income, adjusted for inflation, is 11% lower than it was in 1979, and, at $14,900 in 1997, was about $1,300 below that year's poverty line for a two-parent family with two children. For working families in the bottom of the income scale, the major cause of this negative trend is the decline in their rates of pay. They are working as much or more than ever, but their paychecks are failing to keep up with the rest of the growing economy. The result: the economic gap between the haves and have-nots currently stands at its highest level in the post–WW II era.

Things are particularly tough in some of our cities, where quality jobs for low-wage workers have been disappearing, only to be replaced by service sector jobs with low pay and few benefits. There are numerous reasons why urban workers have lost ground over the past few decades, including declining unions, the shift from manufacturing to services, urban flight, and reduced political support for cities. But two important and growing problems that have gotten less attention are 1) an increase in the use of tax incentives to draw firms to the area, and 2) the privatization of services formerly provided by the public sector. A third issue facing low-wage urban workers is pressure on the low-wage labor market caused by the welfare-to-work component of welfare reform.

The first problem-tax incentives that don't deliver-is described in great detail in a fascinating piece of economic journalism by Donald Bartlett and James Steele in a recent *Time* magazine series on corporate welfare. You've got to read this series for yourself, but to sum it up, they present an air-tight case showing that, far from a solution, these tax incentives are a big part of the problem. All too often, they show, cities are sacrificing crucial resources to lure firms, with little payback in the way of quality jobs.

The second problem, privatization, is exemplified in the following anecdote. A friend from a New York City suburb told me that in her town, in order to accommodate a local tax cut, the trash removal service was privatized, which, in this case simply meant that a private firm bought the city's dump trucks, painted the firm's name on them, and charged residents a rate that was a bit less than the tax cut (the other change was that now my friend had to bring the trash to the end of the driveway herself). I have no idea if the guys picking up the trash were the same folks who used to work for the city, but you can bet they were paid less. You can also bet that this shift from public to private service provision is taking place throughout the land.

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* This piece originally appeared in the spring 1999 issue of *Community Action Digest*.

What can we do to combat these trends?

Enter the living wage movement. Though living wage ordinances come in a variety of flavors, they all amount to the same thing: they force employers who receive contracts or tax benefits from the locality to pay their workers a wage rate a few bucks over the minimum. The message and purpose are quite simple: if you as an employer have benefited from some form of incentive, then you ought to give a little something back to your workforce.

Sounds simple, right? Well, anytime you're talking about mandating a wage increase, you can bet somebody will squawk, and those who benefit from privatization and tax giveaways have predictably been squawking pretty loudly. What's more, their warnings about the negative consequences of living wage ordinances are not only the predictable response of vested interests; some of these arguments are well-grounded and deserve careful consideration.

This essay will explore the debate around this relatively new movement. First, we will look at the different types of living wage ordinances that are currently in place. Next we'll take a brief tour through the arguments of the opposition. Then we'll examine some of the evidence regarding the impact of current living wage ordinances, and finally reflect on the relevance of the living wage movement in the larger economic context.

What Are "Living Wage" Ordinances?

The living wage movement takes as it theme the reasonable position that no one who works for a living should be poor. Thus, wages paid to even the lowest wage workers, should, with full-time work, lift them out of poverty. But how does the movement achieve this goal?

Perhaps the most obvious way to meet this objective would be to push for a federal minimum wage that was high enough to lift full-time workers up to a decent standard of living. However, while those in the living wage movement certainly support a higher federal minimum, given their limited resources, community organizing backgrounds, and recognition of current political realities, most of their energies have been directed at municipal ordinances.

Essentially, these are rules that set a wage level below which certain employers cannot pay their workers. Thus, they are a close relative of federal minimum wage regulations, which set a national floor on wages (some states set their minimum wage above the federal level, but they can't set it lower than the current $5.15 per hour). What's different about living wage ordinances (besides the obvious fact that they set a wage level above the federal minimum) is that they are much more narrowly targeted than the federal law. In all cases, the ordinances currently in place cover a subset of a city's workforce. They usually cover those employed by city contracts and, in some cases, those employed by firms who have benefited from some form of favorable tax treatment by the locality.

A good example is the living wage law passed in the city of Baltimore in 1994. Under this law, firms under contract with the city had to pay those workers who were performing the duties under the contract an hourly wage of $6.10 in

1996, rising incrementally to $7.70 in 1999. Note that only those workers actually working under the city contract are covered by the ordinance. Other workers in the firm are not subject to the living wage ordinance, even if they work at the same site. Another example is the Los Angeles living wage proposal, passed in March of 1997. In this case, covered workers are those under service contracts (or subcontracts) with the city of $25,000 or more, firms with concession agreements, or firms receiving subsidies from the city at least $100,000 annually must be paid an hourly wage of at least $7.25.

So Who Could Object to That?

Sounds fair, you're thinking? Well it won't come as a shock that employers who benefit from city contracts or tax breaks are not enthusiastically signing onto the living wage movement. Some of those who argue against living wages are simply ideologues who oppose any mandates on the private sector. Others are bound to oppose any policy that will cut into their profits. But opponents of the policy also include employers who genuinely fear that the mandated wage increase will hurt their ability to compete in the marketplace; similarly, city officials worry that if there is a wage ordinance in their city, businesses considering relocation will simply look elsewhere, at the cost of local employment opportunities. Both of these counter-arguments maintain that the ordinances, by raising the cost of doing business to city contractors and entrepreneurs, will cost the city jobs and thus hurt the very people they are designed to help.

How well-founded are these fears? First, even those of us who support living wage ordinances should accept that these arguments cannot be rejected out of hand. In fact, two fundamentals of economic theory support these concerns about the ordinances. The first fundamental is that people are generally paid what they are worth, i.e., their hourly compensation is about as valuable as the goods they produce or the services they perform in that hour. The second, and related, fundamental is that if you raise the price of something, people will buy less of it. In classical economics, this principle holds as much for the bananas you purchase at the supermarket as for the privately contracted refuse worker who carts away your banana peels. A third piece of economic theory relevant to our discussion is that mobile capital will seek the highest return (i.e., firms will seek to locate where they can make the most profits), but more on this one later.

If you believe these theoretical propositions, then you are likely to be troubled about mandated wage increases. After all, if workers are by definition being paid their worth, raising their "price" (their hourly wage) can only be bad (as in wasteful and inefficient) for the economy, and ultimately harmful to the worker herself, who, now overpriced, will have to be let go. The result, as contractors leave the market, will be fewer city contracts and less jobs for low-wage workers. The plan to help them has backfired.

But what if these reasonable sounding propositions don't hold? What if workers aren't always paid what they're worth, and what if employers—the buyers of labor services—respond differently to price increases than do shop-

pers buying bananas? Then these arguments against the living wage have to be reevaluated.

There is actually an extensive literature in labor economics which examines the validity of these theories, and, at least as far as the labor market goes, finds them lacking. The literature which evaluates the impact of minimum wage increases is particularly germane, and it universally finds that the job-loss predictions of opponents of the policy never materialize. This is not to imply that no one single worker is unemployed by the mandated wage hike; nor is it meant to imply that a huge wage mandate wouldn't wreak havoc. But, contrary to the predictions of the economic "laws" stated above, it does show that the vast majority of low-wage workers have benefited from the moderate increases in the minimum wage we have implemented.

So are the theories wrong? In the case of the labor market, it appears that, if not wrong, they are pretty unreliable in predicting the impact of mandated wage hikes. The reasons why are not hard to fathom. First, most workers are not paid exactly what they are worth. Wages are set by a number of factors, including the skill, race, and gender of the worker, the conditions of the local labor market (if there are a lot of excess workers, the wage will tend to fall), the nature of the industry and occupation in which the job is located, and, importantly, the bargaining ability of the worker him/herself.

Second, employers will not always respond to the wage hike by laying off workers, for there are other, less disruptive ways they can absorb the price increase. After all, workers are not bananas, and it is much more difficult for an employer to restructure her workforce than for a shopper to switch to oranges until the price of bananas goes back down. As much as they might not want to, employers might find it in their interest to cut their profit margins, or they might try to pass the increase onto their customers through higher prices. Or, instead of laying off their workforce, they are likely to try to get them to increase their productivity, and thus absorb the increase through more efficient production.

That said, there is still an important difference between the federal minimum wage and the municipal living wage. The federal policy is national in scope; thus, no one employer can escape the wage increase by relocating. Recall the third "law" given above: mobile capital seeks the highest return. Since the living wage ordinance applies to a specific geographical area, can't employers simply relocate to avoid paying the higher wage rate?

This is the motivation for rigorous opposition of living wages by anxious city officials who may have been elected to office on the promise of creating X-million jobs. They reasonably fear that if MoneyBags Enterprises is trying to decide where to build their next factory, stadium, etc., a living wage ordinance is not exactly a draw.

This argument also calls for serious consideration. First, we should acknowledge that this mode of thinking is clearly a blueprint for a race to the bottom. You could probably get every factory and sports team in the world to move to your town if you cut them every tax and environmental break available. But, while you might create some jobs, you're just as likely to ruin your community. What's more,

you will create an incentive for neighboring communities to compete on the same basis with you, ultimately lowering regional living standards. On the other hand, you would be just as harmful a leader if you raised environmental regulations to impossible levels, taxed profits at 95%, and insisted that all employees be paid like Michael Jordan.

Sound municipal policy calls for a middle ground. Some taxes and regulations need to be in place to avoid the race to the bottom, and to preserve both the city's tax base and living standards. What's more, despite their claims to the contrary, employers and contractors will not flee the minute a new regulation is reduced. Instead, they will calculate what the regulation will cost them and, as discussed above, try to figure out ways to absorb the cost increase. And if they can continue to make a profit by doing business with the city, they will stay. The next section provides some evidence on these matters from existing living wage ordinances.

What Does the Evidence Show?

Since contemporary living wage ordinances have not been around for very long, there is as yet little evidence of their impact on jobs or economic activity. But what evidence there is shows that the opponents' dire predictions were once again unwarranted.

The most thorough evaluations (of which I am aware) are two separate studies of the Baltimore living wage ordinance, which was approved by the city council in December of 1994. These studies are by no means the last word on the issue; like all empirical studies, they have limitations, particularly regarding sample size. But they are still very instructive. Their main findings are:

- As far as these studies could discern, the cost increase to the city after the living wage ordinance went into effect was less than the rate of inflation.
- Again, given data limitations, these studies found no evidence of job loss in response to the wage increases.
- There was a small decrease-concentrated among smaller firms—in the number of bids per contract after the ordinance went into effect; this small decline, however, did not appear to lower competitiveness or raise contract costs.
- Interviews and case studies with affected employers suggests some absorption of labor cost increases through efficiency gains, particularly lower turnover.
- While there is evidence that the ordinance raised wages for those at the bottom of the wage scale, the affected group appears to be small (less than 2,000).
- Given their low levels of hours worked, the income/poverty-reducing effect was also small; other benefits include some "spillover" increases to workers above the new wage floor.
- Non-compliance on the part of covered employers "remains a significant problem."

Both of these evaluations create the strong impression that the Baltimore living wage ordinance has so far had little impact on either the city's contracting and budget process, or its business environment. Both studies find a real (inflation- adjusted) decrease in contract costs of the contracts in their sample. But they also (the Johns Hopkins study, in particular) leave the impression that few workers were affected, both because of the limited coverage requirements of the ordinance and the fact that most of the covered workers already earn above the living wage (not to mention non-compliance). In cases where more workers fell into the covered wage range, for example, among public school bus aides, the work tended to be seasonal and part-time.

Summing Up

So, at least given the extensive evidence we have on minimum wages and the early returns on living wage ordinances, they appear to be exactly what the doctor ordered to counteract some of the negative economic trends affecting low-wage workers. They force some redistribution of economic resources to those whose boats haven't been lifted by the rising economic tide, and do so without creating distortions in the local economy.

There are other advantages as well. The ordinances also have the potential to counteract the destructive race to the bottom, as cities try to undercut each other. The more pervasive these ordinances are, the less firms shopping around for the cheapest locality will be able to do so on the basis of cutting wages. This point should not be minimized. There is already evidence (given in the *Time* magazine series and the Pollin and Luce book cited earlier) that urban competition has hurt cities more than it has helped them. Living wages can help begin to reverse this destructive policy development.

Living wage campaigns also are useful and productive organizing tools. In numerous cities, low-wage urban residents have responded very positively to these campaigns, apparently viewing them as an opportunity to take action against negative trends that directly affect their living standards. In this sense, the campaigns have provided an all too rare opportunity for low-income communities to become actively involved in their economic fates.

Finally, there is a larger lesson from the living wage movement-a lesson about the nature of the labor market. The movement forces you to step back from the narrow economic arguments for and against the living wage and ask yourself the following question: Why does America, the largest and one of the most productive economies in the world, need to subsidize wages so that full-time, adult workers performing essential tasks can achieve a dignified life style? These workers are taking our kids to school, picking up our trash, and maintaining our public infrastructure. How is it possible that our economy has devolved to the point where we have to subsidize these essential services?

Part of the answer is that we have allowed and even encouraged firms to "take the low-road" in terms of their business practices. Instead of creating incentives to be good corporate actors, to play a positive roll in the economic life of the

communities wherein they reside, our policies encourage them to minimize their contributions and maximize their personal gain. This may be a profitable strategy in the short-run, but it will ultimately serve to corrode some of our most valuable resources. The living wage movement, by pointing the way to the high road, offers a timely and progressive alternative route.

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8 Developing Policy Arguments

What most policy makers understand and many analysts forget is that policy argumentation is central to policy analysis and the policy-making process. Because policy argumentation is the main vehicle for communicating the results of analysis, it is a major factor in the use of policy-relevant information. The analysis and evaluation of policy argumentation are also central to the process of critical thinking that we began to examine in the first part of this book.

In contexts of practice, argumentation is not limited to the kinds of reasoning employed in the social sciences and professions, for example, reasoning based on quantitative models of economic or political behavior, or reasoning based on statistical inferences from a random sample to a population. In the world of policy making, many other modes of reasoning and types of evidence coexist and compete for the attention of policy makers. In this context, analysts who want to improve policies are unlikely to succeed unless they can translate the specialized technical vocabularies of the sciences and professions into arguments that can be understood by policy makers and other participants in policy making. Analysts also should be able to critically assess and, where appropriate, challenge the informa-

tion and assumptions that underlie their own arguments. This chapter presents tools for developing and evaluating policy arguments, a subject that was introduced in Chapter 1.

THE STRUCTURE OF POLICY ARGUMENTS

A policy argument is the product of argumentation, which is the process. In real-life policy settings, arguments are complex and prone to misunderstanding. For this reason, conceptual models are useful in identifying and relating the elements of policy arguments and examining conditions under which they change. One such model is the structural model of argument developed by Stephen Toulmin.[1] The structural model of argument is designed to investigate structures and processes of practical reasoning. Arguments based on practical reasoning, as distinguished from those based on the formal reasoning of mathematics and deductive logic, lack the certainty of formally valid syllogisms such as: If A affects B, and B affects C, then A affects C.

The conclusions of *practical arguments* are always uncertain, as are the reasons and evidence that lead to these conclusions. Reasons, including underlying assumptions, are often not stated explicitly. Even when they are stated, they are always incomplete or inconclusive. Practical reasoning yields conclusions "about which we are not entirely confident by relating them back to other information about which we have greater assurance."[2] Because policy arguments are based on practical reasoning, they are always uncertain and almost never deductive.

Types of Knowledge Claims

A knowledge claim is the conclusion of a policy argument. There are three main types of knowledge claims: designative, evaluative, and advocative. Procedure 8.1 provides guidelines for distinguishing among these three types of claims. Designative claims, associated with empiricism and the investigation of policy causation, are concerned with questions of *fact:* What are the observed outcomes of a policy and why did they occur? Evaluative claims, closely related to ethics, are concerned with questions of *value:* Was the policy worthwhile? Advocative claims, which are explicitly normative, are concerned with questions of *right action:* Which policy should be adopted?

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[1]Stephen Toulmin, *The Uses of Argument* (Cambridge: Cambridge University Press, 1958); and Stephen Toulmin, Robert Rieke, and Alan Janik, *An Introduction to Reasoning*, 2d ed. (New York: Macmillan, 1984). Other models of reasoning and argument are Hayward Alker Jr., "The Dialectical Logic of Thucydides' Melian Dialogue," *American Political Science Review* 82, no. 3 (1988): 805–20; Michael Scriven, *Reasoning* (New York: McGraw Hill, 1977); D. R. Des Gasper, "Structures and Meanings: A Way to Introduce Argumentation Analysis in Policy Studies Education," *Africanus* (University of South Africa) 30, no. 1 (2000): 49–72; and D. R. Des Gasper, "Analyzing Policy Arguments," *European Journal of Development Research* 8, no. 1 (1996): 36–62.

[2]Toulmin, *Uses of Argument*, p. 127.

Policy arguments, as we saw in chapter 1, contain six elements: information ***I***, claim ***C***, warrant ***W***, backing ***B***, rebuttal ***R***, and qualifier ***Q*** (see Figure 8.1a). The first four of these elements are present in any policy argument. The claim ***C*** is the conclusion or "output" of an argument, which is supported by policy-relevant information ***I***, which is the beginning or "input" of the argument. The warrant ***W*** is the justification, or reason, for concluding ***C*** from ***I***. The qualifier indicates that ***C*** has a given truth or plausibility. Consider the following example:

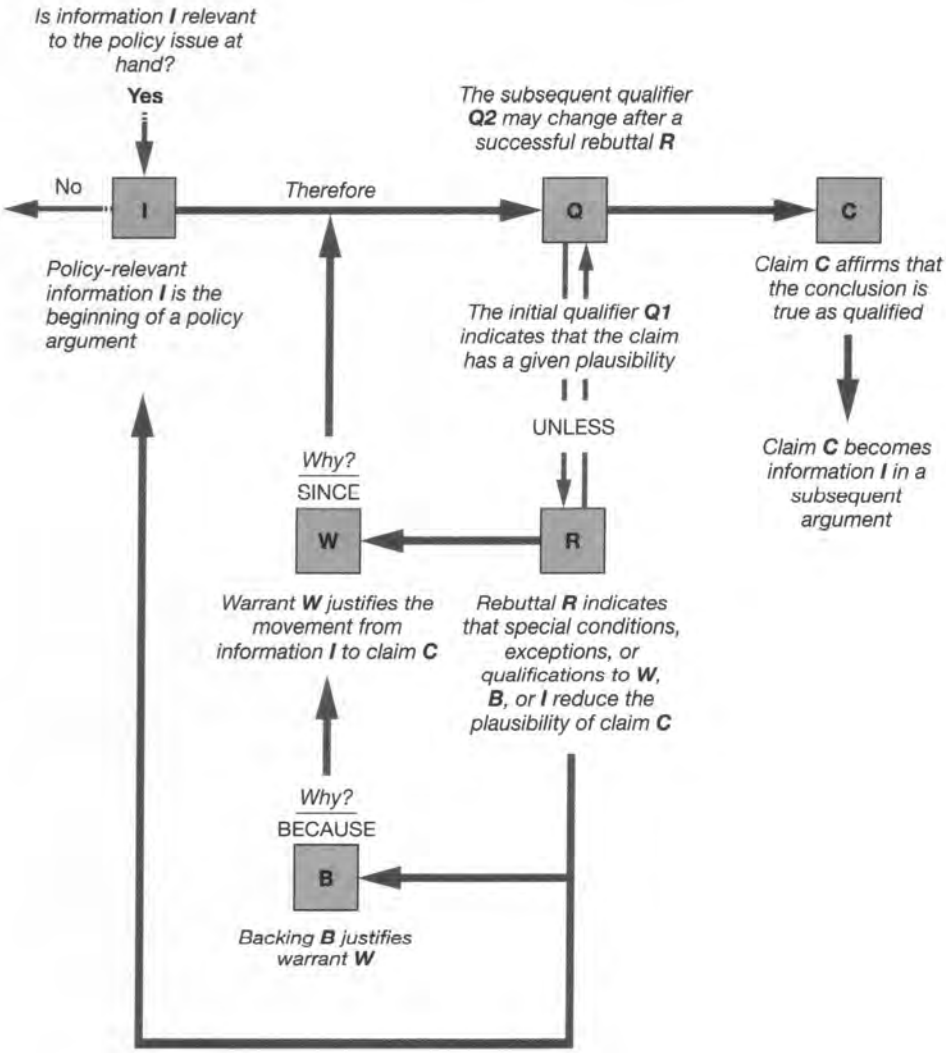

Figure 8.1a The Structure and Process of Policy Argumentation

The Senator supports the privatization of the federal highway system, which will bring significant gains in efficiency and a reduction in taxes. Considering that the privatization of public services has been successful in other areas, this is definitely a "no brainer." Besides, this is the same conclusion as a panel of experts on privatization.

Now let's diagram the argument by breaking it down into its basic elements (Figure 8.1b): *"The Senator supports the privatization of the federal highway system (**I**), which will bring significant gains in efficiency and a reduction in taxes (**C**).*

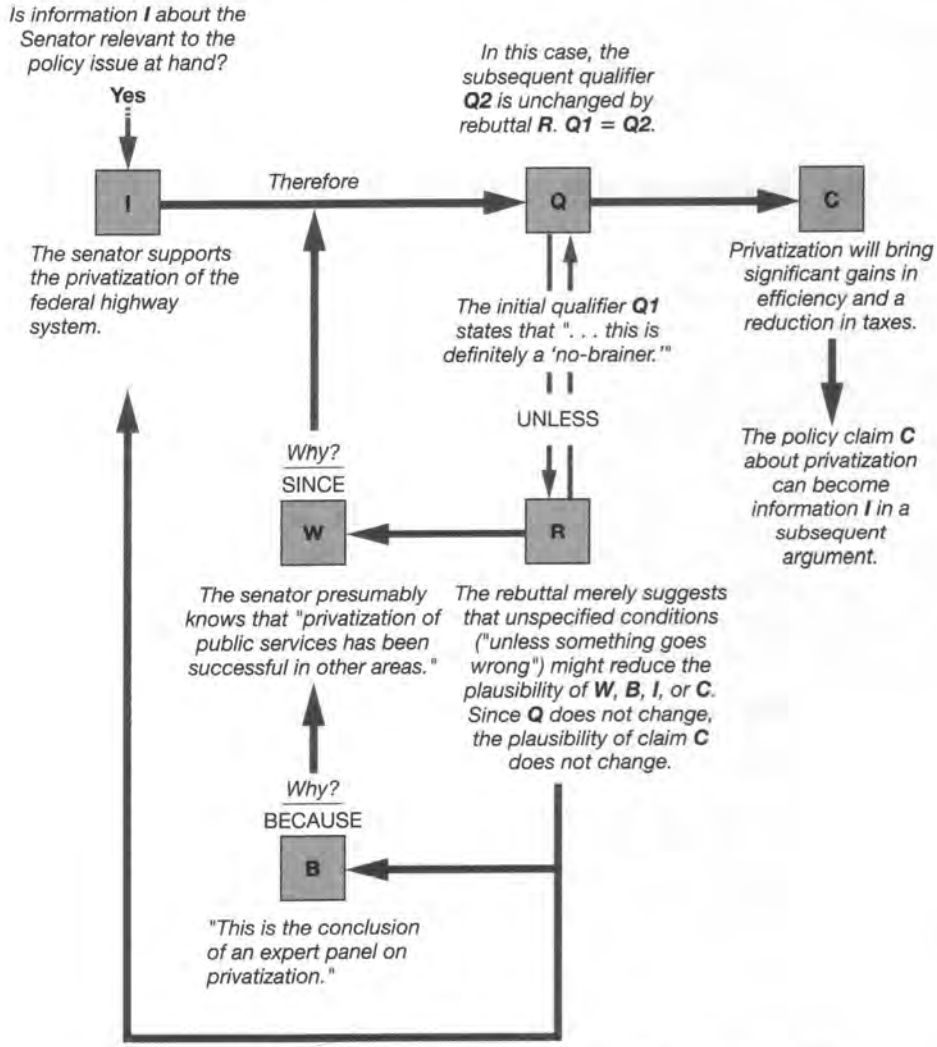

Figure 8.1b The Structure and Process of Policy Argumentation—The Privatization Example

*Considering that the privatization of public services has been successful in other areas (**W**), this is definitely a 'no brainer'"* (***Q***). Additional elements can be introduced to strengthen the argument. For instance, a backing ***B*** has been added ("*This is the conclusion of an expert panel on privatization.*"). Here, as elsewhere, the **B** provides additional reasons or evidence to support ***W***. Finally, the rebuttal ***R*** states any special conditions, exceptions, or qualifications that may reduce the strength of ***Q***, which states the plausibility, or approximate truth, of the conclusion ***C***. In this example, the rebuttal ***R*** merely suggests a possible exception: "Unless something goes wrong." In this case, ***R*** is general, nonspecific, and ineffective. It fails to challenge the original qualifier ***Q1***, which is absolute ("this is definitely a 'no brainer'"). Accordingly, the conclusion ***C*** is unaffected, because ***Q2*** is the same: "*this is definitely a 'no brainer' . . . the privatization of the federal highway system . . . will mean significant gains in efficiency and a reduction in taxes.*"

The Underdetermination of Conclusions by Information

One of the important features of policy argumentation is that policy-relevant information (or data) does not fully determine the conclusions of policy arguments. One way to say this is: "Policy arguments are always underdetermined by data."[3] Another way is "Information does not speak for itself." Identical information can and often does lead to different conclusions, which we call policy *claims* to emphasize the fallible and indeterminate character of arguments. For example, an important document in the history of educational policy in the United States is the Coleman Report (*Equality of Educational Opportunity,* 1966), which among other things provided policy-relevant information about the effects of differences between black and white schools in the achievement of equality of educational opportunity. The same policy-relevant information, however, led to different policy claims (Figure 8.2). Given the information that "Black students attending primarily black schools had lower achievement test scores than black students attending primarily white schools," the claims (with italicized qualifiers in brackets) are:

- *Designative claim and qualifier:* "Since schools in large urban areas are primarily black, the hopes of blacks for higher educational achievement [*simply*] cannot be realized."
- *Evaluative claim and qualifier:* "The Coleman Report is [*clearly*] a racist document based on ethnically biased achievement tests."
- *Advocative claim and qualifier:* "[*There is no question*] that a national policy of compulsory school busing ought to be adopted to achieve integrated schools."

[3]This is a paraphrase of philosophers of science such as W. V. O. Quine, Norwood Hanson, Karl Popper, Thomas Kuhn, and many others, who affirm that all data (and information) are theory-dependent. I am glossing distinctions between information and data.

Box 8.1 Procedural Guide 8.1. Identifying Types of Policy Claims

The first and most important step in developing, analyzing, or evaluating a policy argument is to identify the claim or conclusion. To identify the three types of claims, divide statements into three sets. Use the following rules:

1. *Designative claims*. If the claim asserts that some aspect of a policy has been or can be observed, or if observations are used to make causal inferences, then the claim is designative. Look for words that describe observed or observable characteristics: became, originated, linked, caused, effected, consequence, prediction. Some terms that seem to be designative are really evaluative: "He is a good liberal." "That country is undemocratic." "The evil empire (or axis of evil) is the enemy of all." Claims using these and other "appraising" descriptions are evaluative, not designative, although it may be possible to make observations relevant to the appraisals. A good example is an index of democracy included in a questionnaire. Designative claims rest on warrants that are "factual."
2. *Evaluative*. If the claim asserts that some aspect of a policy has or does not have value or worth, it is evaluative. Look for words such as good, bad, right, wrong, beneficial, costly, efficient, responsive, equitable, just, fair, secure. Examples: "The policy will bring about a 'living wage,' thus moving society toward equity and responsiveness." "The program is less efficient than expected." "The policy compromises the health of the economy." Some evaluative claims refer to states (e.g., a just society) and some to processes (e.g., fair procedures). Evaluative claims often rest on warrants that involve "facts" as well as "values."
3. *Advocative*. If the claim asserts that a government or division within it should take action, the claim is advocative. Look for words such as "ought," "needs to," "must," "is required." Examples: "The World Bank should terminate its structural adjustment program." "Congress should pass the Equal Rights Amendment." "The United States should sign the Kyoto Treaty." "Auto manufacturers require incentives to produce more fuel efficient vehicles." Advocative claims rest on warrants that involve "facts" as well as "values."

Warrants and Rebuttals

Although each of the above claims begins with the same information, very different conclusions are drawn. The reason for these differences is *not* the information—information ("facts") never "speaks for itself." Differences are due, rather, to the role of the warrants in justifying (plausibly or implausibly) the claims on the basis of the information supplied. Some of these warrants are listed below. Although rebuttals apply to backings and information as well, the list shows rebuttals to the warrants only. In this case, the rebuttals diminish the plausibility of the original qualified claims.

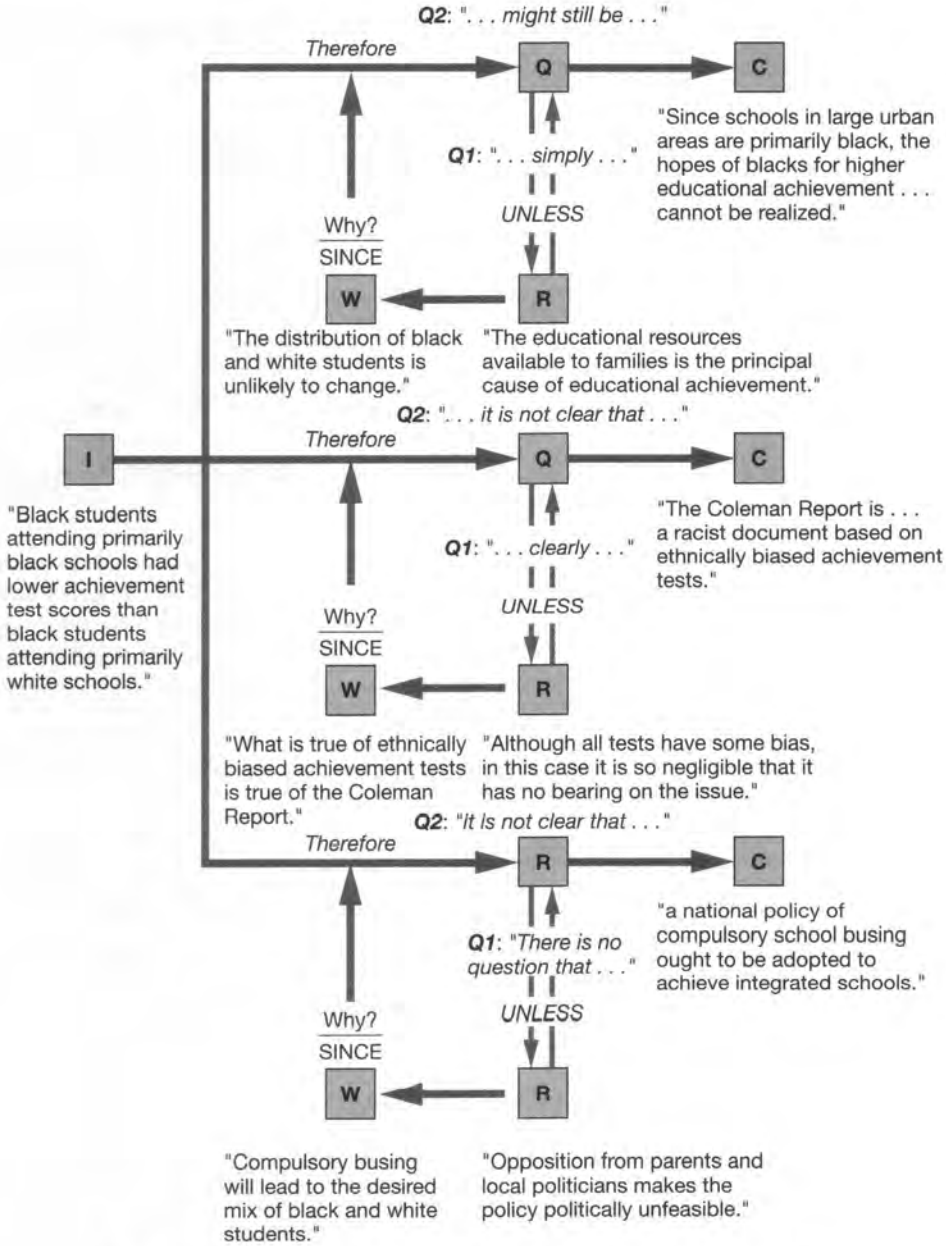

Figure 8.2 The Same Information Leads to Different Types of Claims—As Warrants Are Challenged, the Initial Qualifier Changes

Box 8.2 Procedural Guide 8.2 Identifying and Arranging Elements of a Policy Argument

There are six elements of a policy argument: Information, Claim, Qualifier, Warrant, Backing, and Rebuttal. The following guidelines are useful in identifying and arranging these elements.

1. If you can, do a stakeholder analysis (Ch. 3) before you analyze an argument. This is the main source of elements ***C, I, Q, W, B,*** and ***R.***
2. Start by locating the major claim ***C,*** which is the endpoint or output of the argument. ***C*** is always more general than ***I. C*** involves an "inferential leap" beyond information.
3. Look for language that indicates the degree of credibility the arguer attaches to ***C***—this is the qualifier ***Q.***
4. Look for the ***I*** that supports ***C.*** The ***I*** answers two questions: "What does the arguer have to go on? Is it relevant to the case at hand?"
5. Look for ***W,*** which also supports ***C.*** The ***W*** answers the question "Why is the arguer justified in making claim ***C*** on the basis of ***I?***" Respond with "Since. . ." or "Because. . ." and then identify ***W.***
6. Repeat the same procedure with ***B.*** If there is a question whether a statement is a ***B*** or a ***W,*** look for the one that is more general. This is the ***B.***
7. Remember that a ***W*** or ***B*** may be implicit and unstated—do not expect arguments to be entirely transparent. They are rarely so.
8. Look to the arguments of other stakeholders to find ***R***s. You will not be able to do this competently by yourself, since it requires someone who actually believes in them.
9. Remember that elements can be rules, principles, statements, or entire arguments. Arguments are complex.
10. An isolated *argument* is static; *argumentation,* which involves at least two stakeholders, is dynamic. The initial ***Q*** usually changes when ***R*** challenges the argument.
11. Most ***Q***s become weaker, although some stay the same. Some grow stronger (a fortiori) by withstanding challenges.
12. Argumentation produces "trees" and "chains" involving many processes of argumentation among many stakeholders arrayed through time.

- *Warrant and rebuttal for designative claim.* "The distribution of black and white students is unlikely to change" (***W***). *Unless* (***R***): "The educational resources available to families is the principal cause of educational achievement." The plausibility of the claim is reduced from the qualifier ***Q1*** ("simply"—which is another word for "absolutely" or "without question") to Q2 ("might still be" realized).

- *Warrant and rebuttal for evaluative claim.* "What is true of ethnically biased achievement tests is true of the Coleman Report" (***W***). *Unless* (***R***): "Although all tests have some bias, in this case it is so negligible that it has no bearing on the issue." Here, the qualifier ***Q1*** changes from "clearly" to ***Q2*** "it is not clear that."
- *Warrant and rebuttal for advocative claim.* "Compulsory busing will lead to the desired mix of black and white students" (***W***). *Unless* (**R**): "Opposition from parents and local politicians makes the policy politically unfeasible." Here, the qualifier ***Q1*** changes from "there is no question" to ***Q2*** "to the extent feasible."

MODES OF POLICY ARGUMENTATION

Modes of policy argumentation are the characteristic routes followed by information as it is transformed into policy claims. The several different modes of argument involve reasoning from authority, method, generalization, classification, intuition, cause, sign, motivation, analogy, parallel case, and ethics.[4] Each of these eleven modes of argument has a different type of warrant, and multiple modes can be found in any policy argument. The warrants are the reasons offered by the proponent or opponent of a policy to justify a claim, or inference, based on the information supplied. Modes of policy argumentation and their characteristic patterns of reasoning are summarized in Table 8.1.

Argumentation from Authority

In the authoritative mode, claims are based on arguments from authority. Policy-relevant information consists of factual reports or expressions of opinion. The function of the warrant is to affirm the reliability or trustworthiness of the source of the information. Depending on the social context, authorities may be kings, magicians, or religious leaders, or they may occupy roles as presidents, legislators, agency heads, scientists, professors, writers, or news reporters.

In authoritative arguments, the policy claim reiterates the information that has been provided by the authority, whose reliability, status, sagacity, and so forth, has been underwritten by the warrant. To illustrate (see Figure 8.3), let us imagine that a policy analyst advising the National Security Council at the height of the 1999 U.S.–NATO attack on Yugoslavia made the designative claim ***C***: "though Western leaders continue to deny it, there can be little doubt that the bombing campaign

[4]Some of the modes presented here draw from Wayne Brockriede and Douglas Ehninger, "Toulmin on Argument: An Interpretation and Application," *Quarterly Journal of Speech* 1006 (1960): 45–53; and Toulmin, Rieke, and Janik, *Introduction to Reasoning*, 2d ed., pp. 213–37. I have added additional modes.

Table 8.1 Modes of Policy Argumentation and Characteristic Reasoning Patterns

Mode	Reasoning Pattern
Authority	Reasoning from authority is based on warrants having to do with the achieved or ascribed statuses of producers of policy-relevant information. For example, experts, insiders, scientists, specialists, gurus, power brokers. Footnotes and references are disguised authoritative arguments.
Method	Reasoning from method is based on warrants about the approved status of methods or techniques used to produce information. The focus is on the achieved or ascribed status or "power" of procedures, rather than persons. Examples include approved statistical, econometric, qualitative, ethnographic, and hermeneutic methods and techniques.
Generalization	Reasoning from generalization is based on similarities between samples and populations from which samples are selected. Although samples can be random, generalizations can also be based on qualitative comparisons. The assumption is that what is true of members of a sample will also be true of members of the population not included in the sample. For example, random samples of $\mathbf{n} \geq 30$ are taken to be representative of the (unobserved and often unobservable) population of elements from which the sample is drawn.
Classification	Reasoning from classification has to do with membership in a defined class. The reasoning is that what is true of the class of persons or events described in the warrant is also true of individuals or groups which are members of the class described in the information. An example is the untenable ideological argument that because a country has a socialist economy it must be undemocratic, because all socialist systems are undemocratic.
Cause	Reasoning from cause is about the activity of generative powers ("causes") and their consequences ("effects"). For example, a claim may be made based on general propositions, or laws, of economics that state invariant relations between cause and effect. Other causal claims are based on observing conditions that must be satisfied to infer that a policy has a specified effect. Most argumentation in the social and natural sciences is based on reasoning from cause.
Sign	Reasoning from sign is based on signs, or indicators, and their referents. The presence of a sign indicates the presence of an event or condition, because the sign and what it refers to occur together. Examples are indicators of institutional performance such as "organizational report cards" and "benchmarks," or indicators of economic performance such as "leading economic indicators." Signs are not causes, because causality must satisfy additional requirements not expected of signs
Motivation	Reasoning from motivation is based on the motivating power of goals, values, and intentions in shaping individual and collective behavior. For example, a claim that citizens will support the strict enforcement of pollution standards might be based on reasoning that, since citizens are motivated by the desire to achieve the goal of clean air and water, they will act to offer their support.
Intuition	Reasoning from intuition is based on the conscious or preconscious cognitive, emotional, or spiritual states of producers of policy-relevant information. For example, the awareness that an advisor has some special insight, feeling, or "tacit knowledge" may serve as a reason to accept his judgment.
Analogy-Metaphor	Reasoning from analogies and metaphors is based on similarities between relations found in a given case and relations characteristic of a metaphor, analogy, or allegory. For example, the claim that government should "quarantine" a country by interdicting illegal drugs—with the illegal drugs seen as an "infectious disease"—is based on reasoning that, since quarantine has been effective in cases of infectious diseases, interdiction will be effective in the case of illegal drugs.

(continued)

Table 8.1 Modes of Policy Argumentation and Characteristic Reasoning Patterns *(continued)*

Mode	Reasoning Pattern
Parallel Case	Reasoning from parallel case is based on similarities among two or more cases of policy making. For example, a reason that a local government should strictly enforce pollution standards is that a parallel policy was successfully implemented in a similar local government elsewhere.
Ethics	Reasoning from ethics is based on the rightness or wrongness, goodness or badness, of policies or their consequences. For example, policy claims are frequently based on moral principles stating the conditions of a "just" or "good" society, or on ethical norms prohibiting lying in public life. Moral principles and ethical norms go beyond the values and norms of particular individuals or groups. In public policy, many arguments about economic benefits and costs involve unstated or implicit moral and ethical reasoning.

has provided both motive and opportunity for a wider and more savage Serbian operation than what was first envisioned."[5]

The information ***I*** is from of a statement by Carnes Lord, a professor at the Fletcher School of Law and Diplomacy and former Bush administration national security advisor. The warrant ***W*** affirms Lord's reliability and is backed ***B*** by an additional authoritative argument designed to add to the persuasiveness of the argument. The rebuttal ***R*** challenges the initial warrant, without weakening the claim's credibility, as stated in the original qualifier ***Q1.*** Therefore ***Q2*** does not differ from ***Q1.*** Note that this and other figures were developed with easy-to-use and widely available graphics programs, which provide an efficient and flexible way to represent complex arguments.[6]

Argumentation from Method

Argumentation from method is based on warrants about the approved status of methods or techniques used to produce information. Policy-relevant information may consist of factual statements or reports. The role of the warrant is to provide a reason for accepting the claim based on the information by associating the latter with the use of an approved method or rule. Usually, the claim is that the event, condition, or object described in the information should be regarded as valuable (or worthless), because of the method used to produce it. Consider the following public investment problem. An analyst has information ***I*** that the production of energy per dollar is greater in nuclear power plants than in hydroelectric plants,

[5]*Boston Globe*, April 4, 1999. Quoted in Noam Chomsky, *Rogue States: The Rule of Force in World Affairs* (Cambridge, MA: South End Press, 2000), p. 35.

[6]The program is Microsoft Draw, which is part of Microsoft Word. Other graphics alternatives include Decision Programming Language software. See *DPL 4.0: Professional Decision Analysis Software—Academic Edition* (Pacific Grove, CA: Duxbury, 1998). Using these and similar graphics programs responds to the criticism that hand-drawn figures are inflexible and overly simple. See Des Gasper and George, "Analyzing Argumentation."

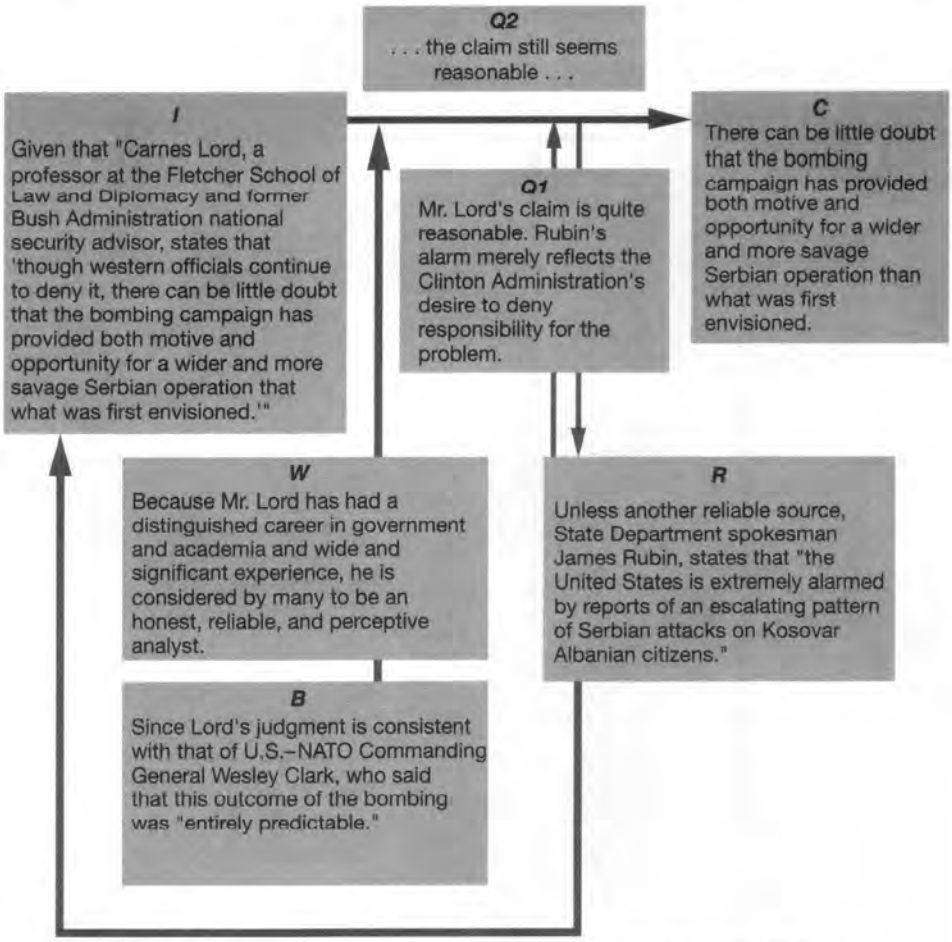

Figure 8.3 Argumentation from Authority: Consequences of the U.S.-NATO Attack on Yugoslavia

which in turn produce more energy per dollar than solar power plants. The claim ***C*** is that the government should invest in nuclear energy rather than solar energy. The warrant ***W*** associates the information ***I*** with claim ***C*** by invoking the transitivity rule of mathematical economics.[7] The warrant is backed ***B*** by the presumption that transitivity is a "universal selection rule" that guarantees the rationality of choice. The rebuttal ***R*** challenges the presumption about the universal validity of transitivity by pointing to the presence of cyclical preferences. The original qualifier ***Q1*** is reduced from "very likely" to ***Q2*** "quite uncertain" (Figure 8.4).

[7]On rules expressing transitive and cyclical preferences, see, for example, Norman Frohlich and Joe A. Oppenheimer, *Modern Political Economy* (Englewood Cliffs, NJ: Prentice Hall, 1978), pp. 6–13.

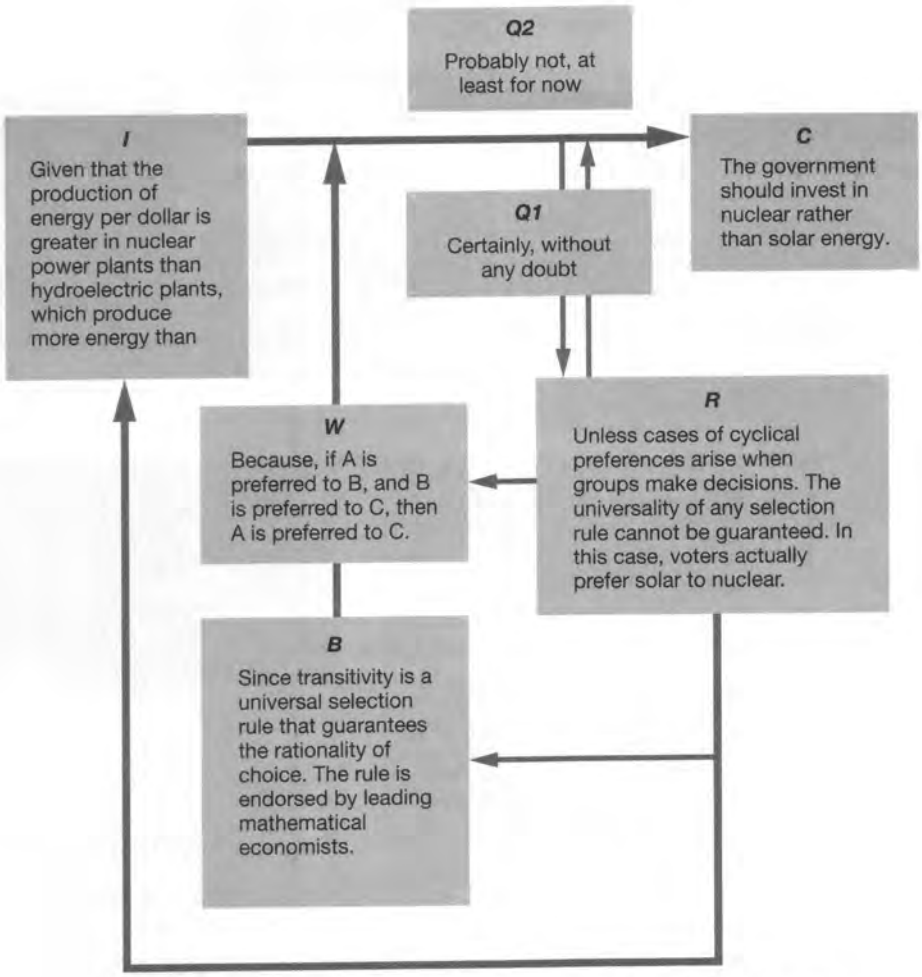

Figure 8.4 Argumentation from Method—Contested Claims about the Authority of the Transitivity Rule

In argumentation from method, claims are assessed in terms of the achieved or ascribed status of general procedures (methods) and specialized ones (techniques), along with the rules guiding their use. The methods and techniques can be "analytic," in the sense of the dictionary definition of analysis as the separation or breaking up of a whole into its fundamental elements or constituent parts. Policy analysts who accept the authority of analytic methods such as econometrics, benefit-cost analysis, or decision analysis sometimes seem to believe that the use of such methods actually "sets the policy agenda and its directions, that useful analysis will be used analysis."[8]

[8]Allen Schick, "Beyond Analysis," *Public Administration Review* 37, no. 3 (1977): 259.

The authority of methods need not be derived from rules of formal logic or mathematics, as the history of qualitative as well as quantitative methods shows. Many qualitative methods used by policy analysts originate in the hermeneutic tradition, which evolved from the interpretation of biblical texts. The authority of qualitative methods, like any other, stems from the professional and scientific communities that create definitions of the purpose, scope, and proper application of approved methods.[9] These communities are extra-scientific sources of authority.

The transitivity rule and other basic axioms of mathematics have also arisen from extra-scientific sources:

> Consider the axiom which asserts the transitivity of preference: if A is preferred to B, and B to C, then A is (or rationally must be) preferred to C. The intuitive appeal of this assertion is so great that few if any economists feel the urge to build formal economic systems in which the axiom fails. Geometry . . . is the classic example; the intuitive strength of Euclid's "postulates" was so great that for two thousand years geometers played their games strictly within the domain . . . which Euclid had laid down. Even when non-Euclidean geometries were discovered in the early nineteenth century, most mathematicians never thought of them as valid.[10]

Adherence to approved methods is wrongly believed to make policy decisions somehow more "rational." A rational choice is thought to be possible if the analyst can order all consequences associated with action, if the ordering of consequences is transitive, and if the analyst can consistently and in a transitive fashion choose the alternative that will bring the greatest benefit in relation to cost.[11] Challenges to this argument may be made on authoritative, intuitive, and ethical grounds. New schools of analysis may serve as a source of approved methods, new axioms providing for nontransitive preferences may come to be accepted on intuitive grounds, and rules that run counter to moral principles and ethical norms may be replaced with new ones.[12] Challenges may also be made on pragmatic grounds, for example, by arguing that the transitivity rule does not actually promote better decisions in policy settings characterized by incomplete information, value conflicts, multiple competing objectives, partisan mutual adjustment, and "organized anarchy."[13] In the last analysis, a successful argument from method must demonstrate only that the results of using particular rules are superior to those that

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[9]Approved methods are part of Kuhn's disciplinary matrix. Thomas Kuhn. *The Structure of Scientific Revolutions,* 2d ed. (Chicago: University of Chicago Press, 1971), p. 103.

[10]C. West Churchman, *The Design of Inquiring Systems: Basic Concepts of Systems and Organization* (New York: Basic Books, 1971), p. 25.

[11]Joseph L. Bower, "Descriptive Decision Theory from the 'Administrative' Viewpoint," in *The Study of Policy Formation,* ed. Raymond A. Bauer and Kenneth J. Gergen (New York: Free Press, 1968), pp. 104–6.

[12]See the discussion of the evolution of welfare economics in Duncan MacRae Jr., *The Social Function of Social Science* (New Haven, CT: Yale University Press, 1976), pp. 107–57.

[13]See Chapter 2.

occur without them and that the observed improvement is a consequence of using the rule or procedure.[14]

Argumentation from Generalization

Arguments from generalization frequently involve samples. Policy-relevant information consists of events, conditions, persons, groups, organizations, or societies that are taken to be representative of a larger population of the same elements. The function of the warrant is to affirm that what is true of the elements in the sample is also true of the unobserved (and often unobservable) elements in the population. The policy claim rests on the assumption that the sample is an adequate or satisfactory representation of the population.

To illustrate, consider the director of a community food bank who wants to know whether persons receiving food are getting an adequate daily allowance of calcium, one of the most important minerals in the body (Figure 8.5). The director, who is attentive to reasons that might justify additional funding for the food bank, makes the claim ***C*** that it is "pretty likely" that food bank clients are receiving sufficient calcium—specifically, given that the observed amount of 755 milligrams (mg) of calcium could have occurred by chance 9 times out of 100, it is not reliably different than the Recommended Daily Allowance (RDA) of 800 mg, an amount prescribed by the Food and Nutrition Board of the National Academy of Sciences.

In this case, the information ***I*** describes the average daily intake of calcium (755 mg) measured in a random sample (sometimes inappropriately called a "scientific sample" in policy circles) of fifty clients. The information ***I*** indicates that the difference between 755 mg and 800 mg could occur by chance 9 times out of 100, a conclusion reached on the basis of a statistical test (a "two-sample test"). The probability value ($p = 0.09$) is included in the qualifier ***Q*** in the ordinary language of "pretty likely." The warrant ***W*** that provides the reason for moving from information ***I*** to claim ***C*** has two parts: the rule that a random sample of at least 30 is adequate in such cases to generalize to the population from which the sample is selected and the practice of accepting a level of statistical significance of $p = 0.05$ (5 times out of 100) as an "acceptable" level of risk. When pressed for additional justification, the director checks her statistics text to find the appropriate theoretical backing ***B*** for the rule $\boldsymbol{n} \geq 30$. The backing ***B*** is the Central Limit Theorem of probability theory.

A member of the director's staff responsible for distributing the food is sensitive to criticism and resistant to the idea that clients served by the food bank may have a calcium deficiency. He therefore challenges the claim with several rebuttals ***R***: a 9 percent margin of error leaves too much room for chance, including a 91 percent (100-9) chance of a "false negative" conclusion of no difference (type II error); another random sample could result in another conclusion; and, in any

[14]Bower, "Descriptive Decision Theory from the 'Administrative' Viewpoint," p. 106. See Nicholas Rescher's essays on methodological pragmatism, for example, *Induction* (Pittsburgh, PA: University of Pittsburgh Press, 1980).

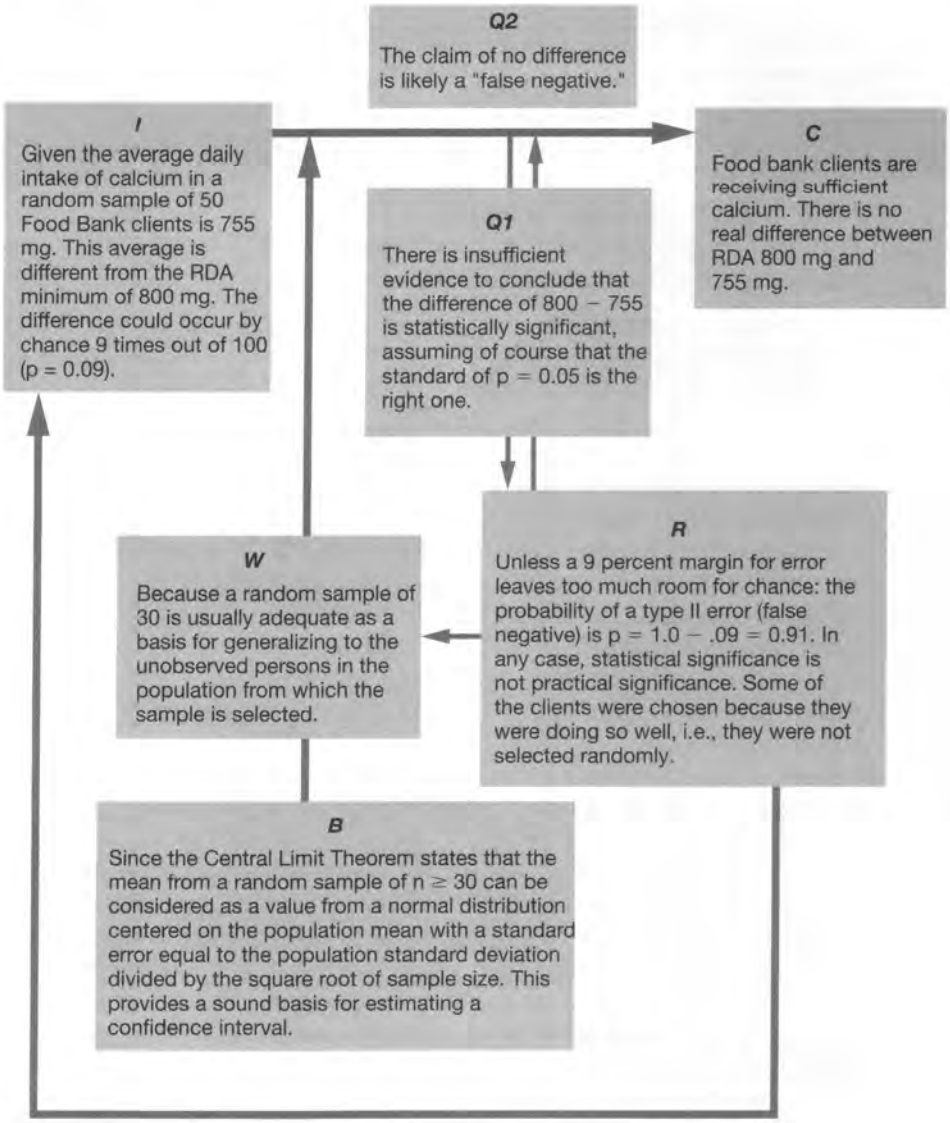

Figure 8.5 Argumentation from Generalization—A Statistical Claim about the Nutritional Status of Food Bank Clients Is a "False Negative"

case, the difference between 755 and 800 mg of calcium is *practically* significant and should be looked at carefully. The rebuttals are very plausible, and we would guess that the director's qualifier ***Q1*** changed from "pretty likely" to ***Q2*** "not likely" that clients are receiving their minimum RDA of calcium. On balance, the director's original claim—that calcium intake is probably adequate—is diminished by the rebuttals of the well-meaning and critical staff member.

Arguments from generalization are not always statistical, in the specific sense that statistics are estimates of population values (called parameters). Nonrandom samples—for example, purposive samples, theoretical samples, and sociometric (snowball) samples—do not permit statistical estimates. They are nevertheless useful in making claims about populations.[15] Even case studies (where $n = 1$) may be used to generalize to wider populations by means of various pattern-matching methods.[16]

Argumentation from Classification

Argumentation from classification focuses on membership in a defined class. The reasoning is that what is true of the class of persons or events described in the warrant is also true of individuals or groups which are members of the class, as they are described in the information. To illustrate, consider the following argument about the relationship between regime type and the control of terrorism (Figure 8.6). The information ***I*** is Iran, Iraq, and the Palestinian Authority are authoritarian dictatorships. The claim ***C*** is that Iran, Iraq, and the Palestinian Authority control terrorism within their borders. The warrant ***W*** is that authoritarian regimes exercise firm control of terrorists and other armed groups within their territories. The backing ***B*** has two parts. The first is that firm control exercised by authoritarian dictatorships is possible because such regimes do not permit the private use of weapons without the express or tacit approval of the government. The second is that the theory of authoritarian dictatorship was developed and tested by distinguished scholars at Harvard University. The rebuttal ***R*** is that one or more of the Middle Eastern regimes permits the private use of weapons and, in fact, is a democracy. It does not fit the classification. The original qualifier ***Q1*** (certainly) is reduced to ***Q2*** (it is not clear).

The plausibility of classificational arguments depends on the completeness and internal consistency of the properties employed to define a class. Various classes of political regimes—authoritarian dictatorship, totalitarian democracy, socialist democracy, capitalist democracy—are much less homogeneous and internally consistent than popular classifications suggest. The same is true for classes of policies (e.g., "privatization"), organizations (e.g., "bureaucracy"), political doctrines (e.g., "liberal" and "conservative"), and groups (e.g., "lower class," "middle class," "upper class"). Many apparently simple classifications turn out to be complex, not simple, and often they are ideologies in disguise.

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[15]See, for example, Delbert C. Miller, *Handbook of Research Design and Social Measurement*, 4th ed. (Newbury Park, CA: Sage Publications, 1991). Generalizability (external validity) in experimental and quasi-experimental research is essentially nonstatistical. See William R. Shadish, Thomas D. Cook, and Donald T. Campbell, *Experimental and Quasi-Experimental Designs for Generalized Causal Inference* (Boston, MA: Houghton Mifflin, 2002).

[16]See William N. Dunn, "Pattern Matching: Methodology," *International Encyclopedia of the Social and Behavioral Sciences* (New York: Elsevier, 2002).

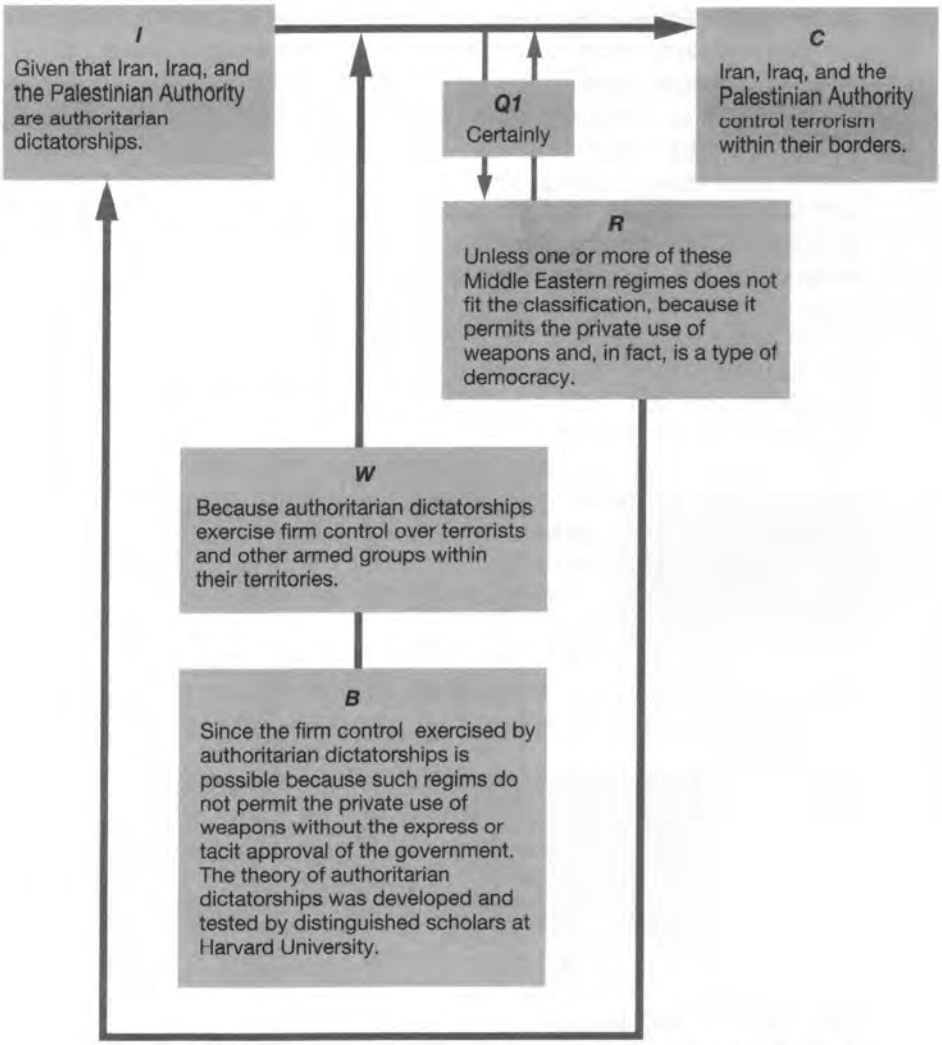

Figure 8.6 Argumentation from Classification—Challenging Claims about Authoritarian Rule and the Control of Terrorism

Argumentation from Cause

Argumentation from cause focuses on the causes and effects of public policies.[17] In causal arguments, information consists of one or more evidently factual statements or reports about a policy environment, a policy stakeholder, or a policy. The war-

[17]Causal argumentation has dominated efforts of political scientists to explain policy making. Recent examples include contributors to Sabatier, *Theories of the Policy Process*. Other examples are James E.

rant transforms these statements or reports by relating them to generative powers (causes) and their results (effects). The claim relates these causes and effects back to the information supplied.

The role of causal arguments in transforming policy-relevant information into policy claims may be illustrated by Allison's well-known causal explanations of foreign policy behavior during the Cuban missile crisis in October 1962.[18] Showing how different models yield alternative explanations of foreign policy, Allison argues that (1) government policy analysts think about problems of foreign policy in terms of implicit conceptual models that shape their thought; (2) most analysts explain the behavior of governments in terms of one basic model, one that assumes the rationality of political choices *(rational policy model);* and (3) alternative models, including those that emphasize organizational processes *(organizational process model)* and bureaucratic politics *(bureaucratic politics model),* provide bases for improved explanations of foreign policy behavior.

In contrasting alternative models, Allison wants to assess U.S. foreign policy during the Cuban missile crisis by reviewing explanatory arguments derived from the three conceptual models. In 1962, the policy alternatives open to the United States ranged from no action and diplomatic pressures to secret negotiations, invasion, surgical air strike, and blockade. The alternatives are examined in terms of rival explanations of foreign policy behavior. The structure of these explanations conforms to a type of causal explanation that philosophers call deductive-nomological explanation, which holds that valid explanations are possible only when general theoretical propositions or laws link prior circumstances with subsequent events.[19]

Among the several advocative claims made at the time of the Cuban missile crisis, let us consider the policy recommendation actually adopted by the United States: "The United States should blockade Cuba." In this case, the policy-relevant information ***I*** is: "The Soviet Union is placing offensive missiles in Cuba." To carry

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Anderson, *Public Policy-Making* (New York: Praeger Publishers, 1975); Thomas R. Dye, *Understanding Public Policy,* 3d ed. (Englewood Cliffs, NJ: Prentice Hall, 1978); Robert Eyestone, *The Threads of Public Policy: A Study in Policy Leadership* (Indianapolis, IN: Bobbs-Merrill, 1971); Jerald Hage and J. Rogers Hollingsworth, "The First Steps toward the Integration of Social Theory and Public Policy," *Annals of the American Academy of Political and Social Science,* 434 (November 1977): 1–23; Richard I. Hofferbert, *The Study of Public Policy* (Indianapolis, IN: Bobbs-Merrill, 1974); Charles O. Jones, An *Introduction to the Study of Public Policy,* 2d ed. (North Scituate, MA: Duxbury *Press,* 1977); Robert L. Lineberry, *American Public Policy: What Government Does and What Difference It Makes* (New York: Harper & Row, 1977); Austin Ranney, ed., *Political Science and Public Policy* (Chicago: Markham, 1968); Richard Rose, ed., *The Dynamics of Public Policy: A Comparative Analysis* (Beverly Hills, CA: Sage Publications, 1976); Ira Sharkansky, ed., *Policy Analysis in Political Science* (Cambridge, MA: Markham, 1970); and Peter Woll, *Public Policy* (Cambridge, MA: Winthrop Publishers, 1974).

[18]Graham T. Allison, "Conceptual Models and the Cuban Missile Crisis," *American Political Science Review* 3002, no. 3 (1969): 689–718.

[19]See Carl G. Hempel, *Aspects of Scientific Explanation* (New York: Free Press, 1965).

information ***I*** to claim ***C***, a warrant ***W*** answers the question: Why is it plausible, given the information provided, to claim that the United States should blockade Cuba? The warrant provides the answer by stating *since* "the blockade will force the withdrawal of missiles by showing the Russians that the United States is determined to use force." In providing additional reasons to accept the claim, the backing ***B*** answers the question: Why would the blockade have this effect? The backing answers the question by stating *because* "[a]n increase in the cost of an alternative reduces the likelihood of that alternative being chosen."[20] The backing ***B*** represents a general theoretical proposition, or law, within the rational policy model (Figure 8.7). In this case, ***Q1*** (probably) changes to ***Q2*** (probably not) after the rebuttal ***R*** has successfully challenged the warrant ***W***.

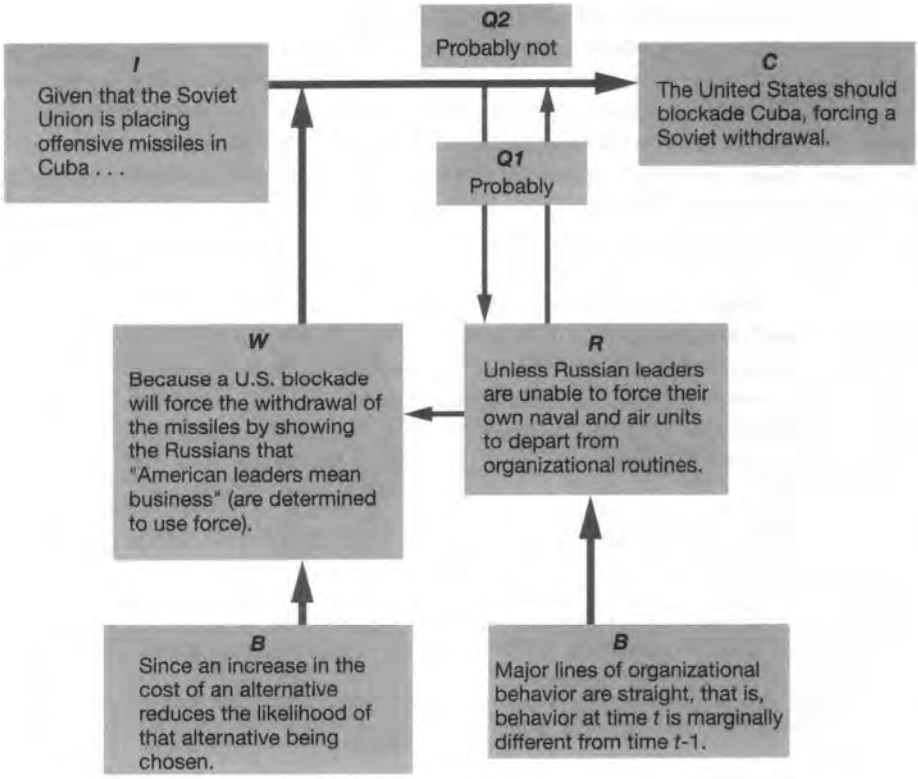

Figure 8.7 Argumentation from Cause: Rival Theoretical Explanations of Foreign Policy Behavior during the Cuban Missile Crisis

[20]Allison, "Conceptual Models," p. 694.

The primary purpose of Allison's account is not to demonstrate the inherent superiority of one or another of the three explanatory models. It is rather to show that the use of multiple competing models can result in improved explanations of foreign policy behavior. The use of multiple models moves policy analysis from a self-contained and static single argument about the relation between information and claim to a new stage of dynamic debate. In this context, the organizational, process model provides a rebuttal ***R*** in the form of a competing causal argument. The rebuttal states *unless* "Russian leaders are unable to force their own organizational units to depart from assigned tasks and routines." This can be expected to occur *because* "[m]ajor lines of organizational behavior are straight, that is, behavior at one time is marginally different from that behavior at t-1."[21] The backing ***B*** for the rebuttal ***R*** is again a general proposition or law within the organizational process model.

The case of the Cuban missile crisis illustrates some of limitations of causal argumentation based on deductive-nomological explanation. First, several competing causal arguments are equally compatible as general propositions or laws. These arguments, each backed by scientific theories, cannot be confirmed or refuted solely on the basis of this or any other information or data.[22] Second, a given causal argument, however persuasive, cannot directly lead to an advocative claim or recommendation, since traditional causal explanations do not themselves contain value premises.[23] In the example below, there is a suppressed value premise, which is that U.S. leaders are motivated by the value of security from the Soviet military presence in the western hemisphere. If some other value had motivated policy makers, either of the two competing causal explanations would have supported altogether different claims, for example, that the United States should invade and occupy Cuba.

Causal argumentation based on the deductive-nomological (D-N) model of scientific explanation attempts to develop and test general propositions about the causes and effects of public policy.[24] Carl Hempel has elaborated D-N explanation as follows:

> We divide explanation into two major constituents, the *explanandum* and the *explanans*. By the explanandum, we understand the sentence describing the phenomenon to be explained (not that phenomenon itself); by the explanans

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[21]Ibid., p. 702.

[22]Georg H. von Wright, *Explanation and Understanding* (Ithaca, NY: Cornell University Press, 1970), p. 145; and Kuhn, *Structure of Scientific Revolutions*.

[23]This is not to say that they do not imply values, since empirical theories in the social and natural sciences rest on unstated value premises. See, for example, M. Gunther and K. Reshaur, "Science and Values in Political 'Science,'" *Philosophy of Social Sciences* 1 (1971): 113–21; J. W. Sutherland, "Axiological Predicates in Scientific Enterprise," *General Systems* 19 (1974): 3–14; and Ian I. Mitroff, *The Subjective Side of Science: A Philosophical Inquiry into the Psychology of the Apollo Moon Scientists* (New York: American Elsevier Publishing, 1974).

[24]Allison, "Conceptual Models," p. 690 (note 4) tells us that Hempel's D-N (deductive-nomological) explanation is the basis (backing) for his three models.

> the class of those sentences which are adduced to account for the phenomenon. . . . [Scientific explanation] answers the question, "Why did the explanandum-phenomenon occur?" by showing that the phenomenon resulted from particular circumstances, specified in $C_1, C_2, \ldots, C_k$, in accordance with laws $L_1, L_2, \ldots, L_r$. By pointing this out, the argument shows that, given the particular circumstances and the laws in question, the occurrence of the phenomenon was to be *expected;* and it is in this sense that the explanation enables us to understand why the phenomenon occurred.[25]

A simple example illustrates traditional causal (D-N) explanation.[26] If I leave my car outside overnight and the temperature drops below freezing, my full radiator (without antifreeze) will burst. Why will this happen? "My radiator burst" - *(explanandum).* "My radiator was full of water, the cap was tightly fastened, and the temperature outside dropped below freezing" (circumstances, or C_k, in the *explanans*). And, "the volume of water expands when it freezes" (general proposition or law, L_r, in the explanans).[27] In this example, knowledge of prior circumstances and the appropriate law permits a prediction of the resultant event.

Questions have been raised about the suitability of D-N explanation in history and the social sciences.[28] These questions arise, among other reasons, because policy analysis and other social sciences are partly evaluative and advocative (normative) in character. Every advocative claim contains both factual and value premises, whereas in traditional causal explanations we evidently find only factual premises. Traditional causal explanations also require that the *explanans* precede (or accompany) the *explanandum*. Yet many advocative claims reverse this sequence, insofar as circumstances that explain action are situated in the future. Future circumstances, including intentions, goals, and desires, explain present actions to the extent that actions cannot occur without the motivation provided by such intentions, goals, and desires.[29] Finally, any correspondence between the results of acting on an advocative claim and the conclusions of a causal argument may be purely coincidental. In policy making, predictions based on deductive-nomological explanations will fail if policy actors employ intelligent reflection to change their behavior, or if unpredictable factors deriving from creative thought intervene.[30]

Deductive-nomological (D-N) explanation is not the sole legitimate form of causal argumentation in public policy. Another form is hypothetico-deductive (H-D) explanation, which involves the deduction of hypotheses from theories that do not involve propositions about invariant causal relations or laws. Often the hy-

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[25]Hempel, *Aspects of Scientific Explanation,* pp. 247–58.

[26]See von Wright, *Explanation and Understanding,* p. 12.

[27]Ibid., p. 12.

[28]Ibid., p. 11.

[29]Ibid., pp. 74–124; G. E. M. Anscombe, *Intention* (London: Basil Blackwell, 1957); and W. H. Dray, *Laws and Explanation in History* (London: Oxford University Press, 1957).

[30]Alasdair MacIntyre, "Ideology, Social Science, and Revolution," *Comparative Politics* 5, no. 3 (1973): 334.

potheses of interest are those dealing with policy or program actions designed to achieve some practical outcome.[31] The relation between action and outcome, however, is not certain. If it were, it would conform to the following requirements, usually called the "essentialist" view of causation:

- The policy, *x*, must precede the outcome, *y*, in time.
- The occurrence of the policy, *x*, must be necessary for the occurrence of *y*, the outcome, which must not occur in the absence of the policy, *x*.
- The occurrence of the policy, *x*, must be sufficient for the occurrence of *y*, the outcome, which must occur when the policy, *x*, is present.

If these requirements were met, the relation between a policy action and an outcome would be certain. This requirement is virtually never satisfied in real-life policy settings. Instead, what occurs is that other conditions—uncontrolled contingencies that lie beyond the control of policy makers—make it impossible to know definitely whether a policy is necessary or sufficient for the occurrence of an outcome. The uncontrolled contingencies are plausible rival hypotheses that must be taken into account and, where possible, eliminated as competing explanations of a policy outcome. Here, the best that may be expected is an optimally plausible claim, that is, an approximately valid causal inference.[32] Figure 8.8 displays causal argumentation in the quasi-experimental tradition founded by Donald T. Campbell, a tradition based on the fundamental premise that causal argumentation in real-life policy settings requires the formulation, testing, and elimination of rival hypotheses.[33] Figure 8.8 shows that rival hypotheses used to challenge the ***W*** and ***I*** change the initial qualifier from "definitely" (***Q1***) to "doubtful" (***Q2***).

Argumentation from Sign

Reasoning from sign is based on indicators and their referents. The presence of a sign indicates the presence of an event, condition, or process, because the sign and what it refers to occur together. Examples are indicators of institutional performance such as "organizational report cards," "benchmarks," and "best practices."[34] Another example is the widely used set of indicators (actually indices) of economic

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[31]See the discussion of the "activity theory of causation" in Thomas D. Cook and Donald T. Campbell, *Quasi-Experimentation: Design and Analysis Issues for Field Settings* (Boston, MA: Houghton Mifflin, 1979), Ch. 1.

[32]The preeminent source on validity questions in the social and behavioral sciences is William R. Shadish, Thomas D. Cook, and Donald T. Campbell, *Experimental and Quasi-Experimental Designs for Generalized Causal Inference* (Boston, MA: Houghton Mifflin, 2002).

[33]Rival hypotheses are also known as "threats to validity." See Donald T. Campbell, *Methodology and Epistemology for Social Science: Collected Papers*, ed. E. S. Overman (Chicago: University of Chicago Press, 1988). The example is from Campbell's "Reforms as Experiments," in the Overman edition cited above.

[34]For example, William T. Gormley Jr. and David L. Weimer, *Organizational Report Cards* (Cambridge, MA: Harvard University Press, 1999).

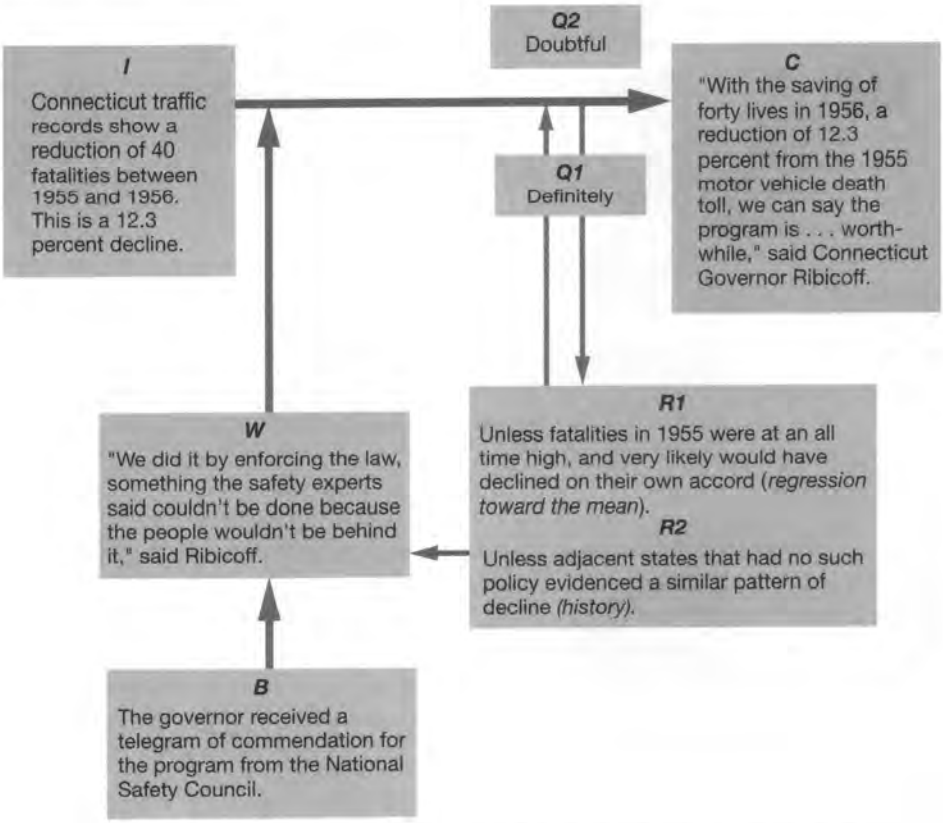

Figure 8.8 Argumentation from Cause: Rival Explanations of the Decline in Traffic Fatalities after the 1955 Connecticut Crackdown on Speeding

performance—"leading," "lagging," and "coincident" economic indicators—published periodically by the Conference Board. Signs are not causes. As we saw above, causality must satisfy additional requirements not expected of signs. Figure 8.9 displays an argumentation from sign based on a correlation coefficient and probability value (p-value).

Figure 8.9 makes an important distinction between signs and causes. In modern statistical analysis, measures of correlation, regression, and statistical significance (e.g., chi-square, t, and F values) are signs that refer to covariation. Covariation is a necessary but not sufficient condition of causation. In Figure 8.9, the ***R*** states a causal relation between participation in Head Start programs and increased graduation rates. It is a causal relation because students who participated had higher graduation rates; those who did not had lower graduation rates; the program came before the graduation in time; and there was, in addition, a positive correlation between participation and graduation. It is positive, moderate in

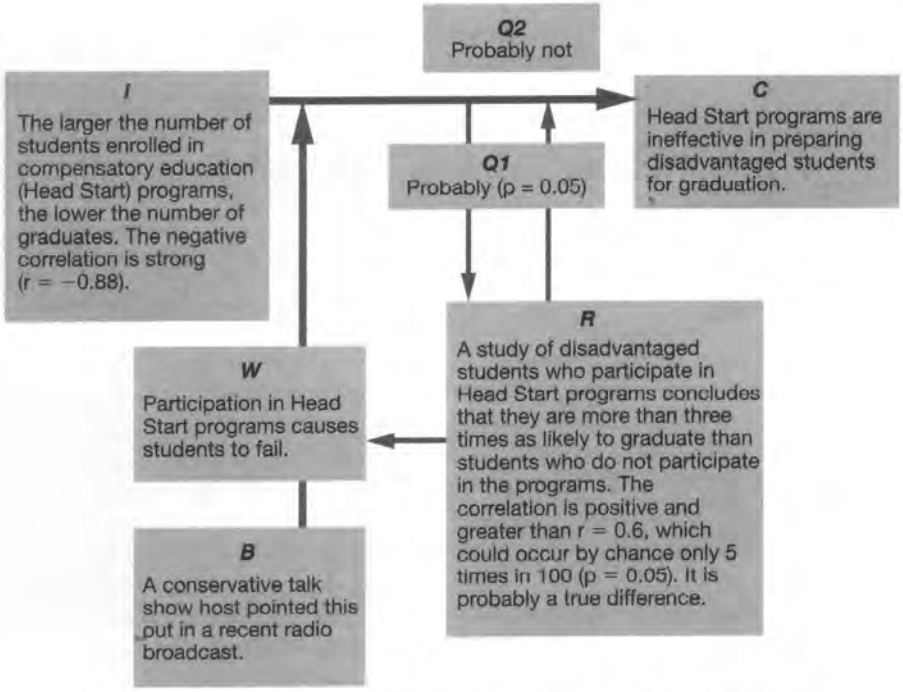

Figure 8.9 Argumentation from Sign—Quantitative Indicators Such as Correlation Coefficients and p-Values Are Not Sufficient to Show Causality

strength (r = 0.61), and statistically significant (p = 0.05). The ***R*** successfully challenges the argument from sign, which mistakenly infers that Head Start is ineffective. The initial qualifier ***Q1*** ("probably") becomes ***Q2*** ("unlikely").

Arguments from sign—whether presented as organizational report cards, benchmarks, or correlation and regression coefficients—are at best statements of covariation or coincidence. Although covariation must be present for a causal relation to exist, causation requires that we fulfill certain conditions. John Stuart Mill, the nineteenth-century English philosopher, presented a set of methods (sometimes called "canons") of inductive inference designed to discover causal relations. *Mills's methods* are broadly employed today in the social and behavioral sciences, policy analysis, and program evaluation.[35] The methods are those of *agreement, differ-*

[35]Quasi-experimental design in program evaluation is based very largely on Mill's methods. The best example is Cook and Campbell, *Quasi-Experimentation,* Ch. 1, who critique and go beyond Mill's methods. For another critique and reformulation, see William N. Dunn, "Pragmatic Eliminative Induction," *Philosophica* 60, no. 2 (1997), Special Issue Honoring Donald T. Campbell. Comparative political science, comparative sociology, comparative public policy, and experimental psychology have also drawn on Mill's methods.

ence, agreement and difference (the so-called "joint method"), *concomitant variation,* and *residues*. The basic idea of the first three methods is as follows:

- If on two or more occasions a presumed effect has only one antecedent condition in common, then that condition is probably the cause of the presumed effect. If on the first occasion, presumed effect Y is preceded by conditions X_1, X_3, and X_5, and on the second occasion the presumed effect Y is preceded by conditions X_2, X_3, and X_6, then X_3 is probably the cause of Y.
- If a presumed effect and a presumed noneffect share every antecedent condition except one, which occurs along with the presumed effect, then that condition is probably the cause of the presumed effect. If the presumed effect Y and the presumed noneffect ~ Y share antecedent conditions X_1, X_2, X_5, and X_6, but do not share condition X_3, which occurs along with presumed effect Y, then X_3 is probably the cause of Y.
- If two or more occasions when a presumed effect occurs have only one antecedent in common, while two or more occasions when a presumed effect does not occur have nothing in common except the absence of that antecedent condition, then the antecedent condition in which the presumed effects and presumed noneffects differ is probably the cause. If on two or more occasions when presumed effect Y occurs it is accompanied solely by antecedent condition X_3, while two or more occasions when presumed effect Y does not occur have nothing in common except the absence of antecedent condition X_3, then X_3 is probably the cause of Y.

The method of concomitant variation, which we know today as correlation (covariation, association), does not require additional comment here, except to say that it is a necessary condition of causation. The method of residues is similar to what we now call the analysis of residual (error) variance in multivariate statistics and econometrics. The logic is that what is "left over" when we have explained the effects of all the (presumed) causes of a phenomenon are the "residues" of other possible (and usually unknown) causes. To know whether we are analyzing causation or correlation, however, requires that we first employ the first three methods, because no statistical analyses, however advanced, are sufficient to establish causation. Statistics provides signs, not causes.

Argumentation from Motivation

In motivational arguments, claims assert that an action should be adopted because of the motivating power of intentions, goals, or values. Motivational arguments seek to demonstrate that the intentions, goals, or values underlying a recommended course of action are such as to warrant its acceptance, adoption, or performance. It is often sufficient to know that large or important groups actually desire to follow the course of action stated in the claim.

Argumentation from motivation represents a form of reasoning that philosophers since Aristotle have called the practical syllogism, or practical inference. In

practical inference, the major premise or warrant ***W*** describes some desired state or end of action, while the minor premise, or information ***I*** relates a course of action to this desired state as a means to an end. The conclusion or claim ***C*** consists of a recommendation act in a certain way to secure the desired state or end. Whereas in *theoretical inference* (argumentation from cause) acceptance of a general proposition or law leads to the conclusion or claim, in *practical inference* (argumentation from motivation) acceptance of a premise about goals, values, or intentions leads a conclusion or claim about actions that are in accordance with them.[36] Claims in practical inference are usually designed to *understand actions,* whereas claims in theoretical inference seek to *explain events.*[37]

Practical reasoning is of great importance to policy analysis, where one of the chief problems is to explain actions in terms of goals, values, and intentions:

> the practical syllogism provides the sciences of man with something long missing from their methodology: an explanation model in its own right which is a definite alternative to the subsumption-theoretic covering law model [i.e., deductive-nomological explanation—*author*]. Broadly speaking, what the subsumption-theoretical model is to causal explanation and explanation in the natural sciences, the practical syllogism is to teleological explanation and explanation in history and the social sciences.[38]

Motivational argumentation not only provides an alternative explanatory model for policy analysis, but also compels us to conceptualize policy making as a political process. Arguments from motivation force analysts to think in terms of the goals, values, and intentions of policy actors, and "enter the phenomenological world of the policy maker."[39] Motivational arguments also bring us closer to questions of values and ethics, which in other modes of policy argumentation are frequently and regrettably kept separate from evidently "factual" matters. Figure 8.10 presents an argument from motivation that is challenged by another argument from motivation and an argument from classification. In this example, ***Q1*** ("it is likely") becomes ***Q2*** ("probably not") after the rebuttal.

Argumentation from Intuition

In reasoning from intuition, policy claims are based on premises or assumptions about the insight of participants in the policy-making process. Policy-relevant information consists of factual reports or expressions opinion. The function of the warrant is to affirm that inner mental states (insight, judgment, understanding) of

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[36]von Wright, *Explanation and Understanding,* pp. 22–27.

[37]Ibid., pp. 22–24. See also Fred R. Dallmayr and Thomas A. McCarthy, eds., *Understanding and Social Inquiry* (Notre Dame, IN: University of Notre Dame Press, 1977); and Rein, *Social Science and Public Policy,* pp. 14–15, 139–70.

[38]Op. cit., p. 27.

[39]Bauer, *Study of Policy Formation,* p. 4.

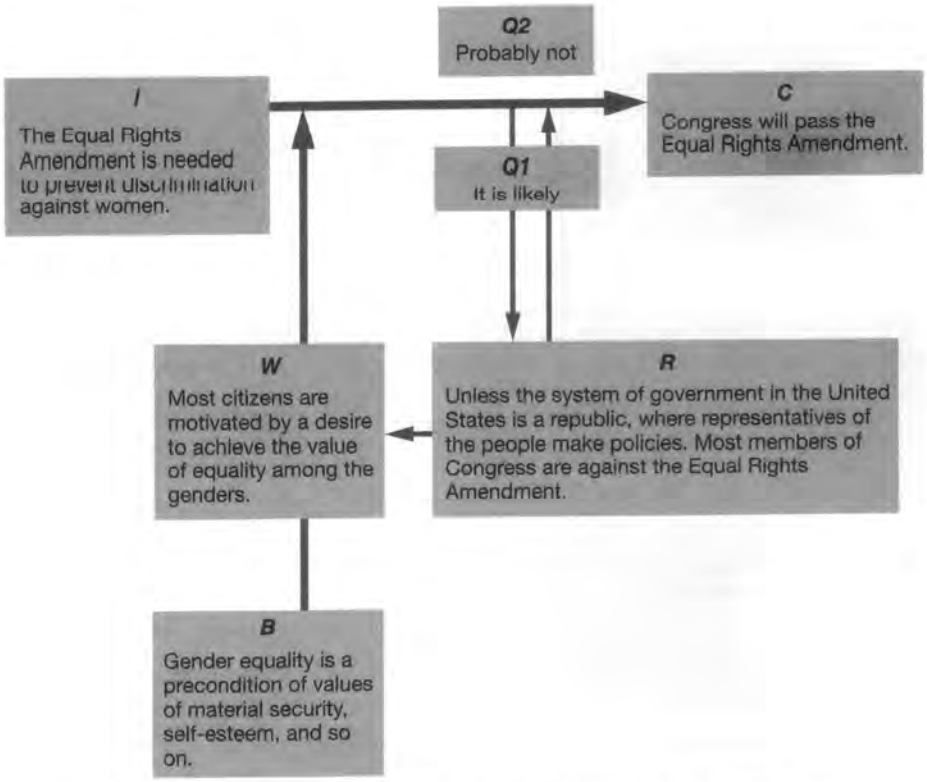

Figure 8.10 Argumentation from Motivation—A Dispute about the Equal Rights Amendment

producers of information make them specially qualified to offer opinions or advice. The policy claim may simply reiterate the report or opinion supplied in the information. Consider this example of early military policy:

> When in 1334 the Duchess of Tyrol, Margareta Maultasch, encircled the castle of Hochosterwitz in the province of Carinthia, she knew only too well that the fortress, situated on an incredibly steep rock rising high above the valley floor, was impregnable to direct attack and would yield only to a long siege. In due course, the situation of the defenders became critical: they were down to their last ox and had only two bags of barley corn left. Margareta's situation was becoming equally pressing, albeit for different reasons: her troops were beginning to be unruly, there seemed to be no end to the siege in sight, and she had similarly urgent military business elsewhere. At this point the commandant of the castle decided on a desperate course of action, which to his men must have seemed sheer folly; he had the last ox slaughtered, had its abdominal cavity filled with the remaining barley, and ordered the carcass thrown down the steep cliff onto a meadow in front of the enemy camp. Upon receiving this scornful

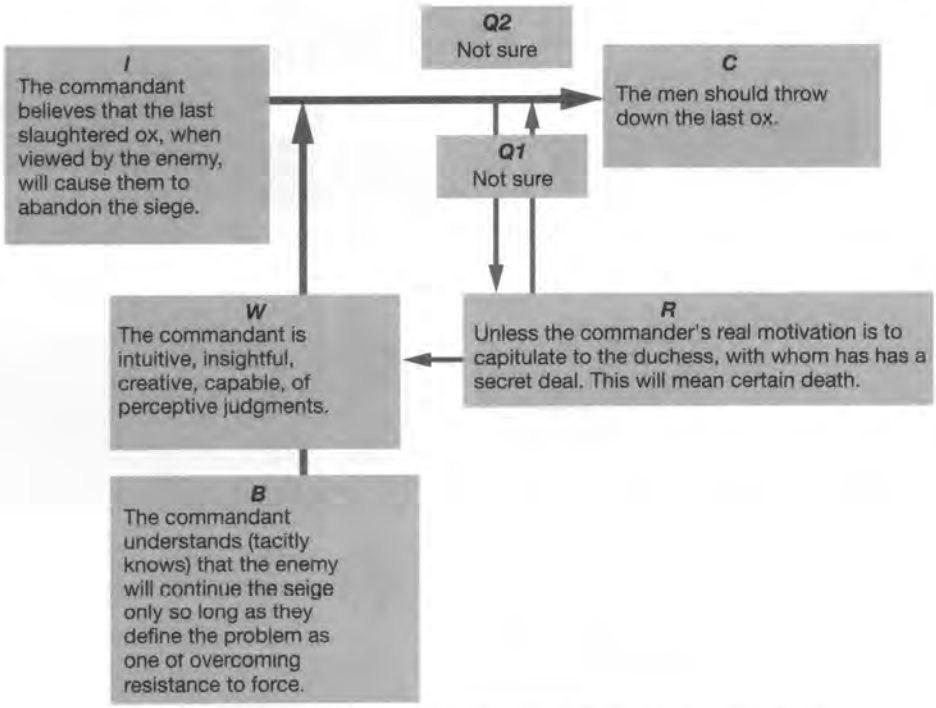

Figure 8.11 Intuitive Argumentation—Perceptive Military Leadership Is Unsuccessfully Challenged by Reasoning from Motivation

message from above, the discouraged duchess abandoned the siege and moved on.[40]

Figure 8.11 serves to emphasize some of the unique advantages of insight, judgment, and tacit knowledge in developing creative solutions to policy problems. However, it also points to difficulties. Although policy scholars urge that intuition, judgment, and tacit knowledge be incorporated into policy analysis,[41] it is seldom possible to identify in advance the methods or forms of reasoning that are likely to yield insight or creativity. A creative act, observes Churchman, "is an act that cannot be designed beforehand, although it may be analyzable in retrospect. If this is the correct meaning of creativity, then no intelligent technician can be creative."[42]

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[40]Quoted in Paul Watzlawick, John Weakland, and Richard Fisch, *Change: Principles of Problem Formation and Problem Resolution* (New York: W. W. Norton & Company, 1974), p. xi.

[41]For example, Yehezkel Dror, *Ventures in Policy Sciences* (New York: American Elsevier Publishing, 1971), p. 52; Sir Geoffrey Vickers, *The* Art *of Judgment: A Study of Policy Making* (New York: Basic Books, 1965); and Edgar S. Quade, *Analysis for Public Decisions* (New York: American Elsevier, 1975), pp. 4–5. Some observers have also commented favorably on the possibility of drug-induced changes in the mental states of policy makers. See Kenneth B. Clark, "The Pathos of Power: A Psychological Perspective," *American Psychologist* 26, no. 12 (1971): 1047–57.

[42]Churchman, *Design of Inquiring Systems*, p. 17.

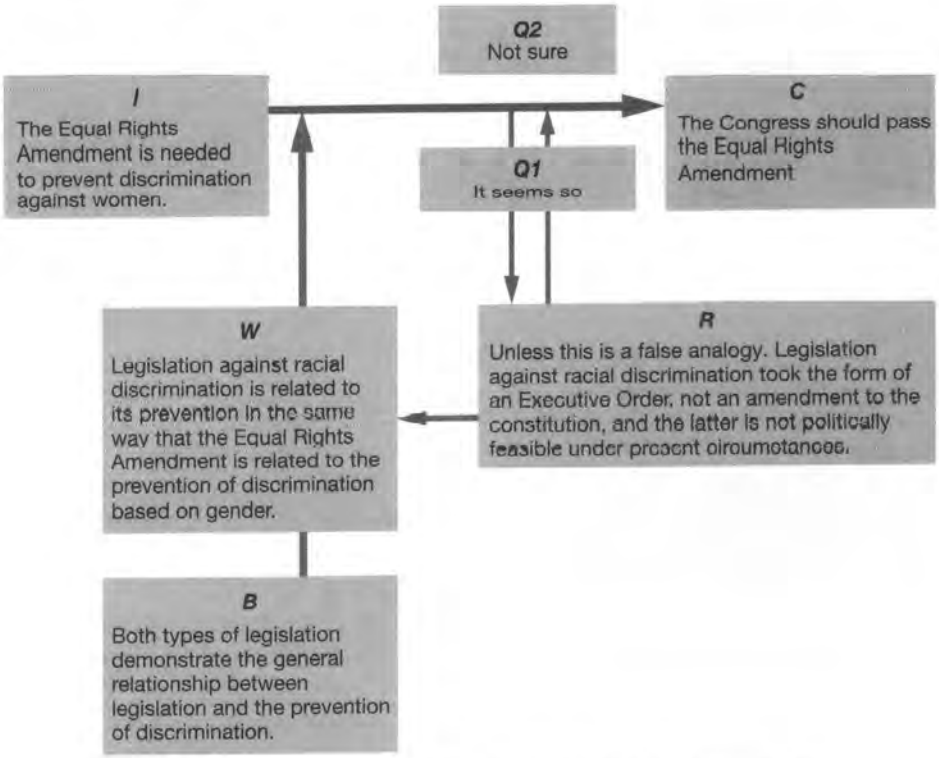

Figure 8.12 Argumentation from Analogy—A False Analogy Diminishes the Plausibility of the Initial Claim about the Equal Rights Amendment

Argumentation from Analogy

Reasoning from analogies and metaphors is based on similarities between relationships found in a given case and relationships found in a metaphor, analogy, or allegory. For example, the claim that government should "quarantine" a country by interdicting illegal drugs—with the illegal drugs presented as an "infectious disease"—is based on reasoning that, since quarantine has been effective in cases of infectious diseases, interdiction will be effective in the case of illegal drugs. In arguments from analogy, claims are based on assumptions that relationships among two or more cases (not cases themselves) are essentially similar. For example, claims about the desirability of adopting policies to mitigate air pollution have been based on beliefs about the success of water pollution policies. In making claims about ways to reduce employment discrimination against women, the reasoning is sometimes based on assumptions about the success or failure of policies designed to reduce discrimination against ethnic minorities.[43]

[43]Robert L. Lineberry, *American Public Policy: What Government Does and What Difference It Makes* (New York: Harper and Row, 1977), p. 28.

Argumentation from Parallel Case

Reasoning from parallel case focuses on similarities among two or more cases of policy making. For example, a reason that a local government should strictly enforce pollution standards is that a parallel policy was successfully implemented in a similar local government elsewhere. Policy claims are based on assumptions that the results of policies adopted in similar circumstances are worthwhile or successful. Government agencies in the United States and abroad often face similar problems, and policy claims may be based on their common experiences. The British experiences with comprehensive medical care and city planning ("new towns"), and the Dutch and Swiss approaches to the decriminalization of illegal drugs, have influenced debates about drug policy in the United States. The experience of some states in adopting taxation, open housing, and equal employment opportunity policies has been used as a basis for policy at the federal level.[44] A variation of argumentation from parallel case is an argument based on the experience of the same agency over time. Past policies in the same agency are used as a basis for claims that the agency should adopt particular courses of action, usually those that are marginally different from the status quo. Claims about federal and state budgetary policies typically derive from assumptions about similarities with past policies adopted in the same agency.[45]

Argumentation from Ethics

Reasoning from ethics is based on the rightness or wrongness, goodness or badness, of policies or their consequences. For example, policy claims are frequently based on moral principles stating the conditions of a "just" or "good" society, or on ethical norms prohibiting lying in public life. Moral principles and ethical norms go beyond the values and norms of particular individuals or groups. In public policy, many arguments about economic benefits and costs involve unstated or implicit moral and ethical reasoning. The warrant in an argument from ethics provides reasons for accepting a claim by associating it with some moral principle or ethical rule. The claim is that the person, situation, or condition referred to in the information should be regarded as valuable or worthless, or that a policy described in the information should or should not be adopted.

To illustrate ethical argumentation, consider Figure 8.13. Here, the evaluative claim ***C*** is that "the existing distribution of income in the United States is unjust." The information ***I*** supplied is that "in 1975, the top 20 percent of American families received 41 percent of all income, while the bottom 20 percent received 5.4 percent. In 1989, the top 20 percent received 46.7 percent, while the bottom 20 percent received 3.8 percent. By 2000, the gap between rich and poor had widened

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[44]Ibid.

[45]See, for example, Aaron Wildavsky's now classic treatment of incremental policy making in *The Politics of the Budgetary Process* (Boston: Little, Brown and Company, 1964). See also the discussion of models of policy change in Chapter 2.

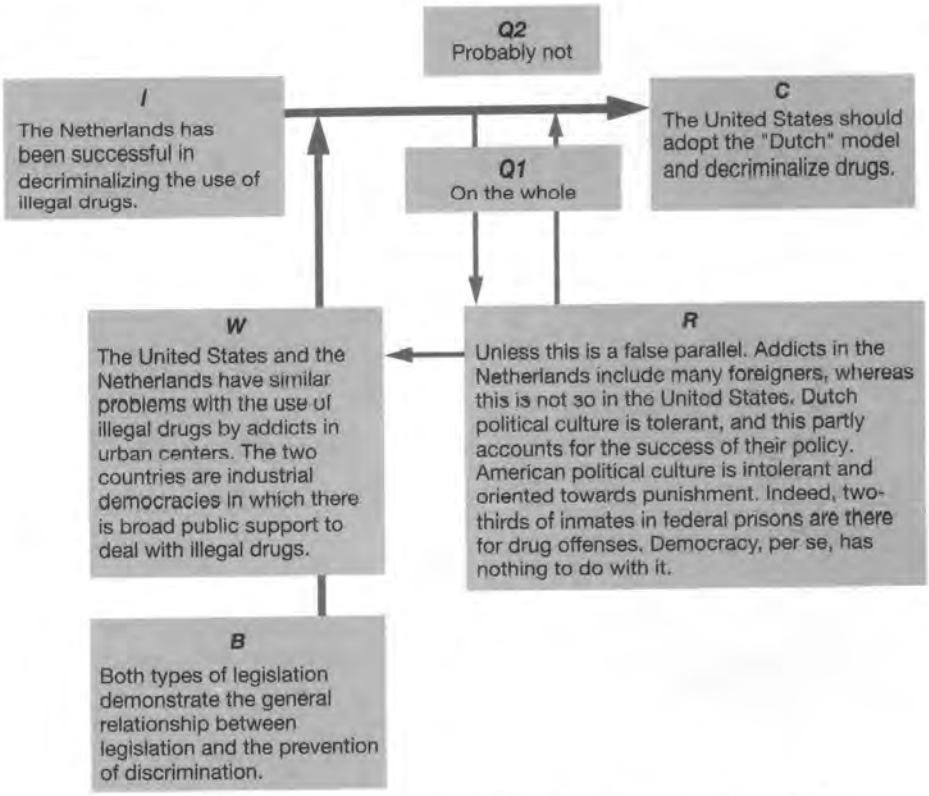

Figure 8.13 Argumentation from Parallel Case—Challenges Often Come in the Form of False Parallels

even further. In the period 1969–2000, the real income of everyone increased by about 3 percent." The warrant ***W*** is the *Pareto rule,* named after the Italian economist and sociologist Wilfredo Pareto (1848–1923).

The Pareto rule is a simple ethical rule that enjoys broad consensus among policy economists.[46] The rule states that "[a]n optimum distribution of income in society is one where some individuals benefit without others losing." The backing ***B*** for the warrant is "Pareto optimality guarantees that all persons retain income to which they are justly entitled by ability and work." The rebuttal ***R*** is "Pareto optimality does not reflect unjust entitlements to income based on fraud, racial discrimination, and other illegal behaviors" (Figure 8.13).

Figure 8.13 shows how ethical argumentation may be conducted in policy analysis. The example of Pareto optimality shows that a widely accepted ethical rule, while it supports claims about a just society, does not apply to situations involving fraud, discrimination, and other illegal behaviors (we could add inheri-

[46]See Peter G. Brown, "Ethics and Policy Research," *Policy Analysis* 2 (1976): 332–35.

tance, insofar as it is not based on ability and work). The systematic analysis of underlying ethical and moral reasoning compels parties in a debate to clarify the meaning of key concepts, such as "entitlement," which are more complex than may be apparent at first glance. Parties making a claim also may be compelled to consider whether a particular ethical rule, such as Pareto optimality, violates their own moral convictions. Proponents of the Pareto Rule may see that its application violates moral convictions about the necessity of basing principles of entitlement on ability and work. If this is done for welfare recipients, why not for heirs? In short, the process of ethical argumentation can help develop ethical rules that are general in their applicability to various situations and internally consistent.[47] Ethical argumentation, it should be emphasized, differs from each of the other modes of reasoning in one essential respect: whereas each of the other modes takes values as a "given"—for example, by describing values by means of opinion surveys—the process of ethical argumentation attempts to discover whether there are *good reasons* to hold various ethical positions.

EVALUATING POLICY ARGUMENTS

The evaluation of policy arguments is a central aspect of thinking critically about public policy. So far, we have looked at the structure of arguments, the process of argumentation, and some of the many types of reasoning employed to make policy claims. This enables us to identify hidden or tacit assumptions and investigate the extent to which the plausibility of a claim ***C***, as represented by its qualifier ***Q***, changes as a result of rebuttals ***R*** introduced in the course of policy argumentation.

We now turn to guidelines for evaluating parts of arguments and arguments as a whole. Some of these guidelines come from formal logic, a discipline that offers criteria for determining—without qualification and with deductive certainty—the *formal* validity of arguments.[48] However, most guidelines originate in an evolving body of standards for assessing the approximate *informal* validity of arguments.[49] Other guidelines come from procedures employed by qualitative methodologists who work in the hermeneutics tradition. This tradition has long been concerned with discovering and accurately representing the meaning of human action, whether expressed in the form of a written text or as the action represented by a written text.[50] Still other guidelines originate in philosophical pragmatism, a philosophy of science and methodology that is useful for evaluating the plausibility of entire systems of arguments.[51]

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[47]MacRae, *Social Function of Social Science*, pp. 92–94.

[48]Classic sources on formal logic include Irving M. Copi, *An Introduction to Logic* (New York: Macmillan, 1953).

[49]See Toulmin, Rieke, and Janik, *An Introduction to Reasoning*, Part V: *Fallacies: How Arguments Go Wrong*, pp. 129–97.

[50]The classic hermeneutics source, published originally in 1960, is Hans Georg Gadamer, *Truth and Method* (New York: Seabury, 1975).

[51]See Nicholas Rescher, *Induction* (Pittsburgh, PA: University of Pittsburgh Press, 1980).

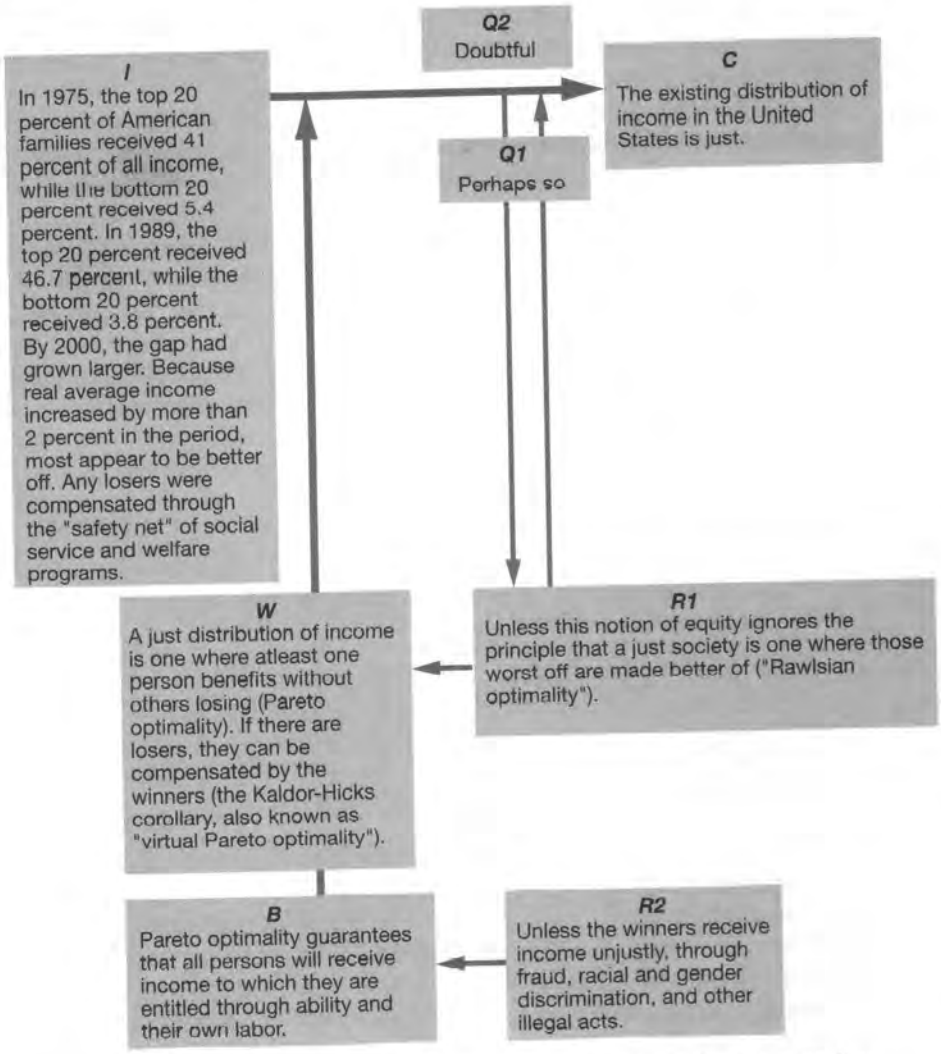

Figure 8.14 Ethical Argumentation—Exceptions and Special Conditions Weaken the Credibility of the Pareto Rule as a Criterion of Justice

Some Hermeneutic Guidelines

Hermeneutics investigates the meanings of human texts. It is perhaps the most comprehensive and systematic of the qualitative methods. The term "qualitative," contrary to a common misunderstanding that pervades the social sciences,[52] is not the simple negative of "quantitative" (in the sense that qualitative refers to that

[52]See, for example, a widely used text by Gary King, Robert Keohane, and Sidney Verba, *Designing Social Inquiry* (Princeton, NJ: Princeton University Press, 1994).

which is not quantitative). Rather, qualitative methods investigate the meanings of actions at the personal and collective levels; quantitative methods are neither designed nor suited to perform this task.

Human texts refer not only to written documents that are products of human action, for example, legislative transcripts and laws that originated as policy debates. Texts also refer to the actions themselves, whether or not they have been represented in a written form. Among various ways to demonstrate the importance of hermeneutic guidelines to the evaluation of policy arguments, a focus on ethical argumentation is most revealing. Consider alternative ethical arguments about a prisoner captured by soldiers from the opposing army:

- *Argument A*. The prisoner is not a member of a regular fighting force. He is a common criminal, a terrorist who lies when interrogated about terrorist plots and other military secrets. Because he does not qualify as a "prisoner of war," he should not be protected against what our opponents call "inhumane treatment."
- *Argument B*. The prisoner is a freedom fighter who is standing up against the terror and oppression inflicted by the enemy. He is a loyal soldier who has a moral duty to mislead interrogators about military secrets. He should be protected as a prisoner of war.
- *Argument C*. The prisoner is a member of a fighting force that perceives itself as a standing army. Presumably, he is a prisoner of war whose loyalty seems to demand that he mislead interrogators about military secrets. As such, it is perhaps reasonable that he receive the protections against inhumane treatment afforded any prisoner of war.

The evaluation of these arguments can benefit from guidelines for the interpretation of written or oral argumentation (Procedural Guide 8.3).

The main function of arguments A and B is rhetorical, not dialectical or logical-empirical. Although the use of A and B as rebuttals to one another would contribute to the dialectical function, this is not the purpose of A or B alone. A and B do present evidently factual statements, some of which appear to be empirically sound and even uncontroversial. A prisoner was captured, he was involved as a combatant, and he was not telling the truth. What is disputed are two main issues: Is it is morally and legally right to lie under the circumstances? Does the soldier qualify as a prisoner of war?

Other guidelines also apply. The quotation marks around some of the words ("prisoner of war" and "inhumane treatment") conceal or obscure meanings. The contexts of A and B are also important for understanding the arguments. Given the history of many conflicts, it is not surprising that both sides regard opponents as terrorists. The principle of hermeneutic charity encourages giving the benefit of the doubt to each party, for example, by trying to understand that both seek to be treated equally. The one side contests the moral and legal acceptability of attacks on their troops (and on civilians) by out-of-uniform combatants, arguing that such

practices are unfair. The other side affirms the moral and legal acceptability of such acts, on grounds that such acts are fair under conditions where one side has a preponderance of modern weaponry ("asymmetric warfare"). Finally, both arguments make liberal use of pejoratives—"extremist," "criminal," "terrorist," "propagandists," "freedom fighter," "oppression"—that obscure rather than clarify moral and legal issues.

If we were to rephrase the arguments, introducing rebuttals and replacing absolute with qualified claims, it would look something like argument C. Argument C has the advantage of isolating the contested issue, which is one of *conflicting obligation:* In the ethics of war, there has been a widespread understanding that prisoners who mislead interrogators about military secrets are displaying courage, honor, patriotism, and other virtues. Here, the same understanding would presumably apply to both sides.

Guidelines from Informal and Formal Logic

Hermeneutic guidelines are designed to enhance the understanding of meanings that underlie arguments and argumentation. Questions concerning the soundness, credibility, or plausibility of arguments do not arise, because the principal aim is to achieve an accurate interpretation of what arguers mean. By contrast, the fields of informal and formal logic provide guidelines for recognizing and assessing the significance of informal fallacies.[53] Here as elsewhere the term "guideline" is used in place of "rule," because there is no way to determine absolutely whether an argument is fallacious. Hence, the analysis of informal fallacies does not permit all or none conclusions.

As we saw in the first part of this chapter, there are numerous modes of argumentation that are generally recognized as appropriate to policy discourse. Arguments of the following kinds are *formally* valid:

- *Hypothetical syllogism*. If p implies q, and q implies r, then p implies r. *Or:* $p \supset q$, $q \supset r$, $\therefore p \supset r$ ($\supset$ = implies). Example: A transitive preference ordering is one form of the hypothetical syllogism. Given three projects, *A, B,* and *C,* if A p B, and B p C, then A p C (p = preferred.to). This formally valid argument can be empirically unsound.
- *Modus ponens. Modus ponens* (method of affirming) asserts that if p implies q, and p occurs, then q will occur. If $p \supset q$, and p, then q. Example: If investment *I* in a project produces outcome *O,* and investment *I* is made, then outcome O will be the result. Although this argument is formally valid, the conclusion assumes that no causally relevant factor other than *I* is present, a situation that almost never exists. This formally valid argument can be empirically unsound.

[53]The terms "informal logic" and "informal fallacy" are used in the discipline of logic, where "formal logic" and "formal fallacy" are also distinguished.

Box 8.3 Procedural Guide 8.3 Guidelines for Interpreting Arguments

- Policy argumentation has three major functions: to generate debate that improves the validity, soundness, and efficacy of policies (dialectical function); to present optimally valid and empirically sound conclusions (logical-empirical function); to persuade others to accept policy arguments (rhetorical function), apart from the validity, soundness, or usefulness of the arguments.
- Look for concealed meanings in words, sentences, and entire arguments. A word or sentence may not mean what it says on the surface. Example: "He is a good Liberal" does not mean that the person described performs well as a Liberal; it rather means that the person's identity as a Liberal is associated with some kind of weakness or limitation.
- Distinguish between the surface meaning of a word, sentence, or argument and its meaning in the context of the arguer. Try to identify any differences in your understanding from that of the arguer. Example: "The mayor should not have publicly acquiesced in the demonstrators' demands." Several potential misinterpretations are possible: someone except the mayor should have acquiesced; the mayor should not have acquiesced in public; the mayor should not have acquiesced at all.
- Observe the principle of hermeneutic charity, which requires that discrepancies in meaning be resolved by accepting, or trying to understand, what the arguer is trying to say. Example: Critics of arguments presented in quantitative language often label such arguments (and the arguers) as "logical positivists," notwithstanding the fact that quantification, per se, has nothing to do with logical positivism. A charitable effort to understand what the arguer actually believes can solve this problem.
- Look for terms that are used pejoratively to discredit a person or policy. On the surface, these terms can be neutral; but in context, they are often used pejoratively. Examples: "This is just another example of a new bureaucracy." "These are the arguments of typical 'tree-huggers.'" "The report, written by a bunch of logical-positivists, is unacceptable."

- *Modus tollens*. *Modus tollens* (method of denying) asserts that if p implies q, and q does not occur, then p will not occur. If $p \supset q$, and q does not occur ($\sim q$), then p will not occur ($\sim p$). Example: If investment I in a program produces outcome O, and O does not occur, then I is not a cause. This formally valid argument can be empirically unsound.

We now turn to modes of argumentation that are generally recognized as formally invalid, inappropriate, or unsound—however persuasive they may appear on first glance. These modes of argumentation are called fallacies. A fallacy is an argument that is weakened or seriously flawed because it uses irrelevant or inadequate

information, erroneous or unsound reasoning, or inappropriate and misleading language. Table 8.2 provides a listing of fallacies and guidelines that are helpful in recognizing them.

Systems of Argumentation

Another aspect of evaluating arguments is the examination of an argument as an entire system of reasoning. Among criteria that may be employed for this purpose are the following.[54]

- *Completeness.* Elements of an argument should comprise a genuine whole that encompasses all appropriate considerations. For example, the plausibility of arguments about the effects of a policy depends on whether such arguments encompass a full range of plausible rival explanations similar in form and content to the classes of rival hypotheses (threats to validity) developed in the tradition of quasi-experimentation.[55]
- *Consonance.* Elements of an argument should be internally consistent and compatible. For example, ethical arguments concerning the justice or fairness of a policy are plausible to the degree that they incorporate a system of internally and externally consistent ethical hypotheses.[56]
- *Cohesiveness.* Elements of an argument should be operationally connected. For example, the plausibility of an ethical argument depends on whether responses to several levels of descriptive and valuative questions—levels ranging from verification and validation to vindication—are operationally linked.[57]
- *Functional regularity.* Elements of an argument should conform to an expected pattern. For example, statistical arguments that offer estimates of parameters of unobserved (and often unobservable) populations are plausible to the degree that patterns in the sample and the population from which it is drawn are functionally regular or uniform, not irregular, based on sample data and background knowledge.[58]

Criteria of plausibility assessment may be applied to modes of argument based on premises that are authoritative, intuitive, analogical, and ethical, as well

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[54]See Rescher, *Induction*, pp. 31–47. I have substituted the term criteria of plausibility assessment for what Rescher calls criteria of cognitive systematization.

[55]On threats to validity, see Donald T. Campbell and Julian C. Stanley, *Experimental and Quasi-experimental Designs for Research* (Chicago: Rand McNally, 1966); and Shadish, Cook, and Campbell, *Experimental and Quasi-Experimental Designs*. On a fifth class of validity threats (context validity), see William N. Dunn, "Pragmatic Eliminative Induction," *Philosophica* 60 (1997, 2): 75–112. Special issue dedicated to Donald T. Campbell.

[56]Duncan MacRae Jr., *The Social Function of Social Science* (New Haven, CT: Yale University Press, 1976), pp. 92–93.

[57]Fischer, *Politics, Values, and Public Policy*, Table 10, pp. 207–8.

[58]Rescher, *Induction*, p. 41.

Table 8.2 Guidelines for Identifying Invalid Arguments and Fallacies[1]

Fallacy	Guideline
Affirming the Consequent	A matter of formal (propositional) logic. A logically invalid argument is: If p then q, and q, then p ($p \supset q$, q, therefore p). An argument can be formally invalid, but practically useful. Example: "The paradigm of 'proof through prediction,'" says Merton, "is, of course, logically fallacious: If A (hypothesis), then B (prediction). B is observed. Therefore, A is true."[2] If the Senator calls for change in basic institutions, and socialists call for change in basic institutions, then the senator is a socialist." In scientific research, this form of argument, although formally invalid, can be useful because a hypothesis may be improved by testing conditions other than B that form rival hypotheses.
Denying the Antecedent	Again, a matter of formal logical validity. If p then q, and not-p, then not-q ($p \supset q$, ~ p, therefore ~ q) is fallacious. Example: Because market economies are democracies, and country X is not a market economy, it is not a democracy.
False Analogy	The comparison of two relationships believed to be similar disregards important differences that make the comparison relatively unsound. Example: Because drug addiction is like an infectious disease, quarantining addicts is the only policy that will work.
False Parallel	The comparison of two cases believed to be similar disregards important differences that make the comparison unsound. The acquiescence of the United States in World War II led to genocide and ethnic cleansing. The United States cannot acquiesce in ethnic cleansing in the Balkans.
Hasty Generalization	In making a generalization from particular instances of a case, a failure to recognize that there are too few instances of the case, or that the instances are exceptional rather than typical. In conducting opinion surveys, an inadequate sample size will yield too few instances, while a failure to use random sampling—where every element or instance has an equal chance of being selected—is likely to yield exceptional conclusions rather than those typical of the population. Example: "Focus group" interviews with fifteen typical voters conducted before the election show that there is greater support for candidate A than candidate B.
False Cause	In making a claim about cause and effect, arguing that a single cause is responsible for an effect, but without examining other plausible causes. False causes also stem from confusing statistical correlation or covariance with causality and inferring cause from temporal sequence alone (post hoc fallacy). Examples: Excessive government spending is responsible for the slow growth of GDP (single false cause). That economic conditions affect social well-being is evident from the statistically significant positive correlation ($r = 0.74$, $p = 0.05$) between suicide and unemployment (false cause based on correlation). After the Reagan (or Clinton) administration took office, we had the highest unemployment (or government spending) in twenty years (post hoc fallacy).
Fallacy of Composition	Concluding that something is true of the whole because it is true of its parts. The fallacy of composition (also called the aggregative or holistic fallacy) involves all parts, not just a sample, so it differs from the fallacy of hasty generalization (see above). Example: Vehicle safety studies of the severity of damage suffered by test robots riding at different speeds in automobiles show that speed and severity of damage are strongly and positively correlated. This is striking evidence that 'speed kills!' But studies of fatal accidents show that approximately 20 percent of fatal accidents are related to speeding.

(continued)

Table 8.2 Guidelines for Identifying Invalid Arguments and Fallacies *(continued)*[1]

Fallacy	Guideline
Fallacy of Division	Concluding that something is true of the parts because it is true of the whole (also called the individualistic fallacy). Example: Because the per capita income of a country has increased, everyone is better off. In many countries, however, this is false. Persons who are better off become even better off, while those worse off become even worse off. Another example is using the arithmetic mean and other averages to describe a group, without examining differences among the group's members (e.g., outliers in a scatter plot).
Fallacy of the Slippery Slope	Concluding on the basis of insufficient or inadequate evidence that if one event occurs, then others will follow in an inevitable or uncontrollable sequence. Example: If the legislature passes a new law requiring stricter registration of handguns, it will lead to government confiscation of all guns.
Begging the Question	A claim is assumed as a reason or evidence. Example: "With a force of 500,000 troops we will be able to invade Iraq and topple President Saddam Hussein. It will take this many troops to do the job."
Ad Hominem	An individual's personal characteristics are used as part of an argument, when such characteristics are irrelevant to an issue. Examples: "An eminent natural scientist concludes that welfare reform is unsound." "The argument of the environmentalists is deeply flawed. After all, these 'tree huggers' are just socialists in disguise." "Theories of economic development are products of Western thinking. Obviously, they are inapplicable to the non-Western world." Note that when personal characteristics are relevant, no ad hominem fallacy is involved. For example, "expert witnesses" in court cases should have appropriate expertise.
Ad Populum	The characteristics or beliefs of a group or community are used as part of an argument, when the characteristics or beliefs are irrelevant to the issue. "The majority of the community believes that fluoride causes cancer."
Appeal to Tradition	A claim is based on conformity to tradition, when tradition is largely or entirely irrelevant to the issue. Examples: "We have always done it this way." "The founding fathers would be appalled by the Senator's proposal." "The successful disciplines have succeeded because they have emulated physics. This should be the model the social sciences, if they want to succeed."
Accent	A misplaced emphasis on a word, phrase, or portion of an argument results in misunderstanding or misinterpretation. The use of italics, boldface print, variable fonts, photos, clip-art, and colors can accentuate the importance of relatively sound or plausible, as well as relatively unsound or implausible arguments, or parts of arguments. A leading example of the fallacy of accent is quoting or extracting information, reasons, or arguments out of context.

Notes:

[1]The first two are formally invalid arguments (argument forms).

[2]Robert K. Merton, *Social Theory and Social Structure*, rev. ed. (Glencoe, IL: Free Press, 1957), p. 99n. The same point is made by Donald T. Campbell, *Epistemology and Methodology for Social Science: Selected Essays* (Chicago: University of Chicago Press, 1988), p. 168.

as those that are causal, statistical, and classificational. The system of criteria is thus applicable to modes of argument typically employed by policy makers, policy analysts, and ordinary citizens. Finally, it should be noted that any claim about the plausibility of policy arguments based on these criteria is itself subject to argumentation and debate. Any *ex ante* claim about the success of arguments based on these criteria is itself plausible rather than certain.

CHAPTER SUMMARY

This chapter has provided an understanding of the structure and process of policy argumentation, focusing on contrasts among types of claims, the identification and arrangement of elements of policy arguments, and the effects of rebuttals on the dynamics of argumentation. The chapter proceeds to contrast different modes of policy reasoning and offer guidelines for the identification and assessment of common fallacies that weaken or seriously flaw policy arguments. Formal as well as informal fallacies are arguments that can appear to be plausible, despite the fact that they involve unreliable or irrelevant information and unsound or unwarranted assumptions. Policy argumentation is central to policy analysis and the policy-making process.

LEARNING OBJECTIVES

- compare and contrast three types of policy claims
- identify and describe functions of the six elements of a policy argument
- explain how rebuttals affect the process of argumentation by changing the strength of qualifiers and (usually) diminishing the plausibility of policy claims
- distinguish modes of policy reasoning based on different kinds of warrants and backings
- evaluate the plausibility of elements of arguments and arguments as a whole
- apply guidelines for identifying formal and informal fallacies
- analyze and evaluate a complex policy argument

KEY TERMS AND CONCEPTS

practical reason (argument)
designative claim
evaluative claim
advocative claim
policy-relevant information
qualifier
claim (conclusion)
warrant
backing
rebuttal
mode of argument (reasoning)
practical syllogism
causality
deductive-nomological (D-N) explanation
hypothetico-deductive (H-D) explanation
Mill's methods
formal fallacy
informal fallacy