

CHAPTER SUMMARY

This chapter provided an overview of the nature of policy problems, described the process of structuring these problems, examined relationships among policy models, and described

specific methods of problem structuring. One of the most important challenges facing policy analysts is reducing the likelihood of a type III error: defining the wrong problem.

REVIEW QUESTIONS

1. "Our problem is not to do what is right," stated Lyndon Johnson during his years in the White House. "Our problem is to know what is right." Considering the major characteristics and types of policy problems discussed in this chapter, to what extent can we know in advance what is "right?"
2. A commonly accepted viewpoint among many policy analysts in government and in universities is that policy analysis can be objective, neutral, and impartial. Given the characteristics of ill-structured problems, consider the extent to which this viewpoint is plausible.
3. Provide two or three examples from your own experience of ways that worldviews, ideologies, and popular myths shape the formulation of policy problems.
4. There are several broad types of organizational structures in which policy formation occurs. One type is the "bureaucratic" structure, whose characteristics include centralization, hierarchical chain of command, specialization of tasks, and complete information. The bureaucratic form of organization requires consensus on preferred policy outcomes, as well as certainty that alternative courses of action will result in certain preferred outcomes (J. D. Thompson, *Organizations in Action* [New York: McGraw-Hill, 1967], pp. 134-35). If many of our most important policy problems are ill-structured ones, what does this say about the appropriateness of the bureaucratic form of organization for formulating and resolving such problems?
5. If many of our most important problems are ill-structured ones, to what extent is it possible to hold individual policy makers, policy analysts, and planners politically and morally responsible for their actions? (For the classic discussion of this point, see M. M. Webber and

H. W. J. Rittel, "Dilemmas in a General Theory of Planning," *Policy Sciences* 4, no. 2 [1973]: 155-69.)

6. The ill-structured problems that follow are taken from illustrations published in the journal *Policy Analysis* (now the *Journal of Policy Analysis and Management*) under the title "Department of Unintended Consequences."

For several thousand years, Egyptian agriculture depended on the fertilizing sediment deposited by the flood of the Nile. No longer, however. Due to expensive modern technology intended to improve the age-old lot of the peasant, Egypt's fields must be artificially fertilized. John Gall, writing in the *New York Times Magazine* (December 26, 1976), reports that the Nile sediment is now deposited in the Aswan Dam's Lake Nasser. Much of the dam's electrical output is used to supply enormous amounts of electricity to new fertilizer plants made necessary by the construction of the dam.

University of Illinois ecologists can explain how certain harmful field mice spread from their native regions into areas where they had never before been found. They are using the new, limited-access, cross-country highways, which turn out to be easy escape routes with few barriers. Older highways and roads, as well as railroad rights-of-way, run into towns and villages every few miles and effectively deter mice migration. The Illinois group found that before interstate highways ran through central Illinois, one type of mouse was limited to a single county. But in six years of super-highways the four-inch-long creatures have spread sixty miles south through the center of the state. The ecologists are concerned lest the mice, a species that loves to chew on trees, become a threat in central and southern

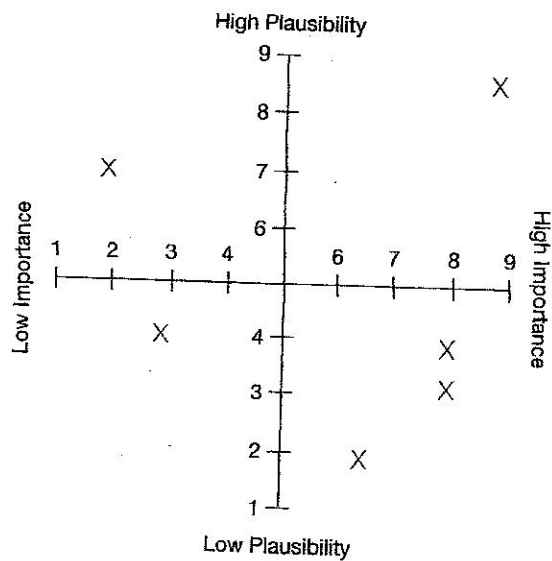
Argument Mapping

Another method of problem structuring is *argument mapping*, which is based on the model of argument presented in Chapter 1. Graphic displays are used to map the plausibility and importance of elements of a policy argument. The first step is to rate the elements—information, warrants, backings, objections, and rebuttals—on plausibility and importance scales. For example, recommendations to abandon the 55 mph speed limit (National Maximum Speed Law of 1973) have been based on the warrant that the opportunity costs of time lost driving at slower speeds increases speeds and, in turn, promotes risky driving among motorists with higher incomes. Conversely, it could be argued that the frequency of accidents is likely to be less among younger motorists, a claim that is based on the questionable warrant that because younger drivers earn less income, they have lower opportunity costs, take fewer risks, and therefore have fewer accidents. This doubtful warrant may be rated by different stakeholders on nine-point plausibility and importance scales (1 = low, 9 = high) and plotted on a graph such as that shown in Figure 3.16.⁷⁷

Figure 3.16 displays the plausibility and importance ratings for six stakeholders, represented by "X." The graph shows that stakeholders are distributed across all four quadrants, indicating broad disagreement about the plausibility and importance of the warrant. This would probably generate objections and rebuttals. If stakeholders are members of a problem-structuring group, the disagreements evident in the right half of the graph (i.e., high importance) can

⁷⁶For an elaboration of assumption analysis using the structural model of argument presented in Chapter 8, see Mitroff, Mason, and Barabba, *The 1980 Census*, *passim*.

⁷⁷Computer software called *Rationale 2* provides capabilities for entering, editing, saving, and evaluating complex policy arguments. The program provides color codes, shading, and a three-point scale to rate each element of an argument. See www.austhink.com.



WARRANT: The opportunity costs of driving time are less for younger drivers, who earn less income. Younger drivers therefore may drive slower and take fewer risks.

FIGURE 3.16
Distribution of warrant by plausibility and importance

be discussed and perhaps resolved. The typical situation, however, is one in which the analyst must identify a range of stakeholders on the basis of telephone interviews, documents, and websites containing the stakeholders' arguments and assumptions. Judgments are then made about the plausibility and importance that stakeholders attach to a warrant, backing, objection, or rebuttal. For example, a review of documents on the 55 mph speed limit indicates that the stakeholder rating the warrant as highly plausible ($P = 9$) is an economist, whereas the stakeholder who ranks the warrant as having low plausibility ($P = 2$) is an ethnographer who specializes in the culture of young drivers and bases his or her analyses on interviews with young drivers, parents, and law enforcement personnel.⁷⁸

On the basis of reasoned arguments and evidence provided by these two sources—along with information about the reasons provided by stakeholders along with statistics on accident rates by age group—we would conclude that this particular warrant has low plausibility. However, because the warrant has high importance it is relevant to the conclusions of the argument and must be examined.

⁷⁸See Thomas H. Forrester, Robert F. McNown, and Larry D. Singell, "A Cost-Benefit Analysis of the 55 mph Speed Limit," *Southern Economic Journal* 50 (1984), reviewed by George M. Guess and Paul L. Farnham, *Cases in Public Policy Analysis* (New York: Longman, 1989), p. 199. For an ethnographic analysis of younger drivers and the meanings they attach to accidents and fatalities—which are different from those predicted by economic theory—see J. Peter Rothe, *Challenging the Old Order* (New Brunswick, NJ: Transaction Books, 1990).