A REPRESENTATIVE LEGISLATURE AND REGULATORY AGENCY CAPTURE

Thesis by

Barry Robert Weingast

In Partial Fulfillment of the Requirements

for the Degree of

Doctor of Philosophy

California Institute of Technology

Pasadena, California

1978

(Submitted September 9, 1977)

To Esther

ACKNOWLEDGMENT

It is a pleasure to acknowledge the support of the National Science Foundation and the California Institute of Technology. The first has awarded a Graduate Fellowship for the past three years and supplied partial funding for this work under Grant No. APR 75-16566 A01; the second supplied Research Assistantships for the past four years.

Roger Noll supervised the formulation and writing of this dissertation. I thank him for his helpful criticism, support, and patience. Many of my colleagues at Caltech have criticized earlier versions of this thesis. I wish to thank Bob Bates, Linda Cohen, John Ferejohn, Mo Fiorina, Gary Miller, Jim Quirk, and Paul Thomas for their efforts. The comments of Bruce Owen and Jim Rosse of Stanford University on Part III are gratefully acknowledged. I also wish to thank William Riker of the University of Rochester for his advice several years ago to investigate the relationship between Congress and regulatory policy.

The manuscript was prepared by Joy Hansen, Marcia Nelson, and Edith Taylor. Their efforts are gratefully acknowledged.

Finally, I thank Esther Handa, Lisa Podell, Kim and Paul Thomas, and David Weingast for their support throughout this undertaking.

B.R.W.
August 1977

ABSTRACT

This thesis develops a model of the policy making process and applies it to the issue of regulatory agency capture. The model allows the possibility of substantial influence of unorganized, non-producer groups. It shows that under certain circumstances an agency will provide benefits for these groups as long as they continue to participate electorally on the issue (i.e., as long as the regulatory issue remains a component of voters' decisions between candidates). The model is called the political cycles model because of the following two conclusions. Based on a comparative static result, it shows that if the mass group no longer generates electoral rewards, producers will dominate agency policy making. The second conclusion is that the process may work in reverse; a captured agency may be revitalized when a mass group begins to generate rewards on this issue.

Following the theoretical presentation, Part III tests the political cycles model against alternative conceptions of agency capture, (the cartel-by-design and the life cycle hypothesis). The models make different predictions about Congressional appropriations behavior under specified circumstances. Budgetary patterns for several agencies are observed to determine which model most adequately explains the observations. The results, though tentative, reveal the influence of nonproducer groups in a manner which rules out both the life cycle and the cartel-by-design models while supporting the model presented here.

CONTENTS

TABLES

CHAPTER 1

MARKET INTERVENTION AND COLLECTIVE CHOICE

The American political system frequently alters the market economy's allocation of resources. Since 1887, market intervention has occasionally taken the form of an independent regulatory commission designed to oversee decisions made by a specified set of economic actors. A major challenge to the positive theory of collective choice is to explain the observed pattern of intervention.

Nearly all of the independent commissions are associated with a type of market failure, including the Interstate Commerce Commission (ICC), the Food and Drug Administration (FDA), the Federal Trade Commission (FTC), the Federal Power Commission (FPC), the Federal Communications Commission (FCC), and the Consumer Product Safety Commission (CPSC). Congress established the ICC to regulate railroads at a time of local railway monopolies. The FDA's jurisdiction, food quality and drug safety, includes potential informational inefficiencies. The FTC administers the Clayton Act addressing monopolization. The FPC's original concern was electric power monopolies. The FCC regulates the airwaves, a form of public good. And finally, the CPSC oversees consumer product safety, also subject to informational inefficiencies. These agencies were created at a time of public concern over the issue, concern which included support for market intervention. This suggests the interpretation of the independent commissions embodied in the public

interest theory. It asserts that the commissions are the political system's response to public demands to rectify market failure problems and therefore are designed to benefit consumers by increasing economic efficiency.

The evidence amassed in the postwar literature on regulation questions the notion that regulatory agencies resulted from popular reform movements. These agencies have been shown to benefit the groups they regulate rather than to correct a market failure despite their mandates to regulate in the public interest. Economists studying the effects of agency policy conclude that there exists little relationship between agency policy and attempts to redress market failure. Political scientists, studying the relationship between political groups who participated in an agency's creation and the subsequent distribution of benefits, arrive at similar conclusions: regulatory agencies tend to benefit the groups they regulate.

These studies raise the issue of regulatory agency capture. Loosely, capture occurs when the groups nominally being regulated either explicitly dominate agency policy making, or are its main beneficiaries. The process by which an agency becomes captured is a central concern of both the political science and economics literatures. Various hypotheses have been posed to explain the observed pattern of agency decisions. The cartel-by-design and the life cycle hypotheses are the two main explanations in the literature. Briefly, the first asserts that the agencies are designed to benefit the regulated actors. The second views agencies as beneficial to mass-based groups (such as consumers) in its initial stages, followed by a decay process in which agency policy swings from

active regulation against the industry to action on behalf of the industry.

Neither of these views allow sufficient variation in agency policy to explain the observed pattern of regulation. Some agencies are observed to benefit nonproducer groups immediately following their formation. This causes problems with the cartel-by-design thesis which predicts that producers are the main beneficiaries. Other agencies are revitalized to benefit nonproducers after years of promulgating regulations beneficial solely to producers. The life cycle view predicts that only producers will benefit in the agency's final stage. It does not allow the process to be reversed.

These observations call for a more general conception of the policy making process which allows greater variation in the possible patterns of agency policy making. The main goal of this thesis is to provide a model which serves this purpose. Part I defines general issues of regulatory agency policy making. Part II presents the theoretical model of the policy making process and applies it to regulatory agency capture. Part III then explores five regulatory arenas to see which view of the policy making process most adequately describes agency behavior.

The development of an alternative conception of the agency procedes as follows. The next two chapters make up Part I, "The Problem." Chapter 2 reviews the main explanations of regulatory agency capture and then reviews the literature in greater detail. The inadequacies of the different approaches are enumerated, especially failures in explaining certain events. Chapter 3, "The Economics of Safety," follows with

an introduction to the economic models of product safety.

Part II, "Regulatory Agency Capture," presents the theoretical model of the policy making process. The model itself is developed in chapter 4, "A Model of the Representative Legislature." This approach to the political system encompasses a representative legislature and allows response to all groups which participate on the regulatory issue. The main results are based on the reciprocity theorem. Under certain conditions, the models show that an agency may be created to regulate an industry to benefit a group of nonproducers. A comparative static result derived from the main theorem shows that if the nonproducer support gradually fades from the political environment, then agency policy making will change to benefit the industry. The latter group remains the sole source of rewards for political actors following the decline of nonproducers. The political system then responds to the new distribution of political support by adjusting agency policy accordingly.

An additional feature of the model is that the process may work in reverse. Agency policy may alter to include benefits for a new mass-based group once the group begins to participate electorally on the issue. The model is called the political cycles model because the agency's response to changes in the political environment may bring it through a natural cycle.

Chapter 5, "Issues, Preferences, and Public Policy," shows that a mass movement supporting regulation is unstable. This induces the cycle in agency policy making. Since the agency alters the distribution of its benefits in response to changes in the distribution of political support, a cycle in the formation and decline of a mass

movement induces a similar cycle in agency policy. This process is applied to regulation in chapter 6, "The Political Cycles of Agency Policy Making."

Part III, "Empirical Studies of Five Regulatory Arenas," presents five case studies. Chapter 7, "The Congressional Budgetary Process: Regulatory Agency Policy and Behavior," develops an empirical test based on the budgetary patterns expected by each hypothesis. This chapter argues that benefiting unorganized groups is necessarily more costly for the agency than benefiting organized industry groups. Since each hypothesis predicts a different distribution of benefits between organized and unorganized groups,legislative intent (on the distribution of benefits) should be observable in the agency's budget.

The next five chapters apply this test to specific agencies, the Consumer Product Safety Commission (Chapter 8), the Occupational Safety and Health Administration (Chapter 9), The Federal Trade Commission (Chapter 10), the Food and Drug Administration (Chapter 11), and the Atomic Energy Commission and Nuclear Regulatory Commission (Chapter 12). The results are preliminary; they indicate the influence of unorganized groups in several cases. The political cycles view more adequately describes agency policy making in all cases but the FDA. None of the hypotheses proved satisfactory in the latter case.

PART I

THE PROBLEM

CHAPTER 2

VIEWS ON REGULATORY AGENCY CAPTURE

The postwar research on regulation has shown that the normative theory of the state implicit in welfare economics cannot explain the observed pattern of market intervention through independent regulatory commissions. When applied to regulation, this theory is referred to as the public interest theory. It asserts that the purpose of regulation is to control the behavior of a set of actors in order to increase economic efficiency. The welfare of consumers, or a specific subset of consumers, is increased by redressing market failures. The literature on regulation is replete with studies showing that regulatory policies often have little to do with correcting market failures; instead agencies are observed to favor the groups they regulate.[1] Since the agencies benefit an industry at the expense of consumers, this form of market intervention poses a dilemma for the public interest theory as an explanatory model of the policy making process.

Economists, theorizing about the political process which produced the independent commissions, have developed several models which address this dilemma.[2] Political scientists, studying a variety of policy areas including regulation have developed some which are also germane.[3] All consider the political process a form of interest group aggregation. This conceptualization of policy making asserts that policy outcomes on any one issue result from the interplay of groups which

express opinions on the issue. Some theories require that the groups be well organized in order to be influential (Stigler, Peltzman, and Edelman). Others allow diffuse groups to be influential if they participate electorally (Bernstein, McConnell).

As various authors point out, a subgroup which does not participate in the policy making debate even though its welfare is affected by the policy issue, will not necessarily have its interests taken into account in the policy making process.[4] If a group does not participate, it does not generate political rewards. Political actors are responsive only to participating groups since their electoral fortunes (and other political rewards) are not affected by favoring nonparticipants. This constitutes the major difference between these theories and normative welfare economics. The latter requires consideration of the preferences of all citizens regardless of whether they have chosen to participate in the policy making debate. Under the various interest group theories, however, maximizing political actors will ignore nonparticipants.

The purpose of this chapter is to define the major approaches that attempt to explain agency behavior. The discussion elucidates the inadequacies of both views, highlighting the need for a synthesis and a more general model.

TWO APPROACHES TO POLICY MAKING

Two major theories attempt to explain the observed favorability of regulatory agencies toward the groups they regulate.[5] The first is the cartel-by-design thesis.[6] This approach assumes that a producer group, wishing to escape the rigors of competition, uses the political system for its own advantage, such as obtaining a cartel manager.

According to this view, the relatively unorganized group of consumers does not affect policy outcomes on this issue. Consequently, agencies are observed to pursue exactly the kinds of policies for which they were designed, namely, benefiting producer groups at the expense of consumers. The cartel-by-design thesis is also called the producer protection thesis to highlight the contrast with the consumer protection view of the public interest theories.

The second thesis is the life cycle model of the regulatory agency.[7] This view argues that the political system imposes regulation upon an industry for the benefit of another group. In general, the second group is a mass reform movement, e.g., the Populist/Grange movement which fought for the ICC, the Progressives who supported the creation of the FDA and the FTC, and, more recently, the various consumer movements which supported the CPSC. According to this hypothesis, the movement is responsible for the creation of the agency through the actions of its political representatives. Initially, members of the movement benefit from regulatory policies. However, over time the movement gradually fades, leaving no political constituency supporting effective regulation. Since the industry remains the only group generating rewards for political actors, representatives respond solely to this constituency. This allows the industry and its political allies to coopt the agency, forcing it to benefit the industry.

The interesting feature of these two hypotheses is that the ultimate impetus for regulatory behavior is the same. Both conclude that the regulated industry will dominate agency policy making. McConnell, studying Federal policy making in agriculture, business, and

labor, argues a similar point. Capture-like behavior occurs with remarkable repetition, even though some agencies were organized by progressive reformers and others by the regulated group itself.

> The most curious feature of the independent commissions history is the degree to which these expressions of the Progressive drive have produced the same phenomena as agencies that emerged out of the orthodoxy of group self-determination. The commissions have exhibited the same accommodation of governmental bureaus to the industries with which they deal, sometimes even to the point of virtual fusion of public and private bodies.[8]

Therefore, observing that a regulatory agency benefits the regulated actors at some time during the life of the agency cannot be construed as support for the cartel-by-design thesis. To distinguish between them the benefits of regulatory policy must be observed over the entire life of the agency.

THE INADEQUACIES OF PREVIOUS WORK

Several studies address the various capture hypotheses by studying the distribution of the benefits bestowed by agency policies. In their efforts to show that the textbook public interest theory of market intervention could not explain the observed pattern of regulatory policies, these scholars have not properly distinguished between the various hypotheses. In part because of these studies, the cartel-by-design thesis is the most popular in the economics literature. Nonetheless, these efforts have failed to substantiate the claims of support for the cartel-by-design thesis.

Stigler's study of the Interstate Commerce Commission (ICC) attempts to verify this hypothesis by testing it against a competing explanation. The second, a straw man, argues that

> Regulation is instituted primarily for the protection and benefit of the public at large, or some subclass of the public.[9]

Implicitly assuming that all consequences of policy implementation are those intended by policy makers, Stigler observes the distribution of the benefits from agency policy making. Analysis of data on the ICC's policies in the 1920s and 1930s reveals that the agency protected the existing regulated carriers from a new source of competition, the trucking industry. Because the predictions of the public interest theory are not born out, he rejects this view in favor of the cartel-by-design thesis.

However, this procedure doesn't rule out the life cycle hypothesis. Since the ICC was created in 1887, exhibiting that the industry received benefits from policy decisions thirty to forty years later is insufficient to show the agency was created for the industry. This methodological oversight can be rectified using data from the first decade of the ICC's operation. Spann and Erickson's work does just that. Their study has two results.[10] First, a component of consumer's surplus rose as short haul rates declined following the abolition of short haul/long haul rate differentials. Second, total surplus decreased because long haul prices were allowed to rise. Spann and Erickson conclude that the cartel-by-design hypothesis is confirmed. They argue that since the total surplus decreased, the general public could not be responsible for the agency's creation.

Yet the conclusion doesn't follow since their counterthesis is inappropriate. Proponents of the hypothesis that a reform movement was responsible for the creation of the ICC do not claim that all

consumers actively sought regulation.[11] Instead, these authors argue that only a subset of all consumers fought for railroad regulation, that is, the farmers of the Grange movement (or a coalition of farmers and merchants).

The recent work of Ulen[12] also supports this interpretation. By tying the effectiveness of the railroad cartel (and hence the rise and fall of total surplus) to the business cycles he concludes that the ICC was superfluous during the period studied by Spann and Ericksen (1887-1893). Ulen's model predicts that the cartel would have regained its effectiveness without regulation because of the upswing in business activities. If his view is correct, then the real significance of Spann and Ericksen's work is to show that the only effect of the ICC was to benefit farmers and other groups who suffered from the short haul/long haul rate differentials.

In the 1880s farmers composed a majority of the population in the United States. The above interpretation of Stigler, Spann and Ericksen, and Ulen shows that the welfare of this politically important and numerically large subclass of the public may have actually improved as a result of the ICC. Since studies of later periods find little benefits from the ICC's policies other than to the various regulated groups, this reinterpretation means the life cycle hypothesis cannot by ruled out as a potential explanation of regulation.[13]

However, the life cycle view has inadequacies as well. They fall into two categories. The first follows from the host of regulatory arenas which it cannot explain. Two examples which will be studied in later chapters are the renaissance of antitrust and

consumer protection activity by the Federal Trade Commission after years of protecting small business from competitive forces (see Chapter 10); and the influence of the environmental groups on the distribution of nuclear power reactors following two decades of regulatory policy beneficial solely to the industrial groups. In this vein, Owen and Braeutigam[14] also mentions the recent policy changes of the CAB improving consumer benefits, and the Federal Communication Commission fostering competition with the Bell System since 1965. In fact, neither hypothesis allows for the behavior exhibited by these agencies: a reorientation of agency policy from actions benefiting only an industry to others providing greater benefits for consumers.

The life cycle approach has a second inadequacy; it lacks a mechanism by which agency policy decays from public benefit to producer benefit. Bernstein originally presented this thesis in terms of an organic view of the agency.[15] Following its "birth," the agency enjoyed a "vigorous youth"; at this time the agency actively regulated the industry in the public interest. "Old age" and the "hardening of the arteries" then sets in, whence the agency succumbs to the interests of the regulated actors. Though Bernstein notes the parallel between the change in policy choice and the political support[16] the mechanism by which the political system affects the agency policy remains unspecified.

Perhaps Bernstein had an interest group aggregation model in mind. Agency policy reflects the distribution of support for and against regulation. Initally a mass reform movement is sufficiently strong to gain an agency for its benefit. However, as the movement

fades, the distribution of political support shifts against effective regulation, and agency policy becomes dominated by the sole interest group remaining, the industry.

This interpretation leaves the fading of the mass-movement unexplained. Further, if an interest group aggregation approach underlies the life cycle, why must it always work this way?

Interpreting the cartel-by-design view within this framework, the results of an agency created in response to demand from producers ought to benefit this group as long as they remain the sole source of political support on the issue. As another scenario, suppose an agency originally designed to benefit producers becomes the focus of public attention. Shouldn't its policies, according to the interest group aggregation approach, change as a result of the redistribution of political support for regulation? If this is the mechanism which underlies Bernstein's life cycle, then this pattern is only one of many potential scenarios describing agency policy making.

CONCLUSION

This chapter has reviewed the two major capture hypotheses in the literature, namely, the cartel-by-design thesis and the life cycle thesis. Both were shown to be too inflexible to allow for the wide range of regulatory policies observed; the first because agencies are sometimes observed to regulate producers to benefit nonindustry groups, and the second because agencies are sometimes observed to undergo a policy renaissance (reversal of the life cycle process).

The final discussion set the stage for further work. By

interpreting both views in terms of the interest-group-aggregation framework, they are indicated to be special cases of a more general view of the policy making process.[17] This approach will be returned to in Part II which presents a model of policy making that allows agencies to respond to all participating groups. The model exhibits a mechanism by which policy reflects the distribution of preferences expressed by political groups. A major result is, that as the participating groups change so will agency policy.

FOOTNOTES TO CHAPTER 2

1. For example, on transportation regulation by the ICC, see John R. Meyer et al., The Economics of Competition in the Transportation Industries (Cambridge: Harvard University Press, 1959); Paul W. MacAvoy, Economic Effects of Regulation: The Trunk-Line Railroad Cartels and the Interstate Commerce Commission before 1900 (Cambridge: MIT Press, 1965); and George J. Stigler, "The Theory of Economic Regulation," Bell Journal of Economics and Management Science 2 (1971):3-21. On drug innovation by the FDA, see Sam Peltzman, "An Evaluation of Consumer Protection Legislation: The 1962 Drug Amendments," Journal of Political Economy 82 (1973):1049-1092; and idem, Regulation of Pharmaceutical Innovation (Washington, D.C.: American Enterprises Institute, 1974). On food regulation by the FDA, see Melvin J. Hinich and Richard Staelin, "A Process Model of Food Regulation," mimeographed (Virginia Polytechnic Institute, 1976). On airline regulation by the CAB, see Richard E. Caves, Air Transport and Its Regulation (Cambridge: Harvard University Press, 1962); Michael E. Levine, "Is Regulation Necessary? California Air Transportation and National Regulation," Yale Law Journal 74 (1965):1416-1447; and W. A. Jordan, Airline Regulation in America: Effects and Imperfections (Baltimore: Johns Hopkins, 1970). On regulation of public broadcasting by the FCC, see Ronald H. Coase, "The Federal Communications Commission," Journal of Law and Economics 2 (1959):1-40; and Roger G. Noll, Merton S. Peck, and John J. MacGowan, The Economics of Television Regulation (Washington, D.C.: Brookings Institution, 1973). On consumer product regulation by the CPSC, see Nina W. Cornell, Roger G. Noll, and Barry R. Weingast, "Safety Regulation," in Setting National Priorities: The Next Ten Years, ed. Henry Owen and Charles L. Schultze (Washington, D.C.: Brookings Institution, 1976). For a general discussion, see Roger G. Noll, Reforming Regulation (Washington, D.C.: Brookings Institution, 1971).

2. See Anthony Downs, An Economic Theory of Democracy (New York: Harper and Row, 1957); Noll, Reforming Regulation; Richard A. Posner, "Taxation by Regulation," Bell Journal of Economics and Management Science 2 (1971):22-50; Stigler, "Economic Regulation:; Paul J. Joskow, "Inflation and Environmental Concern: Structural Change in the Process of Public Utility Price Regulation," Journal of Law and Economics 17 (1974): 317; Melvin J. Hinich, "A Social Choice Model for Consumer Support for Food Regulation," mimeographed (Virginia Polytechnic Institute, 1975); Sam Peltzman, "Toward a More General Theory of Regulation," Center for the Study of American Business Working Paper no. 10 (St. Louis: Washington University, 1976).

Also relevant are the models of Robert Bartlett, Economic Foundations of Political Power (New York: Free Press, 1973); and Peter O. Steiner, "Public Expenditure Budgeting," The Economics of Public Finance (Washington, D.C.: Brookings Institution, 1974).

3. In particular, the work of the various pluralists is relevant. See David B. Truman, The Governmental Process (New York: Alfred A. Knopf, 1951); Robert A. Dahl, Who Governs? (New Haven: Yale University Press, 1961); idem, Pluralist Democracy in the United States: Conflict and Consent (Chicago: Rand McNally, 1967). For a less optimistic statement of the same theory, see Theodore J. Lowi, The End of Liberalism (New York: W. W. Norton, 1969). For various applications to regulation, see Marver Bernstein, Regulating Business by Independent Commission (Princeton: Princeton University Press, 1955); Murray Edelman, The Symbolic Uses of Politics (Urbana: University of Illinois Press, 1964); Grant McConnell, Private Power and American Democracy (New York: Vintage, 1966); Mark Nadel, The Politics of Consumer Protection (Indianapolis: Bobbs-Merrill, 1971); and Paul Sabatier, "Social Movements and Regulatory Agencies: Toward a More Adequate -- and Less Pessimistic -- Theory of 'Clientele Capture,'" Policy Sciences 6 (1975):301-342.

4. Of course, this requires explaining why some groups organize to participate, others only participate electorally, and others do not participate at all. See Mancur Olson, The Logic of Collective Action (Cambridge: Harvard University Press, 1965); and Lance E. Davis and Douglass C. North, Institutional Change and American Economic Growth (Cambridge: Cambridge University Press, 1971).

5. For a review of other potential explanations, see Posner, "Taxation by Regulation"; Bruce M. Owen and Ronald Braeutigam, "The Regulation Game: Strategic Use of the Administrative Process," mimeographed (Stanford: Stanford University, 1977), ch. 1; and Gordon Tullock, "Regulating the Regulators," mimeographed (Virginia Polytechnic Institute, 1976).

6. In the economics literature, this hypothesis is associated with MacAvoy, Economic Effects of Regulation; W. A. Jordan, Airline Regulation in America; and idem, "Producer Protection, Prior Market Structure, and the Effects of Government Regulation," Journal of Law and Economics 15 (1972):151-176. In the political science literature, see Gabriel Kolko, Railroads and Regulation, 1877-1916 (New York: W. W. Norton, 1965). Also see George W. Hilton, "The Consistency of the Interstate Commerce Act," Journal of Law and Economics 9 (1966):87-113; Robert M. Spann and E. Erickson, "The Economics of Railroading: The Beginning of Cartelization and Regulation," Bell Journal of

Economics and Management Science 1 (1970):227-224: Richard Posner, "Theories of Economic Regulation," Bell Journal of Economics and Management Science 5 (1974):335-338; and Peltzman, "Theory of Regulation."

7. This hypothesis is generally associated with Bernstein, Regulating Business, but was popular in the earlier studies on the economic effects of regulation such as Meyer et al., Economics of Competition. See, also, McConnell, Private Power; Nadel, Politics of Consumer Protection; and Sabatier, "Social Movements and Regulatory Agencies."

8. McConnell, Private Power, 290-291.

9. Stigler, "Economic Regulation," 114.

10. Spann and Erickson, "Economics of Railroading."

11. For a survey of this literature, see Ari Hoogenboom and Olive Hoogenboom, A History of the ICC from Panacea to Palliative (Urbana: University of Illinois Press, 1976), ch. 1; and Kolko, Railroads and Regulation, chs. 1 and 2. Also see Davis and North, Institutional Change, ch. 7.

12. Thomas Ulen, "The ICC as a Cartel Manager: Was It Necessary?" (Ph.D. dissertation, Stanford University, 1977).

13. A similar reinterpretation can be made of Jordan's Airline Regulation, a study of the Civil Aeronautics Board (CAB). Following Levine's "Is Regulation Necessary?", he studies the difference in prices for comparable service in regulated and unregulated markets. He found the former to be higher than the latter. This leads him to favor the producer protection view. However, careful examination of his evidence reveals that the price differential in the late 1940s was negligible; it only appeared a decade later. Showing that the CAB benefited the industry thirty years after the Board's creation does not confirm the cartel-by-design view since it is the distribution of benefits in the early years that matters. Jordan's data shows little difference during this time.

14. Owen and Braeutigam, Regulation Game.

15. Bernstein, Regulating Business.

16. See Sabatier's exposition of this point in his "Social Movements and Regulatory Agencies."

17. Joskow's "Inflation and Environmental Concern" similarly concludes the need for more general models. He presents a

model of agency policy change which allows response to the changes in policy environment. Previous models do not allow sufficient variation in policy outcome in response to changes in the political environment.

CHAPTER 3

THE ECONOMICS OF SAFETY: IS THERE MARKET FAILURE?

Economists have widely differing views about market performance on the dimension of safety. One view is that variations in risks reflect a market's response to varying tastes and attitudes towards risks. Some individuals are willing to pay for safety; others are less risk averse and choose to buy cheaper, but riskier products. Firms compete on the basis of price and quality, and an unrestricted market maximizes consumers' freedom of choice among alternatives. Any restriction on consumer choice, if binding, is Pareto dominated by a world with no restrictions, since some individuals would prefer to buy products with a price/quality combination which has been ruled out.

On the other hand, another view holds that market pressure decreases product safety levels forcing firms to provide too little safety and thus hurting consumers. This view models safety in terms of uncertainty. Consumers are not likely to learn all the relevant information about certain classes of commodities (e.g., goods which are purchased infrequently) on the basis of their experiences. According to this approach, low probability events may go undetected. A firm which manufactures products without the defect responsible for the event has higher costs than firms which manufacture products with the defect,[1] and cannot survive in a competitive market. A role exists for restric-

tions on product design, according to this view, since consumers are bearing risks unknowingly.

The two approaches reach opposite conclusions about market performance on the safety dimension. It is troublesome that economic theory can be used to derive such divergent conclusions. What accounts for this discrepancy? Is there a role for market intervention to improve consumer welfare?

This chapter addresses this discrepancy by restating the question. It argues that there are three types of models of the safety problem according to whether safety is considered a quality variable (no uncertainty or risk), a risky variable (but no uncertainty; all probability distributions are known), or an uncertainty variable (probabilities may not be fully known by all individuals). The real issue is which model best characterizes the world in which we live.

The role of information is the key factor distinguishing the three interpretations of safety. The two opinions presented at the outset differ along this dimension. In the first, consumers knowingly choose to bear the risks of less safe products; in the second, they do not. The conclusions about market performance vary with the amount of information. Under full information, competition leads to the desired result of maximizing consumer sovereignty. When information is lacking, however, market forces lead to a decrease in safety; consumers do not necessarily respond to safety improvements because of the lack of information.

The three approaches to product safety discussed here belong to the neoclassical, the probabilistic, and the differential information

paradigms. The first models safety as a quality dimension, not a risky dimension.[2] Firms compete along this dimension as they do on any other. Since full information reigns in the neoclassical world, all actors know the consequences of their choices. Markets provide an optimal amount of diversity; products with less safety are provided because some consumers prefer the combination of less safety and lower price to the combination of greater safety and higher price.

The second approach treats safety as a risky dimension. Products vary in the degree to which they produce harmful or beneficial side effects. A stable probability distribution governs product variability, and all consumers know the distribution. The results about market performance from the neoclassical world carry over into this world.[3] Because consumers have full information about the risks they choose to bear (or avoid), competition induces firms to make the appropriate decisions along this dimension. Improvements in product safety have known consequences on the probability distribution of a firm's product since consumers are assumed to have full information. Consequently, the market rewards firms which make improvements if there is a demand for greater safety.

The final approach interprets safety in the context of economic actors who have differential amounts of information. Products vary in the extent of their side effects. Individual actors are assumed to have some, but not necessarily full, information about the set of possible events (and their probability distributions) associated with a given product.[4]

If the mechanism by which consumers acquire information relies heavily on individual experience, consumers are likely to approximate the second (probabilistic) world in the category of frequently purchased products. Products, which are only seldomly purchased, present problems for consumers since the tails of the distribution are difficult to ascertain. The chances of rare, but very damaging events may be seriously underestimated since they are observed so infrequently.

The conclusions about the market performance in the neoclassical and probabilistic approaches do not carry over into the third view. Firms do not face the proper incentives to fully compete on the dimension of safety in certain markets. The systematic lack of information about unsafe events makes it difficult for firms to internalize the benefits from improvements which reduce the chances of these events.[5] Firms will produce too little safety in the competitive but uncertain world.[6]

The following examples highlight the distinctions among the various worlds. The first is kitchen knives. Knives are inherently risky, and may cause accidents because they are sharp. When consumers use knives, however, they knowingly bear the risk of cutting their fingers. Mandating dull knives to decrease the risk simply decreases the product's usefulness. Since consumers are aware of the relationship between unfortunate occurrences and their use of the knife, no welfare gains would result from this regulatory action.

This conclusion does not follow in the case of television sets, the second example. There are about 100,000,000 televisions sets

in the U.S. Each year there are about 100 cases in which the television blows up. Data compiled from a series of years reveal that brands blow up differentially. Yet few consumers are likely to learn the relative frequencies of such rare events on the basis of their own experiences. Product restrictions in this case may make consumers better off by removing a risk they unknowingly bear.

An interesting feature of these models is that each subsumes the previous model as a special case. The differential information world reduces to the probabilistic world, if consumers gain enough information about product performance to make choices based on near perfect estimates of the probabilities of the various events. The second world reduces to the first if probabilities are either considered irrelevent (i.e., safety is modeled as quality) or if the probability distribution collapses to a single point of degree of safety for each product.

Thus, the issue is not whether economic theory contains a rationale for safety regulation. The issue is whether the operation of informational production and transmission mechanisms prevents the uncertain world from collapsing into the probabilistic world. If such mechanisms function properly, the market will approximate the probabilistic (or even the neoclassical) world; competition will produce an optimal amount of diversity in product quality. If such mechanisms do not function well or do not exist, then competitive market performance will underproduce safety.[7]

This thesis studies several safety regulatory arenas. While the above discussion has not resolved the underlying issue, it does

suggest how agencies mandated to improve safety can benefit consumers. A rationale for market intervention (regulation), if one exists, dictates which products should be subject to intervention and which events are to be prevented. Those products for which consumers acquire adequate information to make knowledgeable decisions among various alternatives should not be subject to intervention, while probability, damaging or disastrous events should be considered for intervention.

The theoretical model of the regulatory process presented in Part II builds on the features of this market failure. This chapter has studied how the public sector can, in principle, improve consumer welfare. Parts II and III study the the public sector's action in practice.

FOOTNOTES TO CHAPTER 3

1. Assuming that safer products are more expensive to produce.

2. White's model of competition along a quality dimension is a good example of this view. Though he applies his model to a nonsafety arena, the approach falls in this category. See Lawrence J. White, "Quality, Competition, and Regulation: Evidence from the Airline Industry," in Regulating the Product: Quality and Variety, ed. Richard E. Caves and Marc J. Roberts (Cambridge: Ballinger, 1975).

3. See Walter W. Oi, "The Economics of Product Safety," Bell Journal of Economics and Management Science 4 (1973):3-28.

4. See Victor P. Goldberg, "The Economics of Product Safety and Imperfect Information," Bell Journal of Economics and Management Science 5 (1974):683-688; Michael S. Hunt, "Trade Associations and Self-Regulation: Major Home Appliances," in Caves and Roberts, Regulating the Product; Nina W. Cornell, Roger G. Noll, and Barry R. Weingast, "Safety Regulation," in Setting National Priorities: The Next Ten Years, ed. Henry Owen and Charles L. Schultze (Washington, D.C.: Brookings Institution, 1976); and Dennis Epple and Artur Raviv, "Product Safety: Liability Rules, Market Structure, and Imperfect Information," mimeographed (Pittsburgh: Carnegie-Mellon University, 1976).

5. The argument relies on the public goods' features of information which hinder the pooling of information. See Cornell, Noll, and Weingast, "Safety Regulation," on this point.

6. See Melvin J. Hinich, "A Social Choice Model for Consumer Support for Food Regulation," mimeographed (Virginia Polytechnic Institute, 1975).

7. This chapter ignores alternatives to standards regulation such as insurance, information production and dissemination, liability rules, etc. For a discussion of these issues, see Cornell, Noll, and Weingast, "Safety Regulation."

PART II

REGULATORY AGENCY CAPTURE

CHAPTER 4

A MODEL OF THE REPRESENTATIVE LEGISLATURE

The purpose of this chapter is to exhibit a model of the policy making process. The following chapters apply the model to the issue of regulatory agency capture. This yields the political cycles view of agency policy making, which shows that regulatory policy responds to all participating groups in the political environment. Further, agency policy making is responsive to changes in the political environment (e.g., increases or decreases in the support for or the opposition to regulation). As the first step in the cycle, it will be shown that even if a mass movement of consumers is the source of the demand for regulation (rather than the industry itself), the agency may nevertheless be captured by the industry if the movement dies. This demonstrates that the cartel-by-design thesis is not a necessary feature of a political system whose policies are observed to benefit an industry nominally being regulated in the "public interest."

An additional feature of the model is that the process may work in reverse. In the second step of the cycle, a captured agency may be revitalized. If public concern over a particular regulated activity increases, agency policy may change to partially or wholly accommodate these interests. The model thus provides a potential explanation for several regulatory agencies which are curiously ignored in the capture literature; for example, the Federal Trade

Commission following its reorganization in 1969-1971 or the Atomic Energy Commission (and later the Nuclear Regulatory Commission) following the successful intervention of the environmentalists in the Calvert Cliffs case during the early 1970s.

The approach taken here differs in another respect with the previous work by economists on regulation.[1] The results of the model are derived from an explicit formulation of the political process. Further, it attempts to incorporate those features of the policy making process which political scientists have identified as the salient features influencing policy formation. Specifically, a representative legislature is introduced. Both the electoral mechanism by which individual representatives are chosen and the legislative committee system are shown to play crucial roles in agency captures. Since these agencies are created by the United States Congress, the details incorporated into the model are meant to mimic various institutions associated with this legislative body.[2]

The first two sections of the chapter present the mechanism for collective choice decisions. The first details the electoral process. Based on the Downsian election, this process induces a set of preference goals for each representative to pursue in the legislature. The second section contains the legislative rules for public policy information. The committee system is a central feature of the legislative institutions. The final section rationalizes these rules by showing that maximizing legislators prefer a committee system to an unmodified majority rule institution. The following chapters derive the political cycles model of agency policy making from the results

of this section.

THE POLICY MAKING PROCESS

The model of the policy making process explored in this section extends the Downsian electoral framework in a natural way to subsume a representative legislature.[3] Previous models conceptualize the policy making process as a single elected official, responsible to the entire electorate. All citizens participate in the same election to choose the policy maker, voting for the candidate whose policy stands afford them the highest utility. As an equilibrium model of electoral competition, the Downsian process induces a set of policy preferences for the elected official which are based on the distribution of preferences in the electorate. Public policies are formed after the election as the policy maker implements the stands taken in the previous campaign.

The model presented in this section embodies the policy making process in a representative legislature. The political economy is divided into N subelectorates so that the single Downsian election is replaced by N independent, simultaneous Downsian elections, each choosing a representative who becomes one participant in the legislature. Public policies then result from representatives pursuing their induced preferences according to the rules of the legislature.

The social choice mechanism for the political economy is then fully described once the institutional rules of the legislature are defined. These rules aggregate the electorally induced preferences of the representative into public policies.

The first part of this chapter reviews the relevant features of the Downsian election, including the modifications necessary to incorporate N elections. This is followed by the Downsian theorem which characterizes the policy stands of maximizing candidates. The second part of the chapter describes the rules of the legislature. The reciprocity theorem, which explains why maximizing legislators would choose these rules, further elucidates the behavior of representatives.

THE ELECTORAL MECHANISM

The political economy is divided into N nonoverlapping geographic units called districts. Each district contains 1/N of all citizens and has one representative in the legislature who is chosen in a local election campaign. Citizens participate only in their own district's campaign and are assumed to vote for the candidate whose policy stands yield them the highest expected utility. Candidates competing for election to the legislature are assumed to maximize the probability of their election.[4] The choice variables under their control are the positions each advocates on the various policy issues. Since citizens have different preferences over policy outcomes, candidates must choose their stands to induce citizens to vote for them. Given a number of assumptions about the distribution of opinions in each district, electoral competition leads to an equilibrium choice of the policy stands advocated by maximizing candidates.

Consider the jth electoral campaign (i.e., the election in district j). There exists a set of policy issues over which candidates compete. The set of issues is parameterized as a Euclidean space, L^j, and is assumed to be exogenously determined. Each candidate, i, chooses a stand, l_{ijk}, to announce on each issue, k. The stand is one particular course of action out of many on this issue, and represents promises of policy measures to introduce, pursue, or support in the coming session of the legislature. The collection of stands taken by each candidate i, $l_{ij}=(l_{ij1}, l_{ij2}, \ldots l_{ijk}, l_{\ldots ijm})$, is an element of the space of district j (i.e., $l_{ij} \varepsilon L^j$).

Since representatives are only one vote among many, citizens in district j discount candidate i's policy stands by the probability that he will be able to influence the outcome.[5] With probability P_j candidate i will be able to influence the decision of the legislature; in this case the policy outcome is l_{ij}. However, with probability $(1-P_j)$, the decision will be beyond the influence of this legislator and hence of his constituents; in this case, the decision of the legislature is some other outcome, $\underline{L}$.

Citizens are assumed to vote for the candidate in their district who offers them the highest expected utility. Thus, citizens in district j face the following maximization problem:

$$\max_i \quad E(U) = U(l_{ij}).P_j + U(\underline{L}).(1-P_j). \qquad (1)$$

Given these assumptions, together with other specific assumptions about the distribution of preferences of voters over policy issues in each district,[6] the DHO theorem establishes an equilibrium policy

choice for maximizing candidates. It asserts that candidates for a given seat will adopt the policy position most preferred by the median voter in their district. This theorem applies to each district's campaign so that competition induces a set of policy preferences for all representatives.

The induced preferences of various representatives will differ to the degree that issues vary in their saliency (marginal impact on the median voter) across districts. Further, the induced preferences need not be complete. Citizens of different districts may be concerned with different issues -- i.e., L^j need not coincide with $L^{j'}$ $(j \neq j')$. Some issues may enter only one or a few local campaigns. Others, called national issues, may be part of all or nearly all campaigns. If an issue is not of concern in a given district, and is not likely to become one in future campaigns, then representatives cannot affect their own electoral fortunes by shaping the policy outcomes on this issue. Consequently, maximizing representatives will concentrate their time and effort on influencing policy choice on issues which are of concern in their district. The remainder of the chapter focuses on this concern.

RULES OF THE REPRESENTATIVE LEGISLATURE

Following their electoral success, representatives are designated as members of the legislature. Public policies for the political economy result from representatives pursuing their induced goals within the confines of the legislative rules. The committee system, which dominates policy development, is the main feature

of the legislature. The remainder of this section describes the committee system and how it serves member electoral goals and affects policy formation.

Public policy making is conceptualized as a two-stage process. In the first stage, the legislature considers various policy alternatives for enactment; in the second, it implements and manages ongoing policies and programs which were enacted in previous legislative sessions. The operational difference between the two stages is that, in the first stage, legislators attempt to influence which programs are chosen, that is, whether a specific program should be enacted. In the second stage, they consider the actual distribution of the benefits and costs, given that the program has passed. This process interprets and implements the broad mandate and legislative goals into detailed policy.

The following examples highlight the distinction between the two legislative stages. First, consider the traditional pork barrel. This system distributes projects in which the costs exceed the benefits so that the entire program costs more than it yields. Once this system is in place, however, it is individually rational for legislators to seek projects for their districts since the costs are spread over all districts through general taxation while the benefits are concentrated in their district.[7] In the first stage of the legislative process, representatives voting on the continuation of the system might dismantle it since society as a whole loses by this system. However, in the second stage, continuation is not an issue; rather, the concern is which districts will receive projects (i.e., the system's benefits).

An antipoverty program serves as a second example. In the first stage, the legislature decides whether the public sector should attempt to alleviate poverty. In the second, assuming the proposal passes, legislators decide on the actual distribution of the program's benefits among the various districts, and oversee the administration of the day-to-day operation of the program.

The Committee system divides policy issues into subgroups. Each committee, or subset of legislators, is delegated the tasks of policy formation within its substantive (policy) jurisdiction in both stages of the legislative process. In the first stage the committee must scrutinize all proposals submitted to the legislature that fall within its subgroup. Judgment as to their merit must be rendered. Rather than require all members to study every proposal, the committee is delegated the responsibility to screen out those which are unacceptable as legislation.

Delegation to scrutinize all proposals in their area gives the committee members veto power over all proposals within their jurisdiction. This becomes the first institutional rule of the legislative committee system:

> R1: No legislation will be considered for enactment by the legislature unless it is proposed by the committee with jurisdiction over the issue.

The second rule requires approval of a majority of all legislators for any proposal to be enacted.

> R2: All proposed legislation must be approved by a

majority of legislators for enactment as a public policy.

Veto power (R1) allows members of a given committee a degree of discretion over policy choices in their area. It can be used to block measures which committee members do not like, independent of the measure's support among all other legislators. Further, since many different proposals on a given issue may command a majority of votes when pitted against the status quo, members of the committee can choose that proposal (out of all which beat the status quo) which best suits their interest through control of the agenda.[8]

The second task of the committee system is the management and oversight of ongoing legislative and bureaucratic programs within its jurisdiction. In previous legislative sessions, policies and programs have been enacted which continue operation. The committee is responsible for control and operation of these programs. At this stage, legislators can influence policy choice through the administration process rather than the legislative process. Majority approval is not required for action at this stage, thus affording committee members another degree of policy discretion.

R3: Policy oversight and control is delegated to the appropriate committee and is not subject to majority rule approval by the whole body.

The final rule of the legislature describes the process which assigns legislators to the various committees. To the degree that is possible, members are allowed to join committees which oversee policies of relevance to their districts. This increases the

marginal impact of the representative on the utility of his constituents. The next section elaborates this rationale in greater detail. The final rule of the legislature is:

R4: Representatives may join the committee of their choice.[9]

LEGISLATIVE INSTITUTIONS AND MEMBER GOALS: THE RECIPROCITY THEOREM

Two rationales support the development of a committee system within the legislature. The first argues that committees are essential for policy formation. Since a legislature addresses large numbers of issues in a given session, little progress can be made if each legislator must pay attention to every detail. Specialization allows many issues to be addressed simultaneously. Policy areas often involve complicated issues which require detailed study. The development of expertise facilitates the number of issues which can be adequately handled. Furthermore, the time and effort invested by individuals duplicated if the member returns to the same committee in the next session.

Specialization and reciprocity serve as the incentive system to support individual investment in a narrow field of expertise. Reciprocity is the process by which legislators agree to yield influence in areas outside their committee's jurisdiction for greater influence over policies within their jurisdiction.[10] Without an increase in influence over policy choice, such as embodied in R1, committee members would not invest time and effort studying problems and proposals or writing legislation in their policy area. If their work could easily be undone by other legislators who had not invested any

time in the issue, their own efforts would be wasted; the time could, perhaps, have been used more effectively elsewhere, such as undoing the work of other members in another policy area.

The committee system, from the viewpoint of the first rationale, represents a division of labor in the sense of Adam Smith. All legislators benefit from the capacity to consider several issues simultaneously and from the improved ability of each committee to scrutinize proposals within its policy area. Of course, allowing legislators who have the greatest stake in an issue the greatest influence over policy choice will bias the final outcome.[11] For example, agricultural policy is more likely to benefit producers if representatives from agricultural districts write farm policy than if representatives from consumer districts (or consumer and farming districts) write the legislation.

The second rationale for the committee system argues that it serves members' goals.[12] The committee system with reciprocity allows a subset of legislators some discretion (and greater personal influence) over policy formation within its jurisdiction. To the degree that policy issues systematically vary across districts, representatives can improve their electoral security from an institution which allows them to trade influence over issues not of concern in their district for greater influence over those issues which are of local concern.

This rationale requires that representatives be allowed to join committees whose policy areas are of greatest concern in their own district. As the reciprocity theorem shows (see Appendix), median voters prefer their representative to have more influence over issues

with a high marginal impact on their utility. A representative who joins a committee irrelevant to the concerns of his constituents may do them little good.

The reciprocity theorem formalizes the notion that the committee system serves members' electoral goals. The actual presentation is contained in the Appendix; the intuitive argument follows. The discussion focuses on why this rationalizes rules R1 - R4.

Noll and Fiorina[13] derive the following comparative static result from the consumer maximization problem (see equation (1) above), an increase in a representative's influence over the policy outcome increases the expected utility of the median voter in his district and hence improves his electoral security (i.e., $\frac{\partial E\{U\}}{\partial P_j} > 0$). The reciprocity theorem is similar in spirit and can be described as follows. The structure of the Downsian election (as formalized by Davis, Hinich, and Ordeshook)[14] allows issues to vary in their marginal impact on the median voter's utility. Define a legislator's influence over policy outcomes in terms of the ex ante probability that he will be able to influence the outcome of a vote over the issue. Then, from an ex ante standpoint, if a legislator trades away influence over an issue with low marginal impact on his median voter for an equal increase on an issue with greater marginal impact, he has increased his median voter's expected utility.

The committee which oversees the issue with the highest marginal impact on his district's median voter is the most attractive for the representative.[15] R1 and R3 support the redistribution of influence of the various issues embodied in the reciprocity system.

The former rule enhances committee influence in the first legislative stage (agency and policy creation) while the latter rule improves influence in the oversight process. R4 ensures that reciprocity will work to the advantage of legislators by allowing them to join the committee of their choice. These rules allow the system of specialization (which the first rationale argued is a necessary feature of legislation) to benefit individual representatives (as argued by the second rationale).

Finally, this result allows inferences to be made about policy change. As the issues in local election campaigns vary over time, the relative attractiveness of the different committees change, leading to turnover in committee membership, and to changes in the preferences expressed by the remaining committee members. This process has important policy consequences, as Chapter 6 will show. New members of a committee are likely to have different preferences than the members they replace. R3 assures members that the oversight process can be used to influence policy in directions which are more in accord with the makeup of the policy goals expressed by the changed committees. So, in general, as membership changes, so will agency policy.

After modeling the regulatory setting, the next two chapters explore the implications of this phenomena for regulatory policy. Chapter 5 defines the political context of safety regulation and its implications for the creation of a regulatory agency. Chapter 6 follows with the study of the evolution of committee policy choice in response to change in the political environment of regulation.

APPENDIX TO CHAPTER FOUR

The appendix presents three results:

1. the equivalence of the consumer maximization problem presented in this chapter and the usual Downsian/DHO case,[16]
2. the Noll and Fiorina comparative statics result on the relationship between a representative's influence and his constituent's utility,
3. the reciprocity theorem.

1. The consumer maximization problem is,

$$\text{Max } E(U) = U(1_{ij}) \cdot P_j + U(\underline{L}) \cdot (1-P_j) \cdot \qquad (1)$$

The index j names the voter's district and can be ignored; i is the index over candidates. The usual voter problem in the DHO election is

$$\max_i E(U) = U(1_i) \cdot \qquad (2)$$

To show the desired result, simply notice that equation (1) is a linear transformation of equation (2). $U(\underline{L}) \cdot (1-P_j)$ is a constant, and multiplying $U(1_i)$ by P_j doesn't affect the choice of 1_i so long as $P_j > 0$.

2. Noll and Fiorina[17] study a model with a voter maximization problem similar to equation (1). They derive the following comparative static result. If P_j is the probability that legislator j will

cast the deciding vote on this issue, and U(x) is the utility function of the median voter in district j, then,

$$\frac{\partial E(U(x))}{\partial P_j} > 0.$$

That is, at equilibrium, the median voter prefers his district to have greater influence over legislative outcomes.

The DHO theorem asserts that candidates will adopt the policy positions which represent the most preferred point of the median voter. Let this point be 1*. The median voter's expected utility is

$$E(U(X)) = U(1^*) \cdot P_j + U(\underline{L})(1-P_j).$$

By definition, U(1*) is greater than U($\underline{L}$), (for all $\underline{L}$ not equal to 1*), and the result follows.

3. The following is a simple version of the reciprocity theorem. Assume:

A1: Ex ante, in a majority rule legislature, each legislator has an equal probability, 1/n, of casting the deciding vote on any given issue (where n is the number of legislators). Votes on distinct issue dimensions are assumed to be independent events.

A2: In a legislative committee system, each committee decides issues within its policy area only. Ex ante, each legislator

on committee k has a probability $1/n_k$ of casting the deciding vote on committee k's issue (where n_k is the number of members on committee k).

A3: There are only two issues and two committees of equal size. Committee one decides issue one and committee two decides issue two. Further, representatives are each members of only one committee, and each committee operates by majority rule.

A4: Consider the representative from district i. His induced preference function over policies, (x_1, x_2), is

$$U^i(x) = -a_{i1}(x_1 - \bar{x}^i_1)^2 - a_{i2}(x_2 - \bar{x}^i_2)^2.$$

$\bar{x}^i = (\bar{x}^i_1, \bar{x}^i_2)$ is district i's median voter's most preferred issue position (see DHO theorem).

A5: Ex ante, assume each legislator i presumes that there exists some expected distance from his most preferred point which represents the policy outcome $x_i^0 = (x_{i1}^0, x_{i2}^0)$ of the legislature such that

$$(x_{i1}^0 - \bar{x}_1)^2 = (x_{i2}^0 - \bar{x}_{i2})^2 \equiv y_i > 0.$$

A6: $a_{i1} > a_{i2}$ (i.e., in district i, issue 1 is more salient than issue 2 in a marginal utility sense); further, legislator i joins committee 1.

Reciprocity Theorem (simple version): The expected utility for legislator i is greater under a legislative committee system than under majority rule.

Proof:

Under majority rule,

$$EU_M = -[\tfrac{1}{n}2 \cdot 0 + \tfrac{1}{n}(1-\tfrac{1}{n})a_1 y_i + (1-\tfrac{1}{n})\tfrac{1}{n} a_2 \cdot y_i + (1-\tfrac{1}{n})(1-\tfrac{1}{n})(a_1+a_2)y_i]$$

Under a legislative committee system

$$EU_{LC} = -[\tfrac{2}{n} y a_2 + (1-\tfrac{2}{n}) y_i (a_1+a_2)]$$

$$EU_{LC} - EU_M = \tfrac{1}{n}(a_1-a_2) > 0.$$

This simple version of the reciprocity theorem can be generalized in several directions, for example, to the case of more than two issues, to having the ex ante probabilities of affecting the outcome be unequal (e.g., as in a seniority system), to committees of unequal size, to nonadditive utility functions, etc. In all cases conditions can be obtained in which a committee system is preferable to majority rule.

FOOTNOTES TO CHAPTER 4

1. The one exception is Sam Peltzman, "Toward a More General Theory of Regulation," Center for the Study of American Business Working Paper no. 10 (St. Louis: Washington University, 1976).

2. The model of the representative legislature presented in this chapter is not an attempt to model the United States Congress. It studies the impact of specific institutions on regulatory agency policy. Though these are essential components of Congress, many salient features are ignored (for example, the bicameral division between the House and the Senate, the seniority system, the party system, etc.). Further, the model ignores the influence of the president (and the executive branch) on the behavior of representatives and agencies except for passing references.

3. For an exposition of the Downsian election, see Anthony Downs, An Economic Theory of Democracy (New York: Harper and Row, 1957); or William Riker and Peter Ordeshook, An Introduction to Positive Political Theory (Englewood Cliffs: Prentice-Hall, 1973). For a formal exposition of the model with proofs, see Otto A. Davis, Melvin J. Hinich, and Peter Ordeshook, "An Expository Development of a Mathematical Model of the Electoral Process," American Political Science Review 64 (1970):426.

4. See the Introduction and Part I, which discusses the advantages and limitations of assuming this single purpose behavior, in David Mayhew, Congress: The Electoral Connection (New Haven: Yale University Press, 1974). A general discussion of legislator's goals is found in Richard F. Fenno, Congressmen in Committees (Boston: Little, Brown, 1972).

5. Roger G. Noll and Morris P. Fiorina, "Voters, Legislators, and Bureaucrats: A Rational Choice Interpretation of the Growth of Bureaucracy," mimeographed (Stanford University, 1976).

6. Davis, Hinich, and Ordeshook, "Model of the Electoral Process."

7. Assuming that taxation spreads the costs evenly over all districts, then even if $b < c$, as long as $b > \frac{1}{n} c$, this district accrues net benefit from the inefficient project (b = benefits, c = cost, n = number of districts). See Barry R. Weingast, "A Rational Choice Interpretation of Congressional Norms," Social Science Working Paper no. 142 (Pasadena: California Institute of Technology, 1976), for a detailed discussion.

8. For a discussion on the use of the agenda to control outcomes, see Charles R. Plott and Michael E. Levine, "A Model of Agenda Influence on Committee Decisions," Social Science Working Paper no. 143 (Pasadena: California Institute of Technology, 1976). Also see Linda R. Cohen, "Cyclic Sets in Multidimensional Voting Models," mimeographed (Pasadena: California Institute of Technology, 1977).

9. For studies of the committee assignment process in the House of Representatives, see Nicholas Masters, "Committee Assignments in the House of Representatives," American Political Science Review (1961); Kenneth Shepsle, "Congressional Committee Assignments: An Optimization Model with Institutional Constraints," Public Choice 22 (1975):55-78; and idem, The Giant Jigsaw Puzzle: The Democratic Committee Assignments in the House of Representatives (Chicago: University of Chicago, forthcoming). In addition to describing the operation of this system, they show how it serves members' goals by attempting to grant each representative membership on the committee of his choice.

10. For the history and development of this practice in the House of Representatives, see George B. Galloway and Sidney Wise, History of the House of Representatives (New York: Crowell, 1976). For other discussions of this rationale, see George Goodwin, The Little Legislature: Committees of Congress (Amherst: University of Massachusetts Press, 1970); and Richard F. Fenno, Power of the Purse: Appropriations Politics in Congress (Boston: Little, Brown, 1966).

11. For a detailed discussion of the reciprocity system and how it affects committee policy discretion in the House of Representatives, see Fenno, Power of the Purse; and Lewis A. Froman, Jr., The Congressional Process, Strategies, Rules, and Procedures (Boston: Little, Brown, 1972). This institution in the Senate is described in Donald R. Mathews, United States Senators and Their World (New York: Vintage, 1960). Also see Nelson Polsby, "The Institutionalization of the House of Representatives," American Political Science Review (1968), for a perspective on reciprocity.

12. A central argument of Theodore J. Lowi, The End of Liberalism (New York: W. W. Norton, 1969).

13. Roger G. Noll and Morris P. Fiorina, "Voters, Legislators, and Bureaucrats."

14. Davis, Hinich, and Ordeshook, "Model of the Electoral Process."

15. Fenno, Congressmen in Committees, contains the best discussion of how the committee system serves the various goals of legislators, and why different committees systematically attract members from different types of districts. Also compare Mayhew, Congress: The Electoral Connection.

16. Downsian/DHO refers to spatial models of electoral competition, as formalized by Davis, Hinich, and Ordeshook. See Downs, Economic Theory of Democracy; and Davis, Hinich, and Ordeshook, "Model of the Electoral Process."

17. Noll and Fiorina, "Voters, Legislators, and Bureaucrats."

CHAPTER 5

ISSUES, PREFERENCES, AND PUBLIC POLICY

This chapter analyzes the response of the policy making process, as modeled in the previous chapter, to a mass movement among citizens in the political economy. The movement studied is assumed to support government regulation to redress a market failure. The economic actors whose behavior is to be regulated (and their political representatives) are assumed to oppose market intervention. Representatives who attempt to enact these policies reflect the movement's strength among their constituents. Under a number of assumptions which lead to the creation of an agency mandated to redress a market failure, it is shown that once the mass movement dies, the agency will benefit the actors it regulates rather than members of the original mass movement.

Essentially, mass movements raise issues which affect voters' preferences. The first part of this chapter describes the circumstances under which issues and preferences diverge. The concern is twofold. First, why don't movements automatically form to internalize potential gains; and second, why might the movement fade despite the loss in benefits which may follow? The second part of the chapter contains the assumptions underlying the creation of the regulatory agency.

THE PARADOX OF PUBLIC POLICY FORMATION

The model in the previous chapter showed that as campaign

issues evolve the preferences expressed by representatives change accordingly. Issues may vary over time for two reasons. First, preferences themselves may change. Second issues may vary though preferences are fixed. This chapter explores the factors which account for the discrepancy between the set of issues and the set of policy variables available to the legislature. These factors are rational ignorance and a prisoner's dilemma faced by voters in all districts.

To develop the context of the rational ignorance, consider an election in which there are many issues, and suppose that individuals vote on the basis of only partial information about the policy positions of each candidate. Why would a voter remain only partially informed when ignorance may lead him to vote against the candidate whose entire platform offers the voter the highest utility? Since an individual voter is only one vote among many in his district, the probability that his vote affects the final outcome is small. The potential benefits from greater information must be discounted by the tiny probability that his vote will make a difference. Further, more information is costly; investment in information may not be worthwhile when weighed against the change in expected benefits. Therefore, individuals may rationally choose to vote on the basis of incomplete information about a candidate's policy stands.[1]

The other factor which contributes to the discrepancy between preferences and issues arises from a prisoner's dilemma imposed by the districting mechanism. Even if voters in one district bear the costs of information and subsequently raise a new issue in their own campaign, they would change only one vote within the legislature.

Unless many districts undertake the investment simultaneously, legislative action may never follow.[2]

Both factors combine to make the relationship between more informed decisions and individual utility improvement very remote. Consequently, the number of issues pursued by the entire legislature is likely to be smaller than the set of issues relevant to the welfare of individuals in a given district.

This situation creates a paradox. To initiate public policy formation, support for a particular position must exist across many districts in order to generate electoral rewards for representative action. Yet this requires solving the public goods problem inherent in the prisoner's dilemma imposed by the districting mechanism. Since no one district gains from initiating action without the support of many others, the public goods problem must be overcome by voters prior to action by the public sector.

Because action in one district alone is unlikely to alter policy, the existence of gains from public action does not constitute a sufficient condition for action. Nevertheless, public issues do arise and enter many local campaigns. Public action benefiting diffuse groups does occur. The dynamics of this process, particularly overcoming the two factors hindering issue formation, are not fully understood and deserve further investigation. This chapter does not attempt to specify when an issue will form. When it does, however, the model of the legislature in the previous chapter explains legislative response. The final section of this chapter applies this to safety regulation.

WANING OF THE MOVEMENT

Though necessary for policy formation, political support across many districts is unstable. Just as it was unlikely to form in the first place, it is unlikely to remain for long periods after policy initiation. Several factors contribute to the decline in public support. First, the public goods problem facing all districts remains, but in a new form. The legislature, now under R3 instead of R2, requires only a handful of representatives on the oversight committee working to ensure the proper outcomes. Other legislators are free to pursue other policy matters; voters in other districts still benefit as long as support remains on the oversight committee.

R4 and the reciprocity theorem ensure that the representatives who join the oversight committee are from those districts where regulation has the highest marginal impact. This contributes to a policy lag. If support eventually fades, the most dedicated followers are likely to be the last to give up. Because the most dedicated representatives join the committee, policy change lags behind changes in the distribution of opinion in the full legislature.

Another factor contributing to the decline in policy support is the large cost required by each individual to remain informed. The certain costs, when weighed against the change in expected benefit of remaining informed, are probably high enough to imply a decline in support.

As support declines, electoral rewards are no longer generated and representatives from these districts pursue other matters. If a small, dedicated opposition exists and remains all along, it

may assume control over policy administration. The legislature, now in R3, allows a small number of legislators to alter policy outcomes. So, as support fades, the opposition may gain control to mitigate or reverse the original policy through the administration process.

Presumably, voters across many districts stand to lose from the policy reversal. Why doesn't the political support re-form as the new members of the oversight committee reverse the original decisions? Besides the factors hindering the original formation, the existence of the agency fundamentally alters the status quo. A policy reversal which benefits the small opposing minority distributes costs in a different manner and among a different subset of the population than prior to the original agency formation.

The ICC will serve as an illustration. Originally, the market failure arose from the local monopolies enjoyed by the railroads. This problem was solved by the ICC which outlawed short haul long haul rate differentials. As the problem was solved, support for regulation faded; nevertheless, the ICC remained. Over time, it became more effective as a cartel manager, raising rates on all previously competitive routes but continuing the ban on local discrimination. The costs were distributed over consumers in all markets rather than concentrated among a small subset as before.

In conclusion, the policy reversal does not imply that the movement will immediately re-form. Nevertheless, gains from public action remain and the issue may rise again. If public concern does grow, a second policy reversal may occur, bringing the public sector

through a full cycle back to the original policy.

RESPONDING TO A MASS MOVEMENT

The previous section explored the dynamics of a movement's formation and decline, and its influence on legislative outcomes of the second stage of policy formation. It assumed the creation of an agency in response to a mass movement. This section provides the missing link by discussing the creation of an agency by a legislature in response to the damands of a mass movement.

A mass movement among the citizens of a political economy occurs whan a large portion of the voters of many districts support a particular policy position on one or more issues. The movement need not encompass a trans-district organization such as a party. It merely requires that a particular set of related policies be of concern in many districts and that commonly held opinions exist across districts. Examples of political movements are the Populists/Grange at the time of the formation of the Interstate Commerce Commission; the Progressives at the time of the creation of the Food and Drug Administration and the Federal Trade Commission; and both the consumer and environmental movements of today (and their support of the Consumer Product Safety Commission, the Environmental Protection Agency, the Occupational Safety and Health Administration, the Agency for Consumer Advocacy, etc.).

In terms of the electoral mechanism of the previous chapter, an issue, k, becomes an issue dimension in a district campaign when many citizens of the district adopt the opinion of the movement. Once

it has become part of district j's campaign, maximizing candidates will announce stands, l_{ijk}, on the issue. If the movement includes the median voter in this district (which, of course, necessitates including half or more of the district's voters), then candidates maximizing the probability of election will support the movement's position.

A movement which gains the support of many median voters in various districts gains support for its position in the legislature. If the size of the support approaches a majority of the committee with jurisdiction over this issue, and a majority of the whole legislature, the movement's position becomes a serious contender for legislative policy formation. Whether the legislature will pass such a proposal depends upon how large the movement becomes, hence how much support it gains in the legislature, as well as the distribution of representatives from supporting districts among the various committees.

Several assumptions are needed to define the political nature of the movement which supports regulation in order to be specific about the legislative outcome for the case of regulation. The first assumption is informational in nature. The position favored by the mass movement is assumed to be consistent with the economic rationale for regulation. Specifically, a particular market failure is presumed to exist (natural monopoly, externality, informational inefficiency, etc.) with a movement of consumers supporting government intervention into the market to correct the market failure.

This is a rationality assumption and rules out the possibility that the political system implements the demand of the movement, but that the movement through ignorance, supports a nonsensical policy.

To assume that the political system misdirects the agency because consumers are uninformed verges on the tautological. Unless citizen misinformation is itself modeled so that an explicit correspondence is drawn between the misinformation of consumers and the position they support, this hypothesis cannot be proven wrong. While modeling consumer misinformation and the subsequent political pressure is a fruitful approach, it is not taken here.[3]

To define the political context of the regulatory issue, the first assumption requires consideration of the economic impact of regulation. Since an individual representative judges alternative policies on the basis of their effect on his district, the impact of regulation must be studied district by district. This allows inferences about the behavior of individual representatives to be made, and hence about the policy outcomes of the whole body.

The following discussion develops the political context of regulation. The main example for the discussion is consumer product safety regulation.[4] Though the model is slightly specialized to this case, it can be generalized to discuss other forms of economic regulation. The scheme assumes that the distribution of firms and consumers is not uniform across all districts; some districts may predominantly contain consumers, other predominantly producer groups (of consumer products), while others may be mixed.

Imposing mandatory safety standards requires firms to make products which invariably are more costly. This implies an increase in market price accompanied by a decrease in output. Unless subsidized, individuals associated with producers bear a net loss since production

is restricted. In the short run, the firm's profits are lowered; in the long run it may go out of business. The negative impact of regulation extends beyond the particular firm to affect other actors in the district. The local economy also suffers. In general, decreases in production create local unemployment through a decrease in labor requirements. Local suppliers of the firm, and of the former employees (considered as consumers), suffer a loss in demand for their services, which has a similar negative impact. All of these actors are voters in the district and will express preferences on this issue based upon its negative impact on their choices.

In general, consumers of the product are better off, since they now purchase safer products.[5] From the standpoint of the welfare analysis of market failure it does not matter that various types of economic actors locate in different geographic regions. However, because of the nature of the districting mechanism, the political system transforms such "irrelevant" considerations into critical factors. A representative must consider policy on the basis of the impact on his district; Paretian considerations aside, the relative concentration of producer/consumer groups does matter. In general, regulation imposes net costs on individuals within districts containing an abundance of producers. As a result of regulation (i.e., safer products), the change in producer behavior benefits consumers in other districts.

In order to determine the decision of the representative from a given district, k, the costs and benefits from various actions must be weighed against one another.

The following calculus is defined solely in terms of

representative k's own subjective beliefs concerning his district's response to action.

Definition: Let b_k be the votes gained from favoring regulation.

Let c_k be the votes lost from favoring regulation.

And, let $B_k = b_k - c_k$ be the net vote change from favoring regulation.

Imposing regulation divides the set of all districts, K, into three types, K_1, K_2, and K_3.

Type I: "Producing districts," $K_1 = \{k \in K \mid B_k < 0\}$

Individuals in these districts bear a disproportionate share of the costs of regulation, owing to the concentration of regulated producers; these costs are not outweighed by the benefits received by these citizens from the regulation of all other districts' products.

Type II: "Consuming districts." $K_2 = \{k \in K \mid c_k = 0\} \Longrightarrow B_k > 0$

These districts have no producers, and therefore individuals within it bear no direct costs of regulation while benefiting from the regulation of all other district's products.

Type III: "Mixed districts." $K_3 = \{k \in K \mid C_k \neq 0$, and $B_k > 0\}$

Mixed districts contain a few regulated producers, and hence some individuals bear direct costs from regulation. However, their number does not outweigh the number of individuals who benefit from all other districts' regulations.

Without further assumption no inferences can be made about the relative size of each subset of districts -- or in fact whether all subsets are nonempty. All that is known; a priori is $|K_1| + |K_2| + |K_3| = |K|$.

Having defined the costs and benefits of regulation for each representative, it is assumed that safety regulation becomes a national issue entering every electoral campaign. Further it is assumed that median voters from producer districts are associated with the industry; hence regulation has a negative impact on them. Median voters in consuming and mixed districts are assumed to be consumers who are not associated with the regulated industries and therefore favor regulation. Consequently, representatives from producing districts will oppose regulation while those from consuming and mixed districts will support it; they will, respectively, attempt to defeat proposed legislation imposing regulation, or to fight for its passage. This conflict will be resolved according to the rules of the legislation.

Each representative, judging the proposal in terms of its impact on his district, weighs it against the status quo. Regulation yields the following payoff vector to the various representatives: $(B_1, B_2 . . . B_n)$, vs. the status quo: $(0, 0, ... 0)$. The preferences of the ith legislator for or against the proposal depends upon whether or not $B_i > 0$ (i.e., whether $i \in K_2 \cup K_3$). At the initial stage of policy formation by the legislature, rules R1 and R2 constrain legislative activity. The first requires that a majority of members of the committee with jurisdiction over the regulatory issue favor regulation. This condition must be satisfied before the whole body can vote on the measure. The second rule then requires that a majority of all legislators favor the proposal in order to enact the legislation.

More precisely, the necessary and sufficient conditions for enacting legislation are as follows. Let C be the subset of legislators

on the oversight committee ($C \subset K$).

(i) A majority of the committee must favor passage:

Let $M = C \cap (K_2 \cup K_3)$ then $|M| > 1/2\ |C|$

(ii) A majority of all legislators must favor passage:

$|K_1| < |K_2| + |K_3|$.

If these necessary conditions are not satisfied, then the regulatory proposal will fail. Thus, a policy to correct a market failure may not pass simply because the distribution of benefits is too concentrated relative to the costs. If they are satisfied, however,[6] then the committee will propose regulation, and a majority of legislators will vote for the proposal.

The above scheme cannot predict when a regulatory proposal will pass the legislature without knowing, or postulating, the distribution of representatives from the various types of districts (K_1, K_2 and K_3) on the committee with jurisdiction over regulation, and the total number of each type in the legislature. In the absence of this knowledge, the fate of a proposal cannot be known. A small minority of legislators who oppose regulation, for example, may block the legislation if they compose a majority of the appropriate committee.

However, regulatory agency capture presumes the creation of an agency, so the necessary conditions can be presumed to hold. Given that an agency has been created, the necessary conditions yield information about the preferences of the members of the policy oversight committee who will control agency policy implementation. At the time of passage, the necessary conditions imply that committee members

favoring regulation dominate agency policy making. This condition is central to the discussion of agency capture in the next chapter. It allows inferences to be made about the initial regulatory policy choice and will form the background against which the changes in the political environment can be discussed.

FOOTNOTES TO CHAPTER 5

1. Of course, individuals may rationally choose to abstain for the same reason. This formulation ignores abstention. See John F. Ferejohn and Morris P. Fiorina, "The Paradox of Not Voting: A Decision Theoretic Analysis," American Political Science Review 68 (1974):525-536; Paul E. Meehl, "The Selfish Voter Paradox and the Thrown-Away Vote Argument," American Political Science Review 71 (1977):11-30; and Brian M. Barry, Sociologists, Economists, and Democracy (London: Collier-Macmillan, 1970).

2. See, for example, the pathbreaking works of Mancur Olson, The Logic of Collective Action (Cambridge: Harvard University Press, 1965); and Lance E. Davis and Douglass C. North, Institutional Change and American Economic Growth (Cambridge: Cambridge University Press, 1971).

3. However, see Melvin J. Hinich, "A Social Choice Model for Consumer Support for Food Regulation," mimeographed (Virginia Polytechnic Institute, 1975). Studying FDA food regulation, he shows how the systematic lack of consumer information, itself the rationale for regulation, translates through the political process into pressure on the agency to regulate the wrong category of hazards. For an intuitive exposition, see Mark Nadel, The Politics of Consumer Protection (Indianapolis: Bobbs-Merrill, 1971), ch. 3.

4. Chapter 3 contains a detailed discussion of the informational inefficiency embodied in the product safety problem and the policy prescriptions to cope with it.

5. Consumers do bear some portion of the costs of regulation through the rise in market price. Standard incidence theory can be used to study the distribution of the costs between producers and consumers. However, as in the case of imposing a tax on consumer products, only in a special case will consumers bear the full costs of regulation.

6. Strategic considerations are ignored in this formulation.

CHAPTER 6

THE POLITICAL CYCLES OF AGENCY POLICY MAKING

Following its creation by the legislature, the agency implements its mandate by making policy decisions. This begins the political cycle of agency policy making. The agency's actions reflect the preferences expressed by the current members of the oversight committee. Legislators who supported the regulation to redress a market failure, and produced an agency, ensure it benefits their constituents.

This chapter builds on the previous chapter by exploring the changes in committee policy choice which reflect the changes within the political environment of regulation. The first part of the cycle of agency policy follows the decline in public support for regulation; the second part reflects a renaissance of public support. In both cases, the model in Chapter 4 describes the alterations in policy which occur in response to these changes.

A decline in the political support for regulation affects a representative's preferences over policy by changing the electoral rewards for various actions on the issue. The decline implies that representatives of producing districts remain the only ones who benefit from altering outcomes on this issue. As only these representatives seek to influence outcomes, they begin to dominate committee policy. The process works in reverse in the second case: as support for

regulation increases, the committee make-up is altered from one concerned with producers to one partially or wholly sympathetic to consumers.

Changes in agency policy reflect the change in preferences expressed by members of the committee (in part through membership change and in part through changes in induced preferences of the remaining members). The committee continues to use agency policy to benefit its constituents. However, the change in committee members preferences alters the distribution of policy benefits among the subsets of constituents.

Creating an agency fundamentally alters the institutional rules by which legislators influence agency policy. In the initial stage of policy formation, the decisions of the committee are subject to majority rule approval by the whole body (R2). The politics of this stage were explored in Chapter 5. This chapter discusses how agency policy responds to change in the political environment subsequent to the agency's enactment. At this time, responsibility for oversight and control is delegated to the committee, which no longer requires majority rule approval of the entire legislature prior to action (R3). R3 affords the oversight committee controlling agency policy a greater degree of freedom in the policy implementation stage than in the previous stage of policy formation. This implies that policy decisions made by agencies are more responsive to changes in political support than is the creation or dismantling of whole agencies.

The political cycle of agency policy begins as the agency starts making policy decisions following its legislative direction.

Members of the oversight committee will use their control over agency policy to suit their own electoral needs, namely, securing policies beneficial to their constituents. As implied by the necessary conditions of Chapter 5, the presumption that an agency has been created requires that a majority of the committee (which evidently controls policy decisions on that issue) favors regulation. The majority, which produced an agency to benefit consumers in the first stage of policy choice, will now ensure that the agency implements policies which are beneficial to this group.

The mass movement gains an agency to benefit its members while it has its greatest support. This situation is unstable (as argued in the preceding chapter). Several factors intervene which most likely result in a decline in the movement's support.

Consider, now, the response of the policy making process to the waning of the movement. As the movement fades regulation slowly ceases to be an electoral issue which reduces its (electorally generated) support within the legislature. The median voter from a district which previously supported regulation may no longer be concerned with the problem. Representatives form these districts no longer gain electorally from control over agency policy and begin to pursue other legislative matters which have a greater marginal impact on their district. Committee decisions change as this process occurs for the members of the oversight committee who previously controlled agency policy.

In terms of the model in Chapter 4, the relative saliency of the issues in a given district now change, so that is, the marginal impact of the various issues on the utility of the median voter changes.

At one time, the movement commanded majority support on the appropriate policy committee. The issue becomes less prominent as the agency begins implementing policies consistent with its mandate, and voters begin to focus on other policy areas. Representatives respond by altering the focus of their policy-influencing activities away from the formerly popular issue.

A decline in the political strength of the regulated actors (who opposed the introduction of regulation) is unlikely. While the mass-movement was formed specifically to raise this issue, industrial groups often existed before the issue arose. Trade associations, for instance, may have been created for a variety of reasons, none of which were to influence regulatory policy. Further, in many cases, regulated actors must interact with the agency on a continual basis. At the extreme, every major decision requires agency approval. Finally, unlike consumers, producers do not face the free rider problem. Since regulatory decisions are made case by case, the firm can privatize the benefits of its own efforts in the regulatory arena.

For these reasons, producers remain aware of the relationship between agency decisions and their own viability. Representatives from producer districts continue to have an incentive to intervene on behalf of their constituents since this results in electoral payoffs, this is no longer the case for representatives of consuming districts.[1]

In sum, as the movement fades, a fundamental asymmetry appears between consumers and producers. Representatives from consuming districts no longer gain electorally from pursuing regulatory matters. Representatives from producing districts remain in a position to receive

electoral support from policy intervention. Representatives from mixed districts continue to gain electorally from regulatory intervention, but the intervention is now on behalf of the district's producers rather than consumers.

In response to evolving issues, preferences expressed by representatives have changed. The make-up of the preferences expressed by members of the committee changes for several reasons. First, new members may join the committee. A decline in the movement alters the relative incentives for a given representative to join the various committees, by changing the relative saliency of the issues. Because of the asymmetry between producers and consumers, representatives from producing districts now have a differential incentive to join the committee. Only their constituents generate political rewards on the issue.

Second, the preferences of members who remain on the committee may change. Members from Type I (producing) districts still favor change in regulatory policy to benefit their constituents. Representatives from Type II (consuming) districts no longer have an incentive to ensure policies benefit consumers. Finally, representatives from Type III districts no longer respond to their consuming subconstituency and favor policies beneficial to their producing constituents.

Another factor affecting outcomes reflects changes in preferences expressed by noncommittee members. Other members are potential traders with members for policy intervention to aid their constituents. As the composition of nonmember preferences changes, the nature of policy intervention on behalf of their constituents will change as well.

In particular, a decline in political support for regulation means that only representatives of producers will be interested in trading with committee members.

Thus, any preferences expressed on this issue will be against the agency pursuing its mandate. Representatives from producing districts are now in a position to control agency policy. To see this, as well as which policy will be pursued, consider the strategies available to member k of the oversight committee. There are two cases, corresponding to whether member k represents producers (i.e., $k \epsilon K_1$ or K_3) or whether he represents a consuming district ($k \epsilon K_2$).

Case I ($k \epsilon K_1$ or K_3). The available strategies are:[2]

a_1: He can ensure that the agency implements its mandate. This yields him $-c_k < 0$.

b_1: He can intervene on behalf of his regulated constituents to reduce the severity of the decisions which concern them, perhaps even securing beneficial decisions. This yields his district $-c_k^* > -c_k$ ($-c_k^*$ may be >0).

c_1: In addition to intervening on behalf of his own regulated constituents, he can make trades with other legislators, i, to reduce the severity of regulations concerning their constituents. In return k receives the benefits of legislation from i's committee $q_{ki} > 0$. Thus, i's payoff increases from $-c_i$ to $-c_i^*$, and receives $-c_k^* + q_{ki}$.

d_1: Finally, he can abolish the agency, causing his net gain to equal zero.

Case II ($k \epsilon K_2$).

a_2: He can ensure that the agency implements its mandate. Since regulation is no longer an electoral issue, this yields zero.

b_2: He can intervene on behalf of his consuming constituency. The electoral rewards from this action are again zero.

c_2: He can make trades with other legislators, i, to intervene on behalf of i's regulated constituents. In return, k, receives the benefits of i's committee, q_{ki}. This yields $k\ q_{ki} > 0$.

d_2: Finally, he can abolish the agency. The electoral rewards from the action are zero.

Representatives from producing districts (and from mixed districts) will choose strategy (c_1) or (d_1), depending upon whether $-c_k^* + q_{ki} \gtrless 0$. As long as representative k can intervene in the regulatory proceeding to gain decisions which yield net benefit to his regulated constituents (e.g., if the agency becomes a cartel manager, then possibly $-c_k^* > 0$), strategy (c_1) will dominate all others. Ironically, Case II shows that representatives from consuming districts can only gain from decisions which benefit producer groups. Electoral rewards are no longer generated on the issue for these representatives since the movement's support within the district has faded. They may gain through trading a policy change which favors producers in return for the benefits of another committee's legislation, q_{ki} (strategy (c_2) dominates). One other factor further facilitates this

regulatory problem for a time. Voters turn their attention to other "unsolved" issues. Third, exogenous factors have an influence as well. The dynamics of large group formation are not well understood. Some periods facilitate their formation while others do not, so their formation remains unpredictable to some extent. Examples are the intercession of World War I on the Progressive Movement, or the Great Depression's influence on the reforms of the 1930s.[3]

This completes the description of the first stage of agency policy making in the political cycles model: in response to the waxing and waning of mass-based support for regulation, the policy pursued by the agency varies. In the initial period of policy oversight, because the movement remains a significant political factor with the ability to reward or punish legislators, the agency implements policies consistent with its mandate. As the movement wanes, the distribution of preferences among legislators on the oversight committee changes. As the producer groups become the only political factor, their representatives dominate the committee policy making process on this issue. Since the relevant institutional rule of the legislature at this stage requires only a majority of the committee to approve a policy change (R3), agency policy will benefit the regulated producers.

Potential gains remain to various subsets of consumers whose welfare is affected by agency policy making. If regulation becomes an issue once again, and receives support from many districts (which once again advocate policies to redress a market failure), agency policy may alter a second time in an attempt to benefit those voters

who now respond to the issue. The process works much the same as in the policy change in the first step of the cycle; legislators' policy stands and legislative activities respond to changes in the preferences expressed by their constituents.

The existence of benefits from collective action is not a sufficient condition for such action since the prisoner's dilemma imposed by the district mechanism remains. The factors which allow movements to form remain exogenous to some extent. Some agencies may never experience a revival in their policy area as a campaign issue or may go unnoticed for extended periods, while others may face recurrent public concern. Agencies in the former group may never complete the full cycle in their policies. Those among the latter group are more likely to complete it.

In the second part of the policy cycle, representatives of most producing districts will continue to receive electoral response from their constituents. However, other representatives will experience a change in the response to their action. Regulation was no longer an issue in the middle of the cycle. Regulatory policy benefited producers, and representatives of consumer districts received no electoral benefit from actions to implement the mandate. As consumers once again advocate regulation, new preferences for representatives are induced according to the Downsian electoral mechanism. Representatives from districts which support regulation will favor implementation of the agency's mandate.

Agency policy decisions may change after a lag period. The same three factors which led to the policy change in the first part

of the cycle still prevail. First, relative incentives to join the committee change; second, preferences expressed by remaining committee members may change; and finally, the incentives of noncommittee members to make trades with committee members for intervention activities also change. If the new movement gains enough support on the oversight committee, agency policy decisions will be altered.

This completes the full political cycle of agency policy making. Regulatory benefits, as part of the political system, respond to change in the environment of the policy issue. Agency policy may change as the make-up of the collection of constituents seeking to influence regulatory decisions changes.

FOOTNOTES TO CHAPTER 6

1. On the role of intervention activities of legislators, see Morris P. Fiorina, "The Case of the Vanishing Marginals: The Bureaucracy Did It," American Political Science Review 71 (1976):177-181; idem, Congress: Keystone of the Washington Establishment (New Haven: Yale University Press, 1977); and Roger G. Noll and Morris P. Fiorina, "Voters, Legislators, and Bureaucrats: A Rational Choice Interpretation of the Growth of Bureaucracy," mimeographed (Stanford University, 1976). Its relation to regulation is noted in David Mayhew, Congress: The Electoral Connection (New Haven: Yale University Press, 1974).

2. Recall that the benefits and costs (i.e., c_k, b_k, and B_k) are the electoral payoffs to representative k and not the welfare gains and losses to his district.

3. The first and third factors are discussed in Lance E. Davis and Douglass C. North, Institutional Change and American Economic Growth (Cambridge: Cambridge University Press, 1971).

PART III

EMPIRICAL STUDIES OF FIVE REGULATORY ARENAS

CHAPTER 7

THE CONGRESSIONAL BUDGETARY PROCESS: REGULATORY AGENCY POLICIES AND BEHAVIOR

This chapter investigates Congressional response to organized groups as well as the unorganized, diffuse groups in an attempt to distinguish between the three capture hypotheses. By studying the actual mechanism by which Congress controls agency policy, the response of the policy making process to the various groups can be observed. A major Congressional control mechanism is the budgetary process. As is the case for all agencies in the Federal government, each regulatory commission must face the Congress each year to receive its annual appropriation, or allotment of funds. At this time, the agency's past performance and its requests for policy changes are scrutinized.

Program levels are controlled by Congressional appropriations. If an agency has not spent money as Congress desires, the appropriations committee may use its many sanction and control mechanisms to ensure compliance.[1] Among the tools available for this purpose are earmarking funds for specific projects, activities, or purposes; failing to allocate any funds for specific categories; placing ceilings on the number of employees of an agency or altering their distribution among the various activities of the agency; and fostering or hindering the agency's (or its administrators') new policy initiatives or pet projects.

Given some assumptions about the nature of the judicial system's influence on policy choice, the Congressional response to diffuse movements can be assessed through the budgetary process.

The argument proceeds as follows. The judicial system is shown to give the advantage to the organized groups through the evidenciary and due process requirements imposed by the Supreme Court and by the Congress. The main point is that an agency cannot make a policy decision for which there is no evidence. Organized participants present evidence supporting their position while unorganized groups do not. Therefore, if political actors want to benefit unorganized groups, they must allocate greater resources to the agency so that it can substantiate a position not presented by an organized group.

Congress has an important control variable here which makes agency policy making more or less responsive to organized groups. The variable is the agency's capacity for research and analysis which can often be observed directly in the budget. To the degree that Congress wants an agency to be dependent upon the organized groups, it will allocate fewer resources for this purpose. Finally, Congressional behavior in this category will be observed to distinguish between the capture models.

The conclusions are tentative; however, in some instances, the budgetary histories presented in the following chapters indicate Congressional response to diffuse, relatively unorganized groups. This suggests the political system is more than a vehicle by which the most organized group on a given issue dictates policy. The

pattern observed in several agencies is best understood by the model presented earlier in Part II, and cannot be explained by the cartel-by-design or the life cycle theses.

THE JUDICIAL SYSTEM AND REGULATORY POLICY

This section explores the relationship between agency policy making and the influence of the organized groups. It argues that the evidence on the judicial systems influence on policy outcomes compliments the conceptualization of the political process as a mechanism for aggregating the interests of various groups.

Two features of the legal system account for its effects on policy outcomes.[2] The first is the nature of its evidenciary requirements; the second is its requirement of due process.

The current evidenciary requirement for regulatory agencies stems from the Administrative Procedures Act of 1946 (APA). This act, however, merely rationalized de facto requirements imposed by the courts over the previous fifty years. In 1912, the Supreme Court ruled that "it has been settled that the orders of the commission are final unless (1) beyond the power which it could constitutionally exercise; or (2) beyond its statutory power; or (3) based upon a mistake of law."[3] Further, concerning mixed questions of law and fact, the court confined itself to the ultimate question as to whether the commission acted within its power. In the next two years this was defined to mean whether there was "substantial evidence to support the order."[4]

The substantial evidence requirement is a weak evidenciary rule. In fact, a full range of evidenciary requirements are employed

in various categories of court proceedings. Criminal proceedings require the strongest rule. Findings must be proven to be true beyond all reasonable doubt. Civil law employes a less stringent rule. Decisions must be supported by a preponderance (or the bulk) of evidence. The requirement of administrative law is still weaker. The substantial evidence rule merely requires that a reasonable man be capable of supporting the ruling.[5]

In terms of the regulatory proceeding, the requirement of substantial evidence means that an agency's ruling may stand in court even if a preponderance of evidence can be established against the ruling. For example, consider an agency ruling on a regulated firm's request to raise its rates. As long as the firm has properly documented its own case, a substantial amount of evidence exists to support a ruling favorable to the firm. Such a ruling may not be overturned in court on the basis of substance, even if there exist more persuasive arguments (e.g., a preponderance of evidence) against the case.

The substantial evidence rule was strongly contested in the debates preceding the passage of the APA.[6] Nonetheless, Congress unanimously favored the weaker requirement. The weaker rule gives politicians greater freedom of choice over alternative policies to the degree that agency policy making is controlled by the political process. Political actors value their increased discretion because the politically expedient policy choice may not coincide with the policy supported by the bulk of the evidence.

The due process requirements also influence the nature of agency decision making.[7] The requirement stems from the Fifth and

Fourteenth Amendments which require that agency decisions be neither arbitrary nor capricious. The judicial system has interpreted this to mean that an agency's decision be supported by substantial evidence and that it be based on all the information and evidence submitted. Should the agency fail to consider any piece of evidence, grounds for overturning the ruling exist and the agency may be forced to begin anew.

Judicial review of agency decisions on procedural grounds gives the advantage to organized interests for two reasons. First, these groups are more likely to challenge a ruling in court. Establishing that a ruling is based on all the evidence requires that an agency devote scarce resources to reviewing its findings to make certain that all points raised by all parties are duly considered. Being challenged in court on precedural (rather than substantive) ground risks having a ruling overturned. The commitment of further resources to restudy the same problem which follows a reversal by the courts means the agency is more likely to pay attention to the interests of those groups which are likely to challenge its decisions.

Second, and more importantly, organized groups tend to document their position while unorganized, nonparticipants do not. Since this documentation provides the basis for substantial evidence supporting a decision in favor of a group's position, it introduces an asymmetry in the proceedings. If an agency decides in favor of a represented group, it may often use the submitted evidence as justification for its decision. However, in order for the agency to implement new policy initiatives or policies which are closer to the

interests of unrepresented groups the agency itself must develop independent evidence and analysis. Without this effort, the basis for substantial evidence supporting these policies will not be established (and will not survive a court challenge). This asymmetry creates the bias in favor of the organized groups since the promulgation of policies favoring unorganized groups necessarily require greater resources.

A crucial control variable which enables Congress to affect agency policy is the amount to resources which go to an agency for its own research and analysis. An agency's ability to develop its own information, interpretation of the facts, and policy choice which will hold up in court, depends upon the amount of research and analysis it can conduct. If an agency's independent capacity is limited, the nature of the judicial review constrains its policy choice to be in the set of alternatives presented by the represented interests. Congress will allocate fewer analytical resources to the agency to the degree that it wants an agency to depend on the organized groups.

Of course, increasing the independence of an agency from organized interests does not ensure that it will consider the interests of the unorganized groups. Congress must use other means of influencing agency decisions to ensure this policy outcome.[8]

Both the economic and political science literatures cite many instances of Congressional intervention to alter the course of agency policy making. A full range of tools are available for this purpose. For example, Congress may specify particular provisions in an agency's authorizing legislation such as unrealistic procedural

deadline which limit the scope of possible regulations in various ways.[9] It may hold hearings on an issue pending before a regulatory commission. In one instance, the courts threw out a decision by the FTC on the grounds that the Congressional pressure via the hearings may have influenced the agency's decisions.[10] Congress may also amend the act which an agency oversees, forcing it to change its policy choice. In some cases, passing a resolution may have the same effect. Coase cites an example of this type in which Congress stopped the Federal Communications Commission from implementing its plans to begin the auctioning of the station licenses.[11] The previous method for allocation of licenses had become a rubber-stamp renewal process which benefited current owners. Though this and other means of statutory intervention have been studied in detail, no one has systematically investigated budgeting as a policy device.

THE BUDGETARY PROCESS AND EMPIRICAL EVALUATION OF CONGRESSIONAL INFLUENCE

The literature on the budgetary process supports the conceptualization of the political system as an interest group aggregation mechanism.[12] A major conclusion about the appropriations process relates agencies to their constituencies: those which develop indentifiable, supportive constituencies fare better than those which do not. According to one student of budgeting, an agency's budgetary success hinges more upon whether the agency acts as a good politician than on elaborate technical support and evidence for the its requests. And,

> Being a good politician. . . requires essentially three things: cultivate an active clientele, the development of confidence among other governmental officials, and skill in following strategies that exploit one's opportunities to the maximum. Doing good work is viewed as part of being a good politician.[13]

In particular, Wildavsky stresses that an agency must "serve your clientele," "expand your clientele," "secure [Congressional and clientele] feedback," and "concentrate on individual constituencies" (i.e., be specific about which groups benefit from particular programs or potential changes in policies).

Weidenbaum's study[14] supports this view. By disaggregating the broad budgetary categories (such as Defense or Health, Education and Welfare), he shows that the bulk of the budget goes to specific, identifiable groups and not the general public. Although these groups vary in their degree of organization, all can be identified as a specific subset of the population.

Another conclusion of this literature is that budgeting is incremental. Congress tends to establish a base budget for each agency which defines the level of the various services and activities performed by the agency. In general, an agency's budget is adjusted incrementally; significant deviations from the established base are closely scrutinized and difficult to obtain.[15]

The significance of the base budget for policy influence is that programs are harder to change once the base has been established. The major influence on policy formation occurs during the formation of the base. Therefore, the period just following the agency's creation must be investigated to assess Congressional influence on an agency.

This can be observed by following the adjustments made by Congress in the various agency program levels. The same applies to agencies which have undergone reorganization by Congress: the adjustment made following reorganization must be compared to those prior to the change.

How does Congress actually influence an agency's choices so that the major portion of the decision favors the specific groups it wants to benefit[16] A distinction made in the literature for this purpose is between across-the-board budget cuts and categorical or programmatic cuts. An agency's budget request normally breaks down its operations into a number of categories or programs. Each category represents a particular function performed by the agency such as enforcement activities standard setting, or research. Across-the-board cuts are a set percentage decrease in each category. This technique is used to affect the scale of an agency's operation and often reflects fiscal concerns not directly associated with the agency's operation (e.g., full employment policies). Categorical cuts, or the redistribution of an agency's resources among its various programs are used to influence agency policy. By restricting the use of funds for some purposes and expanding their availability for others. Congress can influence an agency's decisions in many ways.

Consider the sample budget in Table 7-1 in which the agency's operation is divided into five programs. Standards setting is the process by which the agency promulgates regulations. This encompasses the formal regulatory apparatus (such as licensing boards, hearing

examiners, or standard setting procedures). Regulatory research is defined as the agency's in-house research activities which may be inputs for the commission's decisions or for alternative views on reg ulations than those submitted by the various participants. This category represents the agency's capacity for independent analysis of its regulatory problems. Training activities include training the field inspectors who must learn the regulations and how to test for their effectiveness. Enforcement activities form the incentive arm of the commission, through inspections of the regulated actors to see if the rules are being followed. Administration funds cover costs for the commissioners and their staffs to support major policy decisions. Administration also includes all administrative and management functions for oversight and direction of its own operation.

TABLE 7-1: SAMPLE AGENCY BUDGET
(Millions of Dollars)

1.	Standards Setting	$ 3.6
2.	Regulatory Research	2.7
3.	Training	3.0
4.	Enforcement	27.6
5.	Administration	2.3
	Total	39.2

Congress influences the agency's operation by adjusting the relative distribution of resources among the various categories. For example, consider enforcement activities. For an agency to be

effective, regulated actors must have an incentive to follow the regulations. An agency's enforcement activities are a major component of the incentive system. By increasing the frequency of inspections, the agency increases the expected costs of being found in violation. The greater the resources for this purpose, the more likely that the regulated actors will follow the regulations.[17]

As a second example of influence, Congress may allocate a large amount for enforcement activities to support a huge inspection program. However, if the number of regulations is large, allocating few resources for training means that only the simplest and trivial regulations can be enforced. By adjusting these two variables, Congress has a wide degree of latitude in its influence on the agency's effectiveness in enforcing its decisions.

To make inferences about Congressional influence on agency policies, the pattern of Congressional appropriations must be observed category by category. The key variables to compare are the relative rates of change in the resources going to each program or category. Relative rates of change are the appropriate basis for comparisons since Congress adjusts budgets over a series of years rather than in a given year. This indicates how the resources of the agency are being redistributed, and hence which programs Congress wants to strengthen, and which it wants to diminish.

As argued in the previous section, the category of analytical capabilities plays a pivotal role in the agency's dependence on (or favorability towards) the organized interests. The evidenciary and due process requirements of the judicial system force the agency to focus

attention on the organized interests. In order to develop and pursue policies which are not merely a compromise between the views of the organized participants, an agency needs resources for its own analysis. Otherwise it will fail to establish substantial evidence to support a ruling which is not favorable to a represented group.

Given the nature of the judicial system, the three approaches to the political process make different predictions about the use of this control variable. In principle, then, they can be distinguished by observing actual budgetary patterns. The cartel-by-design thesis conceptualizes policy making as responsive solely to organized interests. It predicts that Congress will allocate few resources for analysis and standards development relative to other categories such as administration and enforcement. During periods of agency expansion (i.e., when the agency's total appropriations are increasing) this category will expand at a slower rate than the others.

The life cycle hypothesis predicts an initial response to unorganized groups followed by a decay period in which the organized groups continually gain influence. In terms of the budgetary process, this means Congress should provide adequate funds for analysis followed by a constant decline in resources (as the agency begins to benefit organized groups).

The model presented in Part II makes the opposite prediction: if the political system responds to the interests of relatively unorganized groups, an agency's analytical capabilities will receive more favorable treatment by Congress. During periods of agency growth, this means that analysis will grow at a greater rate than most other

categories. Since the political cycles view allows all participating groups some influence over policy choice, the degree to which analysis fares more favorable than the other categories depends upon the relative degree of strength of the opposing groups. The weaker the organized opposition, the more likely this category will grow significantly faster than the others.

EMPIRICAL ANALYSIS OF AGENCY PERFORMANCE

The agencies chosen for the investigation are the Consumer Product Safety Commission (CPSC), the Occupational Safety and Health Administration (OSHA), the Food and Drug Administration (FDA), the Federal Trade Commission (FTC), and the Atomic Energy Commission/Nuclear Regulatory Commission (AEC/NRC). All are either new entrants to the regulatory arena (CPSC, OSHA, and AEC/NRC) or have recently undergone a period of controversy and revitalization (FDA and FTC).

This collection of agencies is a different type than those which have been of concern in the previous economic literature, on agency capture. While the literature focuses on the so called "economic" regulation (regulation of monopoly and competition) by the older regulatory agencies such as the ICC, CAB, FPC, etc., the newer regulatory agencies tend to be mandated with noneconomic regulatory tasks. CPSC, OSHA, and FDA regulate aspects of safety and health exclusively; the FTC and the AEC/NRC do so to some extent as well.

One major factor underlies the choice of newly-created or revitalized agencies (which introduces the distiction between the

agencies studies here and those of prime concern in the literature). The appropriation literature shows that budgeting is incremental. The critical period of Congressional influence occurs in the establishment of the base budget following the agency's creation or revitalization. Since budgetary reporting after the Second World War is vastly superior to the reporting in the previous era, investigation of Congressional influence as described above is actually possible. Prior to this time, the data are inadequate for this purpose.

Each agency and its budgetary history are considered separately in the following chapters to investigate the intent of Congress with respect to the dependence of agencies on various unorganized and organized groups. Observations about the agency's behavior are made. First, the stylized facts concerning the agency's performance are presented. The issues discussed are the degree of independence of the agency from organized groups, the identity of the beneficiaries from the agency's policies, and what evidence exists to support these contentions. Where possible, corroborative evidence is used to support the stylized facts.

Second, the predictions of each capture hypothesis are discussed in the specific context of each agency's policy area. Each hypothesis predicts a unique pattern of agency resource allocation. Finally, the agency's appropriation history of each is observed to determine which model is most consistent with the data, and whether the pattern matches the stylized facts.[18]

FOOTNOTES TO CHAPTER 7

1. See Richard F. Fenno, Power of the Purse: Appropriations Politics in Congress (Boston: Little, Brown, 1966), especially chapter 1.

2. See Marver Bernstein, Regulating Business by Independent Commission (Princeton: Princeton University Press, 1955); Richard Cushman, The Independent Regulatory Commissions (New York: Oxford University Press, 1941); Roger G. Noll, Reforming Regulation (Washington, D.C.: Brookings Institution, 1971); and Nina W. Cornell, Roger G. Noll, and Barry R. Weingast, "Safety Regulation," in Setting National Priorities: The Next Ten Years, ed. Henry Owen and Charles L. Schultze (Washington, D.C.: Brookings Institution, 1976).

3. ICC vs Union Pacific Railroad Company (1912).

4. ICC vs Louisville and N.R.R. (1913). The following year this was further clarified as "findings of fact, if supported by substantial evidence, shall be conclusive," 15 U.S.C. 41.

5. "Substantial evidence . . . means that such relevant evidence as a reasonable mind might accept as adequate to support the conclusion," opinion of the Supreme Court, Consolidated Edison vs NLRB, 305 U.S. 197. See Kenneth C. Davis, Administrative Law Text, 3rd ed. (St. Paul: West Publishers, 1972).

6. See U.S. Congress, Administrative Procedure Act: Legislative History (Washington, D.C.: Government Printing Office, 1947).

7. See Alfred Kahn, The Economics of Regulation (New York: John Wiley and Sons, 1970), vol. 1, ch. 1.

8. For a general discussion of the use of statutory control mechanisms in agency oversight, see Noll, Reforming Regulation, ch. 4; Morris S. Ogul, Congress Oversees the Bureaucracy (Pittsburgh: University of Pittsburgh Press, 1976); and David Price, The Commerce Committees (New York: Grossman, 1975).

9. For the cases of CPSC and OSHA, see Cornell, Noll, and Weingast, "Safety Regulation"; for the case of EPA, see Glen Cass, "Air Pollution Control Agency Behavior: Implementing Legal Mandates in an Uncertain World" (Paper prepared for the CIT/IA Conference on Regulatory Policies, 1976).

10. See William L. Cary, Politics and the Regulatory Agencies (New York: McGraw-Hill, 1967):53, for several examples.

11. Ronald Coase, "The Federal Communications Commission," Journal of Law and Economics 2 (1959):24.

12. See Aaron Wildavsky, The Politics of the Budgetary Process, 2nd ed. (Boston: Little, Brown, 1974); Fenno, Power of the Purse; and Murray L. Weidenbaum, Congressional Budgeting (Washington, D.C.: American Enterprises Institute, 1964).

13. Wildavsky, Budgetary Process, 64-65.

14. Weidenbaum, Congressional Budgeting.

15. Wildavsky, Budgetary Process, chs. 2 and 3. For a general discussion of incremental budgeting and supporting empirical analysis, see Otto A. Davis, M. A. H. Dempster, and Aaron Wildavsky, "A Theory of the Budgetary Process," American Political Science Review 60 (1966):529-547; and Fenno, Power of the Purse, chs. 6 and 8.

16. See Fenno, Power of the Purse, chs. 6 and 7.

17. This is independent of the source of regulation: public interest regulation needs enforcement to benefit consumers just as cartels need enforcement to be effective. Consequently, along this dimension captured agencies are less distinguishable fron non-captured agencies.

18. Drawing conclusions from the budgetary data is hampered to some degree by the periodic recategorization of the budgetary figures of many agencies. This renders time series comparisons difficult in some cases. However, this has not proved insurmountable and the patterns tend to be clear enough.

CHAPTER 8

THE CONSUMER PRODUCT SAFETY COMMISSION

The Consumer Product Safety Act (CPSA) of 1973 mandates the Consumer Product Safety Commission (CPSC) to identify hazardous consumer products and to take action which it deems appropriate. In general this will lead to the promulgation of mandatory product standards. Two conflicting uses can be made of this process. Potential benefits to consumers arise from safer products due to the informational inefficiency inherent in the product safety problem.[1] In contrast, producers stand to gain if the mandatory standards impose anti-competitive design specifications. CPSC policy determines the balance of benefits between these two uses of the process. This chapter explores the Commission's operation indicating the distribution of benefits between these two groups.

CPSC operates in a political environment in which both sides of the market, producers and consumers, are active. Both groups influenced the final form of the CPSA and the details of the Commission's mandate.[2] The potential for equal or nearly equal participation by consumer groups along with producers poses an initial problem for the cartel-by-design view. Which should be considered the major interest group to derive the benefits from agency policy?

Since its inception in 1973, CPSC has been criticized for lack of progress in fulfilling its mandate.[3] In four years, it has promulgated only two standards under the CPSA, one for swimming pool

slides and the second for architectural glazing materials. The slow pace in standards production means the Commission yields few benefits for any group; it is still too early to determine the actual distribution of benefits by observing outcomes. Nevertheless, it is possible to observe CPSC response to various groups in initiation of action, even if few actions have completed the full cycle of standards production. Response to the various groups indicates the probable distribution of benefits.

This chapter argues that Congress designed CPSC to be responsive to both sets of organized groups in the environment. To the degree that both consumer and producer groups participate in agency policy making, both will benefit. However, if consumer participation declines, the nature of the Commission's structure (of the regulatory process) combined with Congressional influence through the budgetary process will force CPSC policy to benefit producers. The argument is based upon the structure of the Commission's standard development process and upon the nature of the safety problem.

The first section of this chapter summarizes the predictions made by the capture hypotheses. Each concerns the pattern of benefits resulting from agency policy making and Congressional budgetary behavior. The following section describes the Commission's regulatory process in detail. In particular, the discussion focuses on the cumbersome regulatory apparatus which Congress designed for the Commission in the CPSA. This limits CPSC's influence on its own policy making in several important respects. The interaction of the budgetary process with these effects is then studied. Finally, the evidence regarding CPSC's

response to consumer and producer groups is analyzed. The last section investigates Congressional appropriations behavior. The endeavor reveals budgetary influence consistent with the observations in the previous section. Since this argues the influence of both groups, the political cycles view of the regulatory process is supported.

PREDICTIONS OF EACH CAPTURE HYPOTHESIS

The cartel-by-design thesis conceptualizes the policy making process as responsive to the most organized group on a given issue. It predicts that despite the degree of organization exhibited by consumers, producers dominate agency policy making on this issue. In the arena of product safety, producers use the standards development process to encompass anti-competitive actions; the next section explores this possibility more thoroughly.

Within the context of the budgetary process, the cartel-by-design thesis predicts that the Commission will continually fare unfavorably in the category of analysis. As argued in the previous chapter, this forces the agency to rely on the organized groups. Since consumers are organized as well, their participation in the regulatory process will yield benefits unless Congress intervenes on behalf of their regulated constituents. If producers are to be the sole beneficiaries, Congress must intervene in agency proceedings against consumers, to the degree that the latter group chooses to participate.

The life cycle thesis has no trouble with the relative degree of organization by consumers. It predicts that the Commission will

primarily benefit consumers in its initial years of operation. However, this orientation changes over time as the Commission begins to favor the interests of producers.

The previous chapter argued that the agency needs resources for its own analysis in order to make decisions beneficial to consumers. The degree of organization exhibited by consumers only partially mitigates the need for resources; they are not sufficiently organized to fully support the standard development process themselves. In order to force the agency to accept opinions and interpretations of the industry groups, Congress should stop allocating resources for this category.

Finally, the political cycles model predicts that all groups in the political environment will receive benefits; agency policy changes only if the groups which participate change. In the current context of both consumer and producer participation, it predicts that both benefit. Neither group should be observed dominating the agency or receiving all the benefits from agency policy making.

In terms of the budgetary process, this hypothesis predicts that Congress will allocate few resources for the agency's independent capacity, forcing it to rely on the interpretations of both groups. Congress need not intervene.

SAFETY REGULATION BY THE CPSC

This section describes CPSC policy making in the first four years of its history (1973-1977). It argues that both consumer and producer groups have been active in agency policy making and that

neither group receives a dominant share of benefits. This pattern supports the predictions of the political cycles view. Neither the cartel-by-design nor the life cycle approach are compatible with these results since both predict the dominance of a single group.

The discussion first describes the major component of CPSC's regulatory development, the "offeror process." The exposition focuses on the susceptibility of this process to the influence of both consumer and producer groups, and on the way each can benefit from becoming an offeror to write standards.[6] The case history of bicycle safety standards illustrates how industry groups benefit from safety regulation and how active consumer groups can influence outcomes while inactive groups cannot.

Next, consumer and producer evaluation of CPSC performances are examined. Though both groups find fault with the Commission, neither condemns it for ignoring their interests by focusing solely on the other groups.

Finally, evidence of CPSC's response to various groups is revealed by CPSC's petition log. Section 10 of the CPSA allows outside individuals or groups to intitate CPSC action through a petitioning process. By studying which groups utilize this provision and by assessing their relative success rates, the Commission's response to producers and nonproducers can be gauged. The results show response to both types of groups.

The Offeror Process

Section 7 of the CPSA defines the offeror process which is the major component of CPSC's regulatory development. The Commission is potentially more dependent upon the organized interest than most agencies; it cannot write its own standards due to the nature of the offeror process.

The stages in the process are as follows. First, the Commission identifies which products should be considered for mandatory product standards and which hazards are to be addressed.[7] Next, it must solicit offerors to undertake the actual development of provisional standards. CPSC can write the standards only if no qualified offeror comes forth. If several parties submit bids the Commission may choose among them to accept the one it feels best qualified, according to the criteria it has adopted. It may also contribute to an offeror's costs:

> If an offer is accepted under this subsection, the Commission may agree to contribute to the offeror's cost in developing a proposed consumer product safety standard, in any case in which the Commission determines that such contribution is likely to result in a more satisfactory standard than would be developed without such contribution. [Section 7(d)(2)][8]

The Commission's influences on regulatory development are threefold. First, it chooses products to be considered for mandatory standards development; second, it selects the offeror (the decision to fund offerors obviously influences standard development at this stage); third, it may accept or reject the proposals. The effects on policy outcomes by the Commission's use of these three decision variables will now be discussed; however, partial consideration of the first variable will follow in a later subsection, "Petitioning CPSC."

Both consumer and industry groups have an interest in undertaking standards development. The latter group has several reasons for participation. First, writing the standards itself reduces uncertainty; it is unlikely that the industry would impose standards strong enough to put itself out of business. Second, CPSC regulations have a major advantage over voluntary standards written by trade associations; mandated standards are legally enforceable.[9] By incorporating anticompetitive design specifications along with safety standards, the industry can combine its cartel forming endeavor with the force of law. Consumers, on the other hand, benefit by undertaking standard development since they are more likely to focus on safety concerns than on incorporating anticompetitive provisions.

A fundamental asymmetry exists between the participation of producers and consumers as offerors. Producers are more likely to be willing and able to financially underwrite the development of standards than consumer groups because of their relative concentration and greater ability to privatize the benefits of their actions.[10] Therefore, the Commission's policy regarding contributions to offeror's cost influences regulatory outcomes by affecting consumer groups' ability to participate.

In the first four years, CPSC's policy on funds for offerors has not gone well for consumer groups. The Commission has interpreted section 7(d)(2) as intending only partial reimbursement. Since groups other than those connected with the industry are unlikely to participate without full cost reimbursement, this policy is a blow to consumer

participation. Peter Schuck, director of the Washington office of Consumers Union, criticized Commission policy after CU's financially disastrous experience in the development of the power lawn mower standards:

> The Commission has indicated that all other things being equal, it will look favorably upon consumer candidates to be offerors. But therein lies the problem. All other things are not equal. In particular -- here the degree of my understatement cannot be overstated -- consumer organizations are not equal to industry groups in terms of the financial resources necessary to develop a technically complicated safety standard as offeror. Indeed, I can say without fear of contradiction that so long as the funding for the offeror program remains at its present level, no consumer organization, with the possible exception of Consumers Union, can afford to be an offeror. . . I daresay . . . Consumers Union will have to think long and hard before it makes this sort of expenditure again.[11]

If continued, this policy biases the benefits from the promulgation of mandatory product safety standards in favor of producer groups. However, indications of a change in Commission policy have recently appeared. In public hearings before the House Appropriations Committee, the Commissioners openly criticized this policy, and have asked for an increase in funds to compensate offerors. According to Commissioner Pittle,

> That million dollars in the proposed budget, in my view, is necessary if we want to provide an opportunity for consumer groups to be involved in the offeror process. We have to look at $150,000 to $200,000 to underwrite their expenses. You can reduce that number to practically nothing if you decide you are not going to have any consumer groups participate. This would leave only industry groups. We want to have a wide spectrum of offerors.[12]

A "wide spectrum" of offerors, as Commissioner Pittle termed it, will allow both producer and consumer groups to be influential in standards promulgation.

The third, and final, source of influence over the outcomes of the offeror process is the Commission's discretion to accept or reject the proposals. Through its own in-house research and analysis, the Commission can attempt to distinguish between safety standards and anticompetitive design standards; it may also attempt to judge whether a particular standard solves the problem it meant to address. A lack of resources for analysis restricts the Commission's ability to make critical judgements and limits CPSC to considering whether the offeror addressed all problems noted by the Commission. This leaves the participant groups to police one another (as in the case of bicycles discussed later). The next section studies Congressional behavior on this variable.

Inadequate Analytic Capacity

The case history of bicycle standards illustrates many facets of the previous discussion. Although not developed under CPSA (the process was begun by the FDA's Bureau of Product Safety several years before CPSA's passage), the standard writing sequence was quite similar. The trade association of the American bicycle manufacturers developed the standards without compensation. The proposals involved an elaborate set of regulations, each with a rationale exhibiting the type of hazard it was meant to address. Buried among the safety standards were a complicated series of design specifications meant to limit the importation of foreign bicycles.[13] CPSC, which had taken over the promulgation process of these standards, proposed the

standards without knowledge of design specifications. The proposals never became law, however; because of heated outcries from the small but well-organized group of cyclists, CPSC recommitted the standards for further study.

This example shows how producer groups may attempt to use the development process to their own advantage. Unless a subset of consumers of the particular product are dedicated and well organized,[14] or unless the Commission has sufficient resources for its own analysis, industry is likely to be successful. Further, the example reveals that consumers do influence regulatory outcomes and that anti-competitive regulations are more likely the result of a lack of consumer participation than a facet of a political system which allows them no voice. In sum, the offeror process seems designed to allow influence by all participants; of course, if only producers participate, they are more likely to capture the gains from standards development.

Views of the Participants

The Senate Commerce Committee recently held oversight hearings on the CPSC.[15] Various consumer groups and producers were invited to present their views on agency performance in addition to the Commissioners. Opinions on the agency's performance since the passage of the CPSA are quite uniform within each group. The statements represent the groups' evaluation of Commission performance in terms of the benefits and costs derived from CPSC policy. While both consumer and producer groups want to improve the Commission's performance

(presumably to increase the benefits which they receive), neither is totally dissatisfied. Nor are there any claims that the agency has ignored their interests.

The discussion also reveals that CPSC has not courted either type of group as its main supportive constituency. In their testimony, each suggests how that might occur. Consumers request greater participation in standards development through the offeror process, while producers want CPSC to rely on a voluntary compliance program in which they play the major role.

Every consumer group that testified complains that the Commission proceeds too slowly.[16] Though each explains CPSC's lack of progress a little differently, all ask for more activity; this indicates that the Commission's impact is not totally contrary to their interests. CPSC's decision not to fully compensate offerors is their only substantive criticism of the agency. Since CPSC contributions largely determine the degree of their direct participation, the decision keeps these groups from becoming the major pool from which offerors are drawn.

Producers, on the other hand, uniformly draw attention to the Commission's failure to fully support and launch a voluntary standards development program.[17] Few comments are made about the offeror process except to support their major contention. They argue that since the Commission's limited resources necessarily place a ceiling on the number of products addressed through mandatory standards development, the only hope for safer consumer products is industrial participation through voluntary standards development.

Proper oversight of a voluntary standards program, though expensive and difficult to maintain, might yield safer products and minimize anticompetitive uses of the process. For example, by incorporating sanction mechanisms for inappropriate use of the process along with systematic scrutiny of voluntary standards, CPSC could consider a large number of products.

However, it need not work in this manner. Performances of past voluntary compliance programs have been poor. Judging from the experience of the FTC and the FDA with voluntary programs, it is not surprising that industry groups favor this line. Both of these agencies relied on voluntary programs in the 1950s and evaluations of their impact are pessimistic.[18] Since a voluntary approach often lacks enforcible sanctions, it provides little incentive to follow the rules.

Petitioning CPSC

Section 10 of the CPSA allows any individual or group to petition the Commission to initiate action and requires CPSC to act on it within 120 days. This allows a unique interaction with the political environment to set or adjust the agency's priorities. Although the Commission may choose which products to consider under section 7, section 10 allows others to initiate action. In fact, the first two standards to complete the development process (swimming pool slides and architectural glazing materials) resulted from petitions.

The CPSC petition log indicates the agency's response to consumers and producers.[19] Two summary indexes are relevant. First

which groups are using the petition opportunity? Second, what is the relative success rate of each group? This information is contained in Table 8-1, "Status of Petitions Under CPSA."

TABLE 8-1: STATUS OF PETITIONS UNDER CPSA
(as of July 1976)

	Denied	Granted	Pending	Other	Total
Consumer Groups	6	3	2	0	11
Industry	6	6	2	2	16
Individuals[a]	4	2	12	8	26
Governmental Agents	1	2	2	0	5
Other[b]	1	1	4	0	6
Total petitions	18	14	22	10	64

Source: "CPSC Petition Log" supplied by CPSC

a. Affiliation, if any, not indicated.
b. Mostly lawyers (with no affiliation indicated).

The petitioning process works to the slight advantage of producers. The data reveal that they petition CPSC more often than consumers, and with greater success. More importantly, however, Table 8-1 shows that the process doesn't work to the strict advantage of either group; both make use of petitions.

CPSC BUDGETARY PATTERNS

CPSC officially began operating in May of 1973. Its budget for the next fiscal year (less than two months away) had been

determined by officials in the FDA's Bureau of Product Safety, a predecessor to the Commission. The Commission had little influence in the establishment of its programs since this became CPSC's base budget. CPSC has continually tried to reallocate its resources among its programs to reflect its own priorities. Congress has denied the change each year.

Contrasting the Commission's budgetary requests with the actual appropriations reveals the directions in which the Commission attempts to alter its operations and those which Congress actually chooses. The pattern reveals that the Commission continually seeks greater independence and that Congress repeatedly grants it less.

Unlike nearly all other agencies in the Federal government, CPSC's budgetary request is not filtered through the President's Office of Management and Budget (OMB). Normally, OMB readjusts an agency's requests to bring them in line with the President's priorities before the federal budget goes to the Congress. The Commission submits its requests directly to Congress because of a unique provision in the CPSA.[20] Therefore, the figures reflect the Commission's own priorities rather than those of the President.

Table 8-2 summarizes CPSC's budgetary history (Table 8-3 contains the complete history). The budget breaks down the Commission's activities into five categories. The two of relevance are "hazard analysis and remedy," and "compliance and enforcement." The former represents the Commission's regulatory arm, encompassing the offeror process and standards development.[21] The latter category defines

TABLE 8-2

CPSC

AVERAGE ANNUAL INCREASE PER BUDGET CATEGORY

	Requests	Congressional Appropriation	% of Total Budget 1974	% of Total Budget 1976
1. Administration	37	53	12	23
2. Hazard Identification	11	5	17	15
3. Hazard Analysis and Remedy	44	1	26	22
4. Information and Education	23	4	12	11
5. Compliance and Enforcement	26	4	33	30
TOTAL	30	10		

Source: Table 8-3

TABLE 8-3

CPSC BUDGET (1000's of $) FISCAL YEARS 1974-1976

	1974	1975		1976		
	Congressional Appropriation	CPSC Request	Congressional Appropriation	Presidential Recommendation	CPSC Request	Congressional Appropriation
1. Administration	4,249	5,410	7,043	7,635	10,103	9,738
2. Hazard Identification	5,801	5,922	4,822	4,935	5,703	6,068
3. Hazard Analysis and Remedy	9,129	11,488	8,605	7,212	13,931	9,173
4. Information and Education	4,125	5,054	4,501	4,736	5,922	4,459
5. Compliance and Enforcement	11,472	14,944	11,983	12,077	14,727	12,382
TOTAL	34,776	42,819	36,954	36,595	50,386	41,820

Sources: CPSC Budget; 1974 Governmental Appropriation and 1975 CPSC Request. Agriculture-Environmental and Consumer Protection Appropriations for 1975. Hearings before the Subcommittee on Agriculture-Environmental and Consumer Protection of the House Appropriations Committee. 93rd Congress, 2nd Session (1974) PT. 6, p. 1431.

1975 Congressional Appropriations and 1976 Presidential (OMB) Recommendation and 1976 CPSC request. Department of Housing and Urban Development -- Independent Agencies Appropriations for 1976. Hearings before Subcommittee of HUD-Independent Agencies of the House Appropriations Committee. 94th Congress, 1st Session. (1975) Pt. 4, p. 408.

1976 Congressional Appropriations; U. S. Office of Management and the Budget, Budget of the U.S. Government, Fiscal 1977, Appendix (Washington, D.C., Government Printing Office, 1975), p. 715.

the Commission's efforts to enforce the regulations and provisions of the various acts under its jurisdiction.

Though the Commission requests substantial increases in resources for analysis, Congress has not granted them. The Commission requests, on average, 30 percent increases per year in total resoaurces, with the largest increases allocated to its own analytical capacity (44 percent/year). Congress approves a slower expansion rate of 10 percent/year and drastically limits the increases in analysis to 1 percent/year, the lowest increase of any category (and well below the rate of inflation during this period). In comparison, the Commission's requests for compliance activities fare better. Asking for increases of 26 percent/year, Congress approves 4 percent/year.

Through its requests, CPSC asks Congress to increase its independence from the organized groups by improving its ability to control (and speed up) the standards development process. Congress apparently feels otherwise. While the requests redistribute resources in favor of analysis, Congress does the reverse. Actual appropriations redistribute resources away from analysis by expanding this category more slowly than all others.[22]

CONCLUSION

Congressional efforts through the appropriations process increase the Commission's reliance on the organized groups. Since consumers are organized to some degree, lack of independence doesn't necessarily imply reliance on producer groups.

The evidence in the previous sections supports this

conclusion. Though CPSC has yet to produce many benefits for either producer or consumer groups through standards development, the evidence shows CPSC responds to both.

This pattern of Commission behavior supports the political cycles view of regulatory policy. Both the cartel-by-design and the life cycle approach predict benefits for only one group, while the political cycles view predicts response to all participating groups.

FOOTNOTES TO CHAPTER 8

1. See Chapter 3.

2. See David Price, The Commerce Committees (New York: Grossman, 1975).

3. See U.S. Congress, Implementation of the Consumer Product Safety Act: Hearings before the Subcommittee on Consumers of the Senate Committee on Commerce, Science, and Transportation, 95th Cong., 1st sess. (Washington, D.C.: Government Printing Office, 1977).

4. Technically, the term should be "consumer groups," instead of consumers; as an interest group, "consumer groups" represent only a particular subset of all consumers. This chapter does not attempt to identify how representative the consumer groups' views are of the entire set of consumers. The main point is to show that nonproducer groups influence policy outcomes. With this one caveat, present terminology will continue.

5. Particularly as modeled in Sam Peltzman, "Toward a More General Theory of Regulation," Center for the Study of American Business Working Paper no. 10 (St. Louis: Washington University, 1976).

6. For a background on the offeror process and an evaluation on the data collection system on which it is based, see Nina L. Cornell, Roger G. Noll, and Barry R. Weingast, "Safety Regulation," in Setting National Priorities: The Next Ten Years, ed. Henry Owen and Charles L. Schultze (Washington, D.C.: Brookings Institution, 1976). For an in-house critique of the process, see Evaluation of the Offeror Process by CPSC's Office of Program Planning and Evaluation (mimeographed, 1976).

7. Steven Kelman, "Regulation by the Numbers: A Report on the Consumer Product Safety Commision," Public Interest 36 (1974): 82-102; and Cornell, Noll, and Weingast, "Safety Regulations," evaluate the Commision's attempt at hazard identification and choice of products for regulatory development.

8. Public Law 92-573, section 7 (d) (2).

9. See Michael S. Hunt, "Trade Associations and Self-Regulation: Major Home Appliances," in Regulating the Product: Quality and Variety, ed. Richard E. Caves and Marc J. Roberts (Cambridge: Ballinger, 1975).

10. CPSC's choice of offeror to develop a standard for swimming pool slides shows that industry will underwrite the development costs.

Two proposals were seriously studied by CPSC: the industry trade association (which originally submitted the petition to launch the development process) for $451,500 and a consumer organization (the National Consumer League) in conjunction with the American Society for Testing and Materials for $166,450. The Commissioners unanimously preferred the NCL/ASTM proposal to the trade association's. However, NCL/ASTM insisted on CPSC contributions to cover all costs. Eventually, the Commission broke off negotiations and accepted the trade association's offeror. The contribution to the latter was only $14,175, substantially below the original estimate of $451,500.

11. U.S. Congress, Consumer Product Safety Commission Oversight: Hearings before the Subcommittee for Consumers of the Senate Committee on Commerce, 94th Cong., 1st sess. (Washington, D.C.: Government Printing Office, 1975):23.

12. U.S. Congress, Department of Housing and Urban Development -- Independent Agencies Appropriations for 1978: Hearings before the Subcommittee on HUD -- Independent Agencies of the House Committee on Appropriations, 95th Cong., 1st sess. (Washington, D.C.: Government Printing Office, 1977):119.

13. John Forester, "Toy Bike Syndrome," Bike World 2 (1973):24-27.

14. Their existence (as in the case of the bicycles) is the exception rather than the rule.

15. U.S. Congress, Implementation of the Consumer Product Safety Act.

16. Ibid., 1-43.

17. Ibid., 45-102.

18. See Chapter 10 on the FTC and Chapter 11 on the FDA.

19. Section 10 allows petitions under any of the Acts which the Commission administers. Only petitions under CPSA are analyzed.

20. Section 27 (k).

21. CPSC's data collection and overall analysis of product safety is under category 2, "hazard identification" (see note 7). The Commission's choice of products to regulate is under hazard analysis.

22. Richard Simpson, CPSC's first chairman, substantiated the claim that this pattern of appropriations restricted the Commission's independence:

> Such a reduction [in analytical capability] will especially impact upon the ability of the commission to address the

> development of mandatory product safety standards and will limit the overall evaluation of the offeror concept as embodied in the CPSA. Such a large and absolute reduction in funding, along with continued constraints on staffing, will have a devastating impact on the Commission. . . . Further, if such funding restrictions are maintained in the long term, the Commission has no choice but to consider substantial structural changes and adjustments to provide the adoption of a purely reactive approach to product safety rather than the planned and systematic standards development approach now envisioned.

U.S. Congress, Department of Housing and Urban Development, and Certain Independent Agencies Appropriations for Fiscal Year 1976: Hearings before a Subcommittee of the Senate Committee on Appropriations, 94th Cong., 1st sess., (Washington, D.C.: Government Printing Office, 1975): 821-822.

CHAPTER 9

THE OCCUPATIONAL AND SAFETY AND HEALTH ADMINISTRATION

The Occupational Safety and Health Administration (OSHA) is like CPSC in many respects including two in particular. First, labor, the group nominally designed to benefit from occupational regulation, is well organized, as are producers. Second, this agency lacks full control over its standards development process. Regulation for health hazards, probably the area with the greatest potential benefits from standards, must be developed in coordination with the National Institute of Occupational Safety and Health (NIOSH), a separate agency.

The cartel-by-design thesis fails to make unambiguous predictions about OSHA's behavior in this case as well. Should industry or organized labor be considered the main interest group to benefit from agency policy making?

The stylized facts characterizing OSHA's performance are consistent with the political cycles view of regulation but not with either the cartel-by-design or the life cycle views. The first section of the chapter applies these approaches to OSHA's policy making, presenting the expected performance indicated by each view. The next section briefly summarizes OSHA's history. It argues that the regulatory apparatus designed by Congress has stifled the production of standards (and hence benefits this type for any group). The agency's budgetary history supports this conclusion and is presented in the last section.

PREDICTIONS OF EACH CAPTURE HYPOTHESIS

OSHA may use its standards development powers for two purposes. The first, safer work environments, benefits employees by addressing the informational inefficiency inherent in the safety problem.[1] The second, anticompetitive design features, benefits producers. Each view of the policy process makes different predictions about OSHA's use of standards development to determine the mix of these benefits.

The cartel-by-design approach predicts that the most organized group in the agency's policy environment dominates agency policy making.[2] This yields ambiguous results when applied to OSHA since both labor and business are organized. Particularly troubling for this view is that labor's organization and coordination probably exceeds that of business (as does its voting power) at the aggregate level. This dilemma is resolved by invoking Jordan's formulation.[3] His version of the cartel-by-design thesis, the producer protection model, specifies producers as the prime recipients of agency benefits (independent of the degree of organization of the opposition). OSHA's regulation should concentrate on incorporating anticompetitive features rather than safety improvements into standards development.

The life cycle thesis predicts that the mass-based group, labor, will be the primary beneficiary from agency policy making during OSHA's first years. OSHA's policy should change over time, however, until it benefits producers. The initial benefits of regulation should accrue to labor by concentrating on safety considerations in standards writing. Regulation should begin to encompass anticompetitive features

while diminishing the focus on safety considerations until anti-competitive uses dominate.

Finally, the political cycles view predicts that both groups will benefit from OSHA's regulation. Neither should be observed to dominate agency policy making by receiving a disproportion of agency benefits. OSHA's standards should benefit both groups, perhaps by balancing safety considerations along with anticompetitive features.

OSHA REGULATION

The first evidence against the producer protection view is Congress's placement of OSHA within the federal bureaucracy. OSHA is lodged within the Department of Labor which is known for its support and lobbying efforts on behalf of organized labor. The basic argument of this chapter is that Congress created OSHA for labor's benefit but placed cumbersome restrictions on the agency's standards development process and enforcement activities to minimize the negative impact on producers.

Standards Development

Safety and health regulation by OSHA, as dictated in the Occupational Safety and Health Act (OSH Act), are two separate processes within the agency. Each requires a different path to produce standards.

Several thousand industry "consensus" standards were in effect prior to OSHA's creation. Such standards are developed by nationally recognized standards writing organizations. Only two organizations fit the definitions of the OSH Act, the American National Standards

Institute and the National Fire Protection Association. Section 3 of the OSH Act allowed OSHA to adopt any standards produced by these organizations as "interim" standards. In addition, it was allowed to adopt existing federal standards.[4] OSHA adopted 4,400 interim standards under section 3, of which 45 percent were existing consensus standards.[5]

OSHA may also develop new standards under the OSH Act. This involves an elaborate procedure which includes the study of the latest scientific evidence, the feasibility of standards and the inflationary impact. A set of formal hearings where all interested parties may participate must follow these studies.

OSHA's performance in producing new safety standards under this process has been slow. It developed only four new standards in its first four years. Several others are in various stages of completion, including a project to revise a large portion of the existing interim standards.

The slow pace of standards development implies that OSHA has produced few benefits for either constitutency by the promulgation of new safety regulations. One possible way to study the likely distribution of OSHA's benefits is to determine who benefits from the revision and updating of the existing interim standards since this major project is underway.

The slow pace may cause a serious problem in later years which will harm producers. Most production techniques evolve technologically over time. New design methods may bear only a slight resemblance to the original techniques. Nonetheless, the original standards remain in effect unless updated by OSHA. Revising current standards requires

the same cumbersome process even though a good deal of the process may be wasted repetition. Resource limitations restrict the number of standards (new or revised) which the agency can consider simultaneously. Since the pace of the development process has proved so slow, revision of existing standards is likely to lag considerably behind the rate of technological innovation. Industries with old standards may face a competitive disadvantage because of the impared ability to develop technologically. Until new techniques are approved, these industries may be harmed by foreign producers not subject to the restrictions and by technological advances in markets for substitute goods.

One businessman from Texas explained how the inflexibility affected his operation to his Congressman:

> One specific point is in regard to the pressure vessels which we manufacture in our plant for the oil and gas industry and refineries. In order to retain our certification to build pressure vessels in accordance with ASME Boiler & Pressure Vessel Code, we must construct them in accordance with the latest edition of the Code. However, the OSHA Regulations still refer to previous editions of the Code. Therefore, we could get caught in the middle in providing equipment for our customers.

The discrepancy in the two sets of regulations may prohibit firms from operating until the inconsistency is resolved.

The process required by the OSH Act for the development of health standards is even more cumbersome than that for developing safety standards. OSHA is not fully responsible for the development of its own standards. NIOSH, a separate agency located outside the Department of Labor, must initiate the process by producing a "criteria document." This surveys a particular hazard, investigating and summarizing relevant data and scientific evidence. OSHA must then

complete all the stages required for the development of a safety standard in addition to relying on NIOSH for the criteria document.

In principle, NIOSH functions as the basic research arm for OSHA by providing background material, evidence, and research on OSHA's high priority areas. In practice, coordination between the two agencies has proved next to impossible, with the two agencies persistently adhering to different criteria for choosing the hazards to investigate. The development of health standards by OSHA has continually been frustrated by this cumbersome regulatory process. Only the standard for coke ovens has completed all the stages in the process (as of early 1977). Few benefits accrue to any group at this rate of activity.

NIOSH also suffers from a lack of funds. Out of the 42,000 potential chemical hazards it has identified, it can only study a handful at a time. It completed only 13 documents for the entire fiscal years of 1972 and 1973. The rate of invention of new products with potential health hazards certainly exceeds NIOSH's ability to study them.

Compliance and Enforcement

Standards development is OSHA's first major policy device available for occupational regulation. Compliance and enforcement activities are its second. Firms follow the regulations only if given proper incentives. Individual firms balance the fines and risks of being caught in violation with the costs of compliance. Only if the

expected penalities exceed the sure costs of compliance will (risk-neutral) firms comply.

Preliminary calculations based on average fines imposed, the frequency of inspections, and estimates of the costs of compliance suggest that the expected penalties are much lower than the costs of compliance. Cornell, Noll, and Weingast concluded that:

> The small fines, the infrequent inspections, and the fairly steep compliance costs make compliance worthwhile only if an employer expects to be cited for several hundred "willful, repeated, or imminent danger" violations when the inspector finally arrives. Anything less and it is cheaper to avoid compliance and pay the fines when one is caught. Since the total number of fines in this category during the first twenty-one months of OSHA's inspection program was only 523, it is safe to conclude that OSHA does not provide much incentive to improve occupational safety.[6]

Robert Smith presents further evidence to support the contention that OSHA provides incentives to follow the regulations.[7] OSHA's own data reveal that its inspectors cite only the most obvious violations. Twenty-two standards accounted for 42 percent of all violations in fiscal year 1973.[8] The risks from avoiding all but the most obvious violations are much lower than the above calculations imply.

Unfortunately, all the evidence on OSHA's enforcement activity is from the early 1970s. While allocations for enforcement activities were larger than that for all other safety agencies, the meager amount of funds budgeted by Congress for training inspectors severely limited the quality of the inspectors. Only the most obvious violations could be observed under the circumstances.[9] Since Congress has rapidly increased resources for this category, the pattern sketched above may

be changing. Further investigation of OSHA's behavior would include similar calculations for fiscal year 1974 and later will reveal whether the pattern remains or whether OSHA's behavior has changed.

This brief review suggests that OSHA's impact on the behavior of firms has been slight. Without altering the activity of firms, OSHA cannot yield benefits for any group; regulations which impose safety improvements need enforcement as do regulations which support cartels. Congressional influence seems to have prevented OSHA from benefiting (or being captured by) labor or producers by hindering the development and enforcement of standards.

OSHA'S BUDGETARY HISTORY

OSHA's appropriations pattern supports the claims of the previous section. Table 9-1 summarizes OSHA's budetary history for fiscal years 1972 through 1976, (Table 9-2 presents the actual budget for this period).

The previous chapter compared CPSC's requests with Congressional allotments to indicate the agency's priorities for development relative to those of Congress. It is an unreliable indicator in OSHA's case. The requests which appear are the recommendations of the President's Office of Management and Budget (OMB). President Nixon, known for his dislike of organized labor, was quite hostile towards OSHA. OMB's treatment of OSHA's requests apparently reflect different priorities than those within the agency and the Department of Labor.

TABLE 9-1

OSHA

AVERAGE ANNUAL INCREASE PER BUDGET CATEGORY

	OSHA Request	Congressional Appropriation	% of Total Budget 1972	% of Total Budget 1975
1. Administration	-1	-1	11	4
2. Standards Development	5	28	6	5
3. Training, Information and Education	2	41	6	5
4. Safety and Health Statistics	12	15	9	5
5. Compliance and Enforcement	49	48	67	81
TOTAL		37		

Source: Table 9-2

TABLE 9-2

OSHA BUDGET (1000's of $) FISCAL YEARS 1972-1976

	1972		1973		1974		1975			1976
	Congressional Appropriation	OSHA Request	Congressional Appropriation	OSHA Request	Congressional Appropriation	OSHA Request	Congressional Appropriation	Congressional Appropriation*	OSHA Request	Congressional Appropriation*
Administration	4,024	3,546	3,719	3,530	3,530	3,967	3,948	4,265	3,877	3,973
Safety and Health Hazard Identification, Analysis and Remedy	2,220	2,800	2,983	2,955	4,355	4,939	4,802	5,640	5,153	6,747
Training, Information and Education	2,294	3,294	6,517	3,491	4,491	4,892	4,874	8,911	4,838	12,635
Safety and Health Statistics	3,345	4,600	4,814	4,841	5,141	5,531	5,526	5,581	5,607	5,977
Compliance and Enforcement										
a) Federal	16,793	23,285	26,241	24,939	29,891	37,171	42,177	41,040	48,050	52,653
b) State Programs	7,781	29,975	25,000	30,080	23,000	46,000	41,000	30,371	48,500	35,600
Unobligated Funds								6,198		
TOTALS	36,457	67,500	69,274	69,336	70,408	102,500	102,321	102,006	116,025	117,585

*Note: These figures represent a slightly different categorization than the others and hence are not strictly comparable. The new scheme lists training expenditures for state enforcement officers as "Training, Information and Education," whereas the old scheme included these as part of "State Programs" under "Compliance and Enforcement."

Sources: 1973 OSHA Request; Department of Labor and Health, Education and Welfare Appropriations for 1973. Hearings before the Subcommittee on Department of Labor and Health, Education and Welfare Appropriations of the House Appropriations Committee, 92nd Cong., 2nd sess. (1972), Pt. 6, p. 454.

1973 Congressional Appropriations; Department of Labor and Health, Education and Welfare Appropriations for 1975. Hearings before the Subcommittee on Department of Labor and Health, Education and Welfare Appropriations of the House Appropriations Committee, 93rd Cong., 2nd sess. (1974), Pt. 1, p. 438.

1974 OSHA Request; Department of Labor and Health, Education and Welfare Appropriations for 1975. Hearings before the Subcommittee on Department of Labor and Health, Education and Welfare Appropriations of the House Appropriations Committee, 93rd Cong., 1st sess. (1973), Pt. 6, p. 894.

1974 Congressional Appropriations and 1975 OSHA request; Department of Labor and Health, Education and Welfare Appropriations for 1975. Hearings before the Subcommittee on Department of Labor and Health, Education and Welfare Appropriations of the House Appropriations Committee, 93rd Cong., 2nd sess. (1974), Pt. 1, p. 507.

1975 Congressional Appropriations and 1976 OSHA request. Department of Labor and Health, Education and Welfare Appropriations for 1976. Hearings before the Subcommittee on Department of Labor and Health, Education and Welfare Appropriations of the House Appropriations Committee, 94th Cong., 1st sess. (1974), Pt. 5, p. 653,

Second 1975 Congressional Appropriation and 1976 Congressional Appropriation; U.S. Office of Management and the Budget, Budget of the U.S. Government, Fiscal 1977. Appendix. (Washington, D.C.: Government Printing Office, 1975), p. 523.

Comparison of increments for standards development (OSHA's analytical capacity) with those for compliance and enforcement activities shows that Congress favors the latter. Congress appropriates, on average, 28 percent/year increases for analysis and 48 percent/year increases for compliance. The latter is the fastest growing category in OSHA's budget. At this rate, analysis remains a small portion of the agency's budget, decreasing from 6 percent to 5 percent of the total resources from 1972 to 1975. In contrast, compliance activities jump from 67 percent to 81 percent of the total.

Training activities also fare better than standards development. Congress appropriates increases of 41 percent/year in the former program. The increments may counter the effects of early inspections which overlooked all but the most common violations. Greater resources may improve the quality of inspectors, allowing many other standards to be enforced.

OSHA's large, growing enforcement base, coupled with its small analytical capacity reflects a curious balance of labor and producer interests. Only the political cycles view accounts for this pattern. The life cycle predicts labor will be the beneficiary of regulation (in OSHA's first years) and the cartel-by-design predicts the opposite.

FOOTNOTES TO CHAPTER 9

1. See Chapter 3 for a discussion of the safety problem.

2. Particularly as formalized by Peltzman. See Sam Peltzman, "Toward a More General Theory of Regulation," Center for the Study of American Business Working Paper no. 10 (St. Louis: Washington University, 1976).

3. See W. A. Jordan, "Producer Protection, Prior Market Structure, and the Effects of Government Regulation," Journal of Law and Economics 15 (1972):151-176.

4. For example, the regulations applicable to federal contractors and suppliers under the Walsh-Healey Act.

5. Bureau of National Affairs, Occupational Safety and Health Reporter: Current Report (May 6, 1971):6.

6. Nina W. Cornell, Roger G. Noll, and Barry R. Weingast, "Safety Regulation," in Setting National Priorities: The Next Ten Years, ed. Henry Owen and Charles L. Schultze (Washington, D.C.: Brookings Institution, 1976).

7. Robert Stewart Smith, The Occupational Safety and Health Act (Washington, D.C.: American Enterprises Institute, 1975), ch. 4.

8. Ibid., 63. The twenty-two standards constitute one-half of one percent of OSHA's 4400 regulations.

9. The funds for fiscal year 1973 provided only three months' training. These inspectors were then required to enforce 4400 regulations in hundreds of thousands of contexts. Not surprisingly only the most common violations were observed.

CHAPTER 10

THE FEDERAL TRADE COMMISSION

Throughout the 1950s and 1960s, the Federal Trade Commission (FTC) was known for its strict enforcement of the various fur and textile labeling provisions; its role in antitrust was limited to such earth shattering cases as the monopoly in bull semen or a decline in competition among gift shops in the Virgin Islands.[1] The Commission's greatest impact on the economy resulted from actions under the Robinson-Patman Act designed to protect small businesses from competitive pressures in evolving markets. Consumers suffered from its enforcement, since this practice limited, rather than promoted, competition.

The benefit bestowed upon consumers by the scope of the Commission's activities during this period was marginal at best. Antitrust enforcement was generally limited to the Robinson-Patman Act as action under other acts diminished. Action under the FTC's deceptive practices responsibilities focused on a voluntary assurance program for major problems and a compulsory enforcement program for trivial concerns. Furthermore, the effect of the fur and textile activities on both consumers and producers was rather innocuous, though a large amount of attention was devoted to these areas.

This pattern of activity changed dramatically in the late 1960s and early 1970s following two highly critical studies of the

Commission's operation. The first,[2] a well-done journalistic exposé by a group of Nader's Raiders, focused public and executive attention on the issue. The second study,[3] undertaken by the American Bar Association at the request of President Nixon, reached conclusions similar to those of the first. Virtually every aspect of the Commission's activities was found wanting. In response to these reports and to public opinion, Nixon initiated reforms and appointed a series of new, activist chairmen. Under their leadership, the FTC was reorganized and has since played a greater role in antitrust and consumer protection, deemphasizing its small business protection role, its voluntary compliance program, and its fur and textile labeling enforcement activities.

This chapter argues that the change in policies pursued by the FTC during this period supports the political cycles view of the political process and rejects both the cartel-by-design and the life cycle views as too narrow. The next section summarizes the scope of the FTC's activities and the various statutes it administers. This highlights a basic contradiction between two sets of responsibilities entrusted to the Commission by Congress: that of protecting certain competitors (i.e., existing firms in an industry), and that of promoting competition. A major policy choice of the Commission is which set of actions to emphasize, and hence, which subgroups of the political economy to benefit by its actions.

The following section discusses the predictions of the three competing views of agency policy making within this regulatory arena. The final section contains the empirical data. Reflecting the

change in agency behavior following its reorganization, the data are surprisingly consistent with the stylized facts contained in the previous sections.

THE SCOPE OF THE FTC'S AUTHORITY

The Federal Trade Commission Act (FTCA) of 1914 created the FTC. The general authority of the Commission stems from this act which provides for the oversight of trade practices and outlaws "unfair methods of competition." The latter phrase has been interpreted by the courts to mean acts as defined by the Sherman and Clayton provisions, such as price fixing, price discrimination, mergers of various kinds, etc.

Since its creation, the Commission's authority has been altered in several important ways. First, each act administered by the Commission faces continual court tests which often result in reinterpretations of the law. Over the years these have specified that the general language of the various provisions covers certain distinct actions. This source of external influence on the FTC will not be studied here.[4] Second, Congress has amended many of the provisions of the FTCA and the Clayton Act and has also added additional responsibilities. The changes have provided a wide range of potential activities for the Commission with a range of impacts on competition and consumer welfare.

The rest of the section summarizes those sections of the Acts which play a large role in Commission activity. Since activities under different sections have effects ranging from anitcompetitive to

innocuous to pro-competitive, the mix of case loads chosen by the Commission determines which groups, producers or consumers, benefit from the regulatory policy making. The mix of cases constitutes a major policy variable available to the Commission; another is the extent of enforcement of agency decisions and actions.

The FTC's activities fall into the three categories of antitrust, deceptive practices, and fur and textile labeling. In the field of antitrust, Congress has assigned the Commission conflicting goals. The first is the promotion of competition by outlawing specific trade practices such as price fixing. The second is the protection of existing firms, particularly small businesses.

The FTC and the Justice Department have joint responsibility for the administration of the Sherman and Clayton Acts. In practice, however, the FTC has assumed prime responsibility for the Clayton Act. The parts of the Clayton Act relevant to FTC behavior are sections 2, 3, and 7. Section 2 outlaws price discrimination, or the selling of identical products or services at different prices to different customers. This provision was little used until 1936, when this section was amended by Congress. The Robinson-Patman Act extended this law to prohibit different firms, under certain circumstances, from selling identical products at different prices. Written during the depression, this provision was designed to protect small firms from the competition of large firms. Scholars uniformly agree that its effects have been to protect competitors rather than promote competition.[5]

Section 3 of the Clayton Act outlaws certain trade practices

which allow some firms to take advantage of their market position. Specifically, the practices cited are tying contracts, requirements contracts, and exclusive dealings contracts. Finally, Section 7 (as amended by the Cellar-Kefauver Act of 1950) deals with merger activities. It outlaws mergers which create monopolies or which significantly increase the market power of particular competitors. It also deals with vertical integrations and conglomerate mergers.

Vigorous enforcement of the various provisions has a variety of effects on consumers and producers. Most benefit consumers by restricting anticompetitive practices. Specifically, actions under section 5 of the FTCA (such as price fixing agreements) and sections 2 (prior its amendments by the Robinson-Patman Act), 3, and 7 of the Clayton Act serve this purpose. However, merger policy includes an anticompetitive facet under certain circumstances. Because of judicial interpretation of the Cellar-Kefauver Act, intervention to prevent mergers may be used to protect existing competitors, especially small firms, rather than to promote competition.[6] Actual use of this clause is a policy variable to the Commission.

The mix of cases investigated and litigated under these provisions reflects the bias of the Commission toward promoting competition or protecting competitors. Ideally the change in caseload should be observed over time to determine whether the FTC's policies changed in the late 1960s from the protection of existing firms towards more vigorous antitrust enforcement. Unfortunately, the standard sources of data on the FTC[7] only list cases (initiated,

pending, and settled) by the section of the act which they fall under until the reorganization in 1970. Since the data are aggregated, only the total number of antitrust cases can be observed. A future investigation to disaggregate caseload data would allow time series comparisons of the ideal sort. Reluctantly, stylized facts and isolated examples will be used to draw tentative conslusions.

During the 1960s, the FTC's record in antitrust favored the protection of competitors with only erratic attempts at procompetitive measures. According to the American Bar Association,

> In recent years, FTC enforcement [of the antitrust statutes], with few exceptions, has been limited to enforcement of the Robinson-Patman Act, some investigations and formal proceedings under Section 5 of the FTCA concerning antitrust problems in connection with vertical distribution arrangements, and economic studies, reports, promulgation of guidelines, and formal proceedings challenging mergers under Section 7 of the Clayton Act and Section 5 of the FTCA.[8]

Further,

> In the last year or two the FTC has virtually abandoned efforts to use Section 3 of the Clayton Act or Section 5 of the FTCA to proceed against alleged antitrust violations involving distribution arrangements. The stated reason is that the agency has received few complaints charging such violations.[9]

Finally, the Commission's merger activity had declined. While its Bureau of Economics documented an unparalleled rise in mergers, total resources allocated to the merger division fell. Considering the rate of inflation in the late 1960s, this reflects a sharp drop in real resources.

Since the reorganization of 1969-1971, the FTC has been known as a much more active agency in the field of antitrust. At one point, Commission Chairman, Miles Kirkpatrick, who headed the American

Bar Association study group, was fired by President Nixon for leading a vigorous agency. The FTC now emphasizes its other responsibilities while Robinson-Patman cases have declined. Examples of recent antitrust litigation are Exxon, et al, in which the FTC has charged eight of the primary refiners of petroleum products with monopolization and conspiracy to monopolize, and Kellogg, et al case, challenging practices which allegedly supported a shared monopoly among the four largest firms in the breakfast cereal industry.[10]

The policies pursued by the agency in the field of antitrust have changed from emphasizing the protection of competitors to the promotion of competition following the Commission's revitalization, to the degree that these stylized facts accurately characterize the FTC's behavior.

FTC activity in the area of deceptive practice was characterized in the 1960s by reliance on voluntary compliance in major cases and strict enforcement of trivial matters. The two major classes occurring under this heading are deceptive labeling and false and deceptive advertising. In the former area, the American Bar Association's evaluation of the FTC's action is as follows.

> For lack of adequate planning, the FTC has tended to select relatively trivial practices for staunch enforcement measures. While simultaneously asserting the lack of manpower and funds to initiate programs to combat ghetto frauds, monitor advertising, and secure effective compliance with orders, the FTC has issued complaints attacking the failure to disclose on labels that "Navy shoes" were not made by the Navy, that flies were imported, that Indian trinkets were not manufactured by American Indians, and the "Havana" cigars were not made entirely of Cuban tobacco.[11]

The Commission's record of protecting the consumer was not much better

with respect to false and deceptive advertising. While specific examples of beneficial activities occur,

> lack of planning has led the agency to commit insufficient resources to the area, and deploy them badly.[12]

The Commission, however, has been more active in the area of deceptive advertising following its reorganization. For example, in response to a petition filed by Ralph Nader and other consumer advocates, the FTC announced a new policy of requiring all major industries to provide substantial evidence in support of their advertising claims.[13]

Under this category, the Commission is also investigating the anticompetitive effects of self-regulation by the professions. Following an influential report on the relationship between price and restrictions on advertising in the market for eyeglasses,[14] the Commission has initiated action to bar professional associations from making binding arrangements of this sort. The FTC has taken similar action against local bar associations and has won a favorable precedent in the state of Virginia.

The FTC activities have recently expanded into new areas[15] such as warranty protection and drug advertising. In addition, the Commission has downplayed its reliance on assurances of voluntary compliance. Table 10-1 contains the number of assurances of voluntary compliance issued in 1965-1969 and 1972-1974. The number has declined from an average above 500 in the late 1960s to 1 in 1974. In discussing this pattern, the Commission comments:

> The Commission obviously puts little stock at this point in the

assurances of voluntary compliance.[16]

TABLE 10-1: ISSUANCE OF ASSURANCE OF VOLUNTARY COMPLIANCE

1965	1966	1967	1968	1969	1972	1973	1974
776	422	559	507	511	49	16	1

Source: 1965-1969 - ABA (1969)

1972-1974[17]

The final area of FTC authority, fur and textile labeling, was a growing part of the Commission's activities during the 1960s. The relevant statutes[18] were enacted during the depression and were designed to protect firms from competition.[19] Technically, these actions come under deceptive practices. Since they represent a large and growing portion of the FTC's budget, and because of their virtually irrelevant effect on consumers, they deserve special attention.

Accurately labeled textiles and furs undoubtedly benefit consumers, but the impact is marginal at best. Since a great percentage of FTC resources was allocated to these actions during the sixties, this necessarily limited the total impact of the FTC on the consumer. These activities have played an increasingly smaller role in Commission activity following the reorganization. In 1969, these activities accounted for 11 percent of total agency resources of about $24 million dollars.[20] By 1975, expenditures for fur and textile activities declined to $235 thousand dollars, less than 1 percent of total expenditures.[21] Declining funds reflect conscious FTC policy. In discussing the falling

number of inspections which have followed lower funds, the FTC claims:

> The Commission has become more selective and has greatly reduced its inspection efforts to a much lower priority. [22]

The FTC of the 1970s is a different agency than its predecessor of the 1960s. The stylized facts and evidence reveal a large change in the distribution of benefits. Considerable consumer benefits are consistent with the data, although they do not conclusively prove that consumers are now benefiting from agency action. The evidence does show that those groups who previously benefited from agency activity no longer do so.

PREDICTIONS OF EACH CAPTURE HYPOTHESIS

The potential policies available to the FTC range from the anticompetitive protection of existing firms to the promotion of competition. Each view of policy making predicts a unique pattern of Commission policy.

The cartel-by-design view predicts that agency policy making will benefit producers at the expense of consumers. Since no endogenous mechanics for policy evolution exists, agency policy making will continue along these lines protecting firms against the competitive forces of the market. Budgetary figures should reflect this steadfastness; no change should occur in agency resources, despite the rise of the consumer movement.

According to the life cycle hypothesis, agency policy making will initally benefit consumers. This policy decays over time into one which benefits producers. Thus, policy evolution should begin with

decisions which promote competition and end with decisions which benefit firms by protecting them from competition. No allowances are made for a change in agency activities once it has decayed into the final stage of policy making. This hypothesis also predicts no change in the Commission resource allocation once industry has captured the agency.

The political cycles view predicts agency policy will evolve as the relative degree of political support for and against an effective agency changes. In particular, in the period with a lack of public concern, the agency should benefit producers. These policies should evolve from producer protection toward promotion of competition as the agency becomes the focus of public attention. In response to a growing consumer movement, Congress may dramatically redistribute agency resources causing the distribution of agency benefits among the various groups to alter.

INFERENCES FROM THE BUDGETARY DATA

The appropriations pattern of the FTC from the mid-1960s through the mid-1970s is consistent with the stylized facts presented in the previous section. In the late 1960s, antitrust declines as a total percentage of resources while deceptive practices (a major portion devoted to fur and textile labeling enforcement) grows continuously. After reorganization, the pattern reverses dramatically. Antitrust activity grows phenomenally; resources for consumer protection also increase. This pattern is consistent with considerable consumer influence and benefits as the FTC redirects its activities

from protecting competitors to promoting competition.[23]

The budgetary figures for this period are summarized in Table 10-2 (Table 10-3 contains the annual agency requests and Congressional appropriations for fiscal years 1964 through 1976). The budget breaks down the Commission's operation into several categories, which roughly correspond to the descriptions in the previous section.

"Maintaining competition" represents the agency's antitrust activities. Prior to 1971 "deceptive practices"/"consumer protection" describes the FTC's deceptive labeling and advertising activities and fur and textile enforcement; after 1971, this category includes a new set of responsibilities with little reliance on old activities. The final two categories are included for comparison. "Executive direction" totals consist of funds for the Commissioners and their staffs; "administration" totals represent the funds for the coordination and management of the agency's operation.

The categories of interest are "maintaining competition" and "deceptive practices"/"consumer protection." The patterns emerge by comparing the figures from 1966 to 1970 with similar figures from 1972 to 1976.[24] During the first period, antitrust activities fall from 48 percent of total commission resources to 32 percent. While actual dollars for this category rise (2 percent per year), real resources diminish because of the rate of inflation. Declining real resources for analysis under antitrust means that, even if the FTC wanted to make a policy swing to promotion of competition, its effect would be slight. Fewer resources necessarily mean fewer actions. In contrast, "deceptive

TABLE 10-2

FTC

AVERAGE ANNUAL INCREASE PER BUDGET CATEGORY

	1966-70		1972-76		% of Total Budget			
	FTC Request	Congressional Appropriation	FTC Request	Congressional Appropriation	1965	1970	1972	1976
1. Maintaining Competition	2	2	16	27	48	32	23	37
2. Deceptive Practices/ Consumer Protection	7	13	6	15	38	52	49	40
3. Executive Direction	4	11	12	12	2	2	7	6
4. Administration	1	8	14	8	5	4	12	8
5. Other					7	10	9	9
TOTAL	6	10	11	19				

Source: Table 10-3

TABLE 10-3

FTC BUDGET (1000's of $) FISCAL YEARS 1964-1976

	1964	1965	1966		1967		1968		1969		1970	
	Actual	Congressional Appropriation	FTC Request	Congressional Appropriation	FTC Request	Congressional Appropriation	FTC Request	Congressional Appropriation	FTC Request	Congressional Appropriation	FTC Request	Congressional Appropriation
1. Antimonopoly												
(a) Investigation and Litigation	5542	6512	6694	6454	6517	6258	6468	6237	6563	6317	6317	6985
(b) Economic and Financial Reporting	723	672	722	919	927	992	1052	1013	1094	1133	1133	1316
(c) Trade Practices, etc.	149	190	192	184	186	282	297	308	326	345	345	419
(d) Other	542	75										
2. Deceptive Practices												
(a) Investigation and Litigation	3025	3489	3554	3506	3541	3813	4232	4414	4654	5049	5564	6121
(b) Trade Practices	300	377	434	427	433	564	593	617	652	691	691	840
(c) Textile & Fur Enforcement	1080	1202	1217	1247	1262	1283	1375	1484	1596	1708	2408	2394
3. Executive Direction	264	276	296	315	323	338	344	336	343	382	407	466
4. Administration	651	666	666	808	820	848	864	873	899	875	875	983
5. Truth in Lending										300	2200	2394
TOTAL	12,276	13,459	13,776	13,860	14,009	14,378	15,225	15,281	16,127	16,800	19,940	21,219

	1970	1971	1972			1972	1973	1974			1975		1976	
	Actual	Congressional Appropriation	FTC Request	Congressional Appropriation		Actual	Congressional Appropriation	FTC Request	Congressional Appropriation	FTC Request	Congressional Appropriation	FTC Request	Congressional Appropriation
1. Maintaining Competition	8389	8658	9430	8466	1. Maintaining Comp.	5609	7006	7335	8332	9900	12382	15511	17672
2. Consumer Protection	10294	10995	12151	13307	2. Consumer Prot.	12131	14365	13838	14394	16436	17702	19878	19061
3. Exec. Dir. & Policy Planning	576	685	693	1007	3. Exec. Director	1715	1975	2040	2173	2601	2189	2449	2611
4. Admin.& Management	1447	1592	1652	1692	4. Admin.	2834	3159	3206	3446	4397	3232	3676	3673
					5. Economic Action	2266	3425	3671	3995	4770	3402	4135	4074
TOTAL	20,706	21,936	23,926	24,472	TOTAL	24,555	30,430	30,090	32,340	38,114	38,998	45,649	47,091

Source: The Budget of the United States Government, Fiscal years 1966 through 1976.

practices" fare favorably. On average, the FTC requests an increase of 7 percent per year (near the rate of inflation). Congress nearly doubles the increase by appropriating 13 percent per year increases. Agency funds for this purpose rise from 38 to 52 percent of total resources. Textile and fur enforcement is about one third of this category and doubles from 1965-1970 while resources for antitrust litigation and investigation, part of "maintaining competition" increase by just 7 percent (see Table 10-3).

In contrast, the figures for 1972 through 1976 describe an entirely different agency. Congress pushes the agency to greater antitrust activity by substantially adding to the Commission's requests in the category. The FTC asks Congress for 16 percent increases per year (which is much greater than the 2 percent per year increases requested prior to 1970). Congress responds by granting even larger increases by appropriating 27 percent per year expansion. Agency funds for antitrust nearly triple in four years as a consequence. Apparently the committee members are responding to the publicity of the issue brought about by the Nader and ABA reports and the subsequent FTC reorganization.

The pattern for consumer protection is similar. While the FTC requests appear nearly the same across the two periods, they are actually different. The figures are misleading because they do not account for the significant decline in fur and textile activities from 26 percent to less than 2 percent of his category. The FTC requests are down, on average, 1 percent per year (from 7 percent per year increases to 6 percent per year increases); Congressional

appropriations are up from 13 percent to 15 percent per year. The decline of consumer protection activities from 49 percent to 40 percent (1972 to 1976) of agency resources understates the increase in the FTC's activity in this area.

The comparison of the 1960s appropriations with the 1970s figures dramatizes the changes in the agency following its reorganization. The pattern is consistent with that of an agency that plays a more active role in promoting competition to benefit consumers. Of the three capture theses, only the political cycles view predicts this change at a time of increased public concern. The cartel-by-design and life cycle views both predict no change in agency benefits in response to a consumer movement late in agency history. The budgetary data and stylized facts are inconsistent with the predictions of the cartel-by-design and the life cycle hypotheses. The data and stylized facts are compatible with, though do not prove, the validity of the political cycles thesis.

CONCLUSION

The stylized facts of the FTC's performance describe an agency whose policies envolved from anticompetitive protection of existing firms to promotion of competition following increased public attention and political intervention. To the degree that this pattern accurately characterizes Commission behavior, it supports the political cycles view of policy making. Since neither the cartel-by-design nor the life cycle hypotheses allow for the possibility of

a swing from a policy beneficial to producers to one beneficial to consumers, both are ruled out. The striking change in the agency workload bolsters the evidence of the stylized facts. Only the political cycles view predicts the observed change in agency activity.

FOOTNOTES TO CHAPTER 10

1. David Price, The Commerce Committee (New York: Grossman, 1975): 89.

2. Edward F. Cox, Robert C. Fellmeth, and John E. Schulz, The "Nader Report" on the Federal Trade Commission (New York: Baron, 1969).

3. American Bar Association, Report of the ABA Commission to Study the Federal Trade Commission (New York: American Bar Association, 1969).

4. For a summary of this influence see F. M. Scherer, Industrial Market Structure and Economic Performance (Chicago: Rand McNally, 1970), chs. 20 and 21.

5. See, for example, Corwin D. Edwards, The Price Discrimination Law (Washington, D.C.: Brookings Institution, 1959).

6. See D. Turner, "Conglomerate Mergers and Section 7 of the Clayton Act," Harvard Law Review (1965):1355.

7. The FTC's Annual Report on the Annual Appropriation Hearings.

8. ABA, Federal Trade Commission, 67.

9. Ibid., 68.

10. For a summary of major FTC activities, including recent court decisions, see U.S. Congress, Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies Appropriations for 1976: Hearings before the House Committee on Appropriations, Subcommittee on the Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies, 94th Cong., 2nd sess. (Washington, D.C.: Government Printing Office, 1975):12-30.

11. Lee Benham, "The Effects of Advertising on the Price of Eyeglasses," Journal of Law and Economics 15 (1972):337. Also see Lee Benham and Alexandra Benham, "Regulating through the Professions: A Perspective on Information Control," Journal of Law and Economics 18 (1975).

12. ABA, Federal Trade Commission, 39.

13. Ibid, 40.

14. Mark Nadel, The Politics of Consumer Protection (Indianapolis: Bobbs-Merrill, 1971).

15. U.S. Congress, Appropriations for 1976, 31-74.

16. Ibid., 211.

17. Ibid., 211.

18. Wool Products Labeling Act, the Textile Fiber Products Identification Act, and the Fur Products Labeling Act.

19. ABA, Federal Trade Commission, 45.

20. See Table 10-2

21. U.S. Congress, Appropriations for 1976, 63.

22. Ibid., 211.

23. However, without the caseload data referred to in the previous section, the possibility that the stylized facts are wrong and that these resources are actually going towards more active protection of small firms cannot be ruled out.

24. Because of the recategorization in 1970 and again in 1972, longer cross time comparisons are not possible.

CHAPTER 11

THE FOOD AND DRUG ADMINISTRATION

The Food and Drug Administration's recent history superficially fits the political cycles pattern nearly perfectly. An in-depth look, however, reveals that it damages the case for this thesis more than any other example studied.

Public attention to the agency has come and gone again several times in the seventy years since the FDA's creation. Congress greatly strengthened the FDA's authority over the marketing of new drugs in 1962, following a surge in public concern over drug safety at the time of the thalidomide episode. The political cycles view predicts that Congressional response should benefit consumers (i.e., the groups now voicing opinions on the agency's operation).

The budgetary pattern is a perfect translation of this prediction (according to the arguments in Chapter 7), into Congressional appropriations behavior. FDA analytical capacity shrinks prior to the amendments; after the amendments, it increases significantly for several years.

Studies of the impact pattern of the 1976 drug amendments uniformly draw the opposite conclusion. The amendments have decreased the availability of new drugs, which may imply a decline in consumer welfare. This revelation also troubles the case for the cartel-by-design view since the impact has not been shown to have improved the

position of drug companies.

The next section reviews the predictions of each view of the policy making process. The following section views FDA history, and the budgetary patterns are summarized in the final section.

PREDICTIONS OF THE VARIOUS VIEWS ON AGENCY CAPTURE

The cartel-by-design view predicts that an agency is created for the benefit of an industry. No endogenous mechanism exists to alter agency behavior over time. No change should be observed in agency behavior in response to an upsurge in public concern over a particular regulatory arena. The FDA's policy should be the same before and after the amendments, benefiting producers in both cases.

The life cycle thesis has no endogenous mechanism for the change in agency policy making once the agency has decayed into the final stage. The agency remains captured by the industry once this occurs. This hypothesis also predicts that FDA behavior in the 1950s should carry over through the 1960s. No change should be observed in agency policy making.

The predictions of the political cycles model are equally straightforward. This view predicts that Congress should alter the agency's behavior from benefiting the industry to benefiting consumers, in response to an upsurge in public controversy over FDA activity. Agency behavior should be observed to alter following the amendments in 1962.

THE FDA'S HISTORY

Regulation by the FDA has been characterized by several swings in public controversy and Congressional intervention. Congress created the FDA in 1906 at the time of political participation by the Progressive movement. Upton Sinclair's The Jungle, and the activities of other muckrakers, intensified the demand for regulation by exposing the filth of the nation's meat packing industry and providing examples of similar behavior in the drug market.[1] The agency fell into a period of dormancy as the Progressive era passed, following World War I.

Interest in the agency perked up again during the Great Depression, as the horrors of the unregulated market in drugs and patent medicines were well publicized.[2] In response to growing public concern, Congress passed the Federal Food, Drug, and Cosmetic Act (1938), amending the FDA's authority to intervene in the market. This act revised the original 1906 law by dropping the requirement that the agency had to prove fraudulent intent in mislabeling cases (e.g., false therapeutic claims).

The increase in public concern and the ensuing legislation brought the agency through the full cycle of policy making. The FDA experienced public concern in 1906, neglect in the 1920s, and public and Congressional attention once again in the 1930s.

The changes in agency policy making did not end here; FDA activities continued to cycle. The agency once again fell out of the public forum, following World War II, during the return to normalcy. During the 1950s, the FDA's administration of its mandate relied on a

program of voluntary compliance.[3] Like most voluntary programs, this one lacked the incentives to alter firm behavior and had little impact on the industry.[4]

Public concern over the agency's statutory authority to protect consumers reappeared following several years of Congressional hearings by Senator Kefauver and the well-publicized thalidomide episode. The thalidomide case involved the marketing of a new drug without enough evidence on its side effects. Though never introduced in the United States, the drug resulted in deformed babies in Europe. There seems little doubt that this event moved Congress into action.

In 1962, Congress passed the Kefauver amendments to the 1938 Act. This significantly broadened FDA's authority and increased the requirements for new drugs prior to marketing. The new requirement that drug producers had to prove efficacy in addition to safety was the most notable change.

The rest of the chapter focuses on the economic effects of this instance of Congressional intervention to distinguish between the various capture hypotheses.

Studies of the influence of the 1962 amendments on the rate of invention of new drugs abound in the recent literature. Nearly all demonstrate the negative impact on the production of new drugs. A component of consumer welfare invariably declines because of the decrease in the availability of therapeutic alternatives. Another component of consumer welfare rises since some unsafe drugs are kept off the market. After balancing these countervailing forces or ignoring the latter force, all conclude that a net decline in consumer

welfare occurred. These results make the FDA a major counterexample to all views on agency capture to the extent that they ignore uncertainty.

The main studies on the impact of the 1962 amendments are by Bailey,[5] Grabowski,[6] Peltzman,[7] Schwartzman,[8] and Wardell and Lasagna.[9] These investigations utilize a variety of methods, which include studying the differential in number of new drugs produced before and after the amendments, comparing the rate of new drug introduction in the United States with that in foreign countries, and estimating the change in the rate of return of research and development activities to discover new drugs. The investigations demonstrate the decline in production of new drugs, no matter which method is used.

The studies constitute compelling evidence when taken as a whole, even though most suffer from methodological problems.[10] Despite Congressional intervention following public concern, the FDA has not benefited consumers as predicted by the political cycles view. The next section reinforces the contradiction by showing that the agency's budgetary pattern precisely follows the predictions of the political cycles view.

FDA'S BUDGETARY HISTORY

The change in the FDA's budgetary pattern, after the 1962 amendments, reflects a revitalized agency. If the FDA of the 1950s can be characterized as a docile or benign agency, the appropriations increases subsequent to Congressional intervention suggest a much

different agency. Resources for the agency's analytical capabilities for drugs, recorded as "medical evaluation," increase quite significantly, allowing the agency to play a more active role in the development and marketing of new drugs.

The political cycles view, as mentioned above, predicts this change will benefit consumers, because the amendments come at a time of great public interest in the FDA activity. Evidence discussed in the last section shows that the predictions are not borne out. The cartel-by-design and the life cycle theses predict no change in agency performance.

Table 11-1 summarizes the agency's budgetary history. (The actual budgets are presented in Table 11-2). Unfortunately, the agency's drug activities can only be partially separated from its food responsibilies. The categories are defined as follows. "Field inspections and investigations" is the agency's compliance and enforcement program. Inspections and fines supply the incentive for firms to comply with the regulations. "Research and methodology" is the agency's program to improve its inspection process (mainly for the agency's responsibilities in foods). "Compliance, consultation and education" is the agency's activities to help smaller businesses comply with the regulations. "Medical evaluation" denotes the agency's program to oversee drug development and marketing. The agency's responsibilities in this area changed dramatically following the 1962 amendments. "Executive direction" consists of the agency's administrative and management functions.

TABLE 11-1

FDA

AVERAGE ANNUAL INCREASE PER BUDGET CATEGORY

	1958-1962		1963-1967		% of Total Budget		
	FDA Request	Congressional Appropriation	FDA Request	Congressional Appropriation	1958	1962	1968
1. Field Inspections, Investigations	19	21	17	17	66	62	41
2. Research and Methodology	22	27	24	26	17	18	17
3. Compliance, Consultation and Education	19	24	27	21	5	5	2
4. Medical Evaluation	19	20	68	69	5	5	19
5. Executive Direction	22	37	37	35	6	9	9
6. Other							12
TOTAL	19	24	22	26			

Source: Table 11-2

TABLE 11-2

FDA BUDGET (1000's of $) FISCAL YEARS 1958-1968

	1958	1959	1960		1961		1962		1963		1964	
	Actual	Congressional Appropriation	FDA Request	Congressional Appropriation	FDA Request	Congressional Appropriation	FDA Request	Congressional Appropriation	FDA Request	Congressional Appropriation	FDA Request	Congressional Appropriation
1. Field Inspection, Investigations & Lab Analysis	6,336	7,179	7,615	8,645	10,902	12,161	15,146	13,362	17,395	16,420	19,908	20,158
2. Research & Methodology	1,593	1,698	2,216	2,801	2,866	3,215	4,284	3,884	4,964	4,921	6,379	6,860
3. Compliance, Consultation & Education	516	525	633	680	789	923	1,108	1,179	1,732	1,722	2,043	1,974
4. Medical Evaluation	506	577	626	763	996	1,113	1,308	1,168	1,456	2,040	3,918	3,217
5. Executive Direction	619	617	711	1,003	1,293	1,436	1,740	2,044	2,733	2,837	3,672	3,539
6. Other	6								120			
TOTAL	9,597	10,597	11,800	13,800	16,852	18,848	23,580	21,637	28,400	27,940	35,920	35,748

	1965	1966		1967		1968	
	Actual	FDA Request	Congressional Appropriation	FDA Request	Congressional Appropriation	FDA Request	Congressional Appropriation
1. Medical Evaluation	4,567	8,040	7,879	10,418	13,190	12,353	12,353
2. Research and Methodology	5,485	6,878	6,857	7,953)			
3. Scientific Evaluation	2,450	3,323	3,320	3,897)	11,321	11,980	11,156
4. Educ. & Voluntary Compliance	1,315	1,571	1,837	2,688	1,537	1,481	1,329
5. Regulatory Compliance	22,888	24,572	24,545	26,101	27,254	26,673	27,134
6. Exec. Direction	3,726	6,150	6,391	7,44[illegible]	5,675	6,145	6,059
7. Drug Abuse Control			2,200	4,952	4,986	7,280	7,594
TOTAL	40,431	50,433	52,929	63,454	60,857	66,749	65,625

Source: The Budget of the United States Government, Fiscal years 1960-1968.

Comparison of the agency activities, as reflected through the appropriations, before and after the amendments, reveals the differences in FDA activity. Enforcement is by far the largest single program of the agency; this includes resources for both food and drug inspections, taking two-thirds of the agency's budget in 195. Medical evaluation, on the other hand, is a relatively minor responsibility of the agency at this time, making up about 5 percent of total agency activity. In the five years prior to the amendments, the agency and Congress want to expand these programs at nearly the same rate, maintaining the relative sizes of the categories. The agency requests increases of 19 percent per year for both enforcement and medical evaluation; Congressional appropriations are slightly higher, allowing increases of 21 percent per year and 20 percent per year, respectively.

A remarkable change occurs following the 1962 amendments. Requests and appropriations for drug research and analysis grow at a phenomenal rate in comparison with the previous period. The FDA now asks for increases of 68 percent per year; Congress grants the requests (appropriating increases of 69 percent per year). At this rate of expansion, medical evaluation grows from 5 percent of total FDA activity in 1962 to 19 percent of total activity in 1968. Enforcement activities expand just a little bit slower following the amendments. The agency requests and Congress appropriates increases of 17 percent per year. As a percentage of total activities, enforcement declines from 62 percent of the budget in 1962 to 42 percent of the budget in 1968.

The pattern reveals that Congress intentionally expanded the agency's role in drug evaluation following the public controversy over the agency's prior behavior. Yet, studies on the impact of the changes show that neither consumers nor firms benefited from the change. This observation rules out all three views of the policy making process. The life cycle and the cartel-by-design views predict no change at this time. While the political cycles view predicts a change, the actual effects are in the opposite direction from the predictions. This raises the question of which political actors, presumably maximizers, gain from this intervention. The two most likely beneficiaries, producers and consumers, have been ruled out. None of the views presented can answer the question safisfactorily.

All these formulation ignore problems of uncertainty. Introducing this factor may salvage one or more of the alternative views. If the relationship between the regulatory apparatus and market outcomes is itself subject to uncertainty, the Congress may be observed to (perhaps inadvertently) experiment with various alternatives, searching for the desired effect. The economic effects observed by the research reported earlier may be an unexpected consequence. Since 1968, Congress has repeatedly intervened in the FDA's regulatory process. Perhaps further research will reveal that these are attempts to alter the impact of the amendments. Congressional intent could then be gauged by studying the directions in which Congress attempts to move the agency.

All three views of the political process can be altered to

deal with this type of uncertainty. The modified predictions could then be compared with the evidence on Congressional intent (rather than on actual consequences) to distinguish between the alternative views.

FOOTNOTES TO CHAPTER 11

1. Mark Nadel, The Politics of Consumer Protection (Indianapolis: Bobs-Merrill, 1971):11. The review of the FDA's early history presented here is based on Nadel's chapter 1, "Consumer Protection in History."

2. Compare Ruth de Forest Lamb, American Chamber of Horrors: The Truth about Food and Drugs (New York: Arno Press, 1976).

3. Nadel's analysis of the FDA's budget reveals that the agency had little choice but to rely on a voluntary compliance program due to the resource limitations. See Nadel, Consumer Protection, ch. 3.

4. In fact, in 1958, FDA's chief administrator, G. Larrick, received an award from the American Pharmaceutical Association for "distinguished service to the public welfare" and "understanding of mutual problems." See Martin Mintz, By Prescription Only (Boston: Beacon Press, 1967):95-96.

5. Martin Neil Baily, "Research and Development Cost and Returns: The United States Pharmaceutical Industry," Journal of Political Economy 80 (1972):70-85.

6. Henry G. Grabowski, Drug Regulation and Innovation (Washington, D.C.: American Enterprises Institute, 1976).

7. Sam Peltzman, Regulation of Pharmaceutical Innovation (Washington, D.C.: American Enterprises Institute, 1974).

8. David Schwartzman, "Pharmaceutical R&D Expenditures and Rates of Return," in Drug Development and Marketing, ed. Robert B. Helms (Washington, D.C.: American Enterprises Institute, 1975).

9. William M. Wardell and Louis Lasagna, Regulation and Drug Development (Washington, D.C.: American Enterprises Institute, 1975).

10. For a dissenting view which deserves further investigation, see Douglas L. Cocks, "Product Innovation and the Dynamic Elements of Competition in the Ethical Pharmaceutical Industry," in Helms, Drug Development and Marketing.

CHAPTER 12

THE ATOMIC ENERGY COMMISSION AND THE NUCLEAR REGULATORY COMMISSION

The atomic power industry owes its existence to the creation of the Atomic Energy Commission (AEC) in 1946 and to Congressional subsidies that were doled out by the AEC until 1974. At this time, the agency was divided into the Nuclear Regulatory Commission (NRC), which took over the AEC's regulatory functions overseeing the nuclear power industry; and the Energy Research and Development Agency (ERDA), which subsumed the AEC's R&D responsibilities.

The nuclear power industry has fluctuated considerably over the years. Many of the technical problems were solved in its infancy when it relied on government subsidies. In the second stage, the direct subsidies ended as the costs of nuclear plants became competitive with the alternatives for baseload generation capacity. The third stage began in the late 1960s as the costs of nuclear plants escalated faster than costs for other types of plants. By 1976 they were no longer competitive with coal, and applications for new plants fell off precipitously.

This chapter argues that Congressional intervention on behalf of an interest group it created follows the pattern predicted by the political cycles view of agency policy making. The early history of the industry indicates highly favorable Congressional intervention on its behalf, as expected by the cartel-by-design view. The political cycles

view predicts the identical intervention. Since no other interest group existed, benefits should principally accrue to the industry. The final period of industry history allows discrimination between these two approaches. In the late 1960s the environmental groups became a political factor seeking to delay or halt the expansion of nuclear power.[1] As the second section will show, Congressional behavior at this time no longer fully supported producers, substantiating the political cycles view.

The first section reviews the predictions made by the various approaches to public policy making regarding Congressional intervention on behalf of the different constituent groups. The second section presents the history of the industry to review the causes of the vast increase in the costs of nuclear plants. The discussion focuses on the control variables available to Congress, and how they were used to stem or foster the price escalation. The final section reviews the budgetary history of the AEC and NRC to discern Congressional intervention via its budgetary powers.

PREDICTIONS OF THE CAPTURE THESES

In the late 1960s nuclear power was a commercial success. Yet by 1975, the cost of plants coming on line, and cost estimates for new orders had increased more rapidly than coal plants, rendering nuclear facilities economically unattractive.

How did Congress respond to the decline of an industry it had played a major hand in developing? The life cycle view is inappropriate here since the industry is stipulated to be the stepchild

of Congress and the AEC. The industry's creation, an outgrowth of military uses of nuclear processes, did not involve any market failures.

The cartel-by-design view predicts that Congress will intervene in an effort to save the industry. Congress should be observed to use its statutory powers on behalf of the industry to delimit the factors responsible for the decline.

The political cycles view predicts that Congress will allow both industry and environmental groups to influence outcomes. Although it may be observed to intervene on behalf of one side or the other, Congress should not favor only one side in the controversy. The third section presents the specific predictions of the cartel-by-design and the political cycles.

THE HISTORY OF THE NUCLEAR POWER INDUSTRY

The Atomic Energy Act of 1954 charged the AEC to develop an economically viable, safe nuclear power industry. This section briefly summarizes the rise and fall of the industry.[2] It focuses on the factors which, in the late 1960s, contributed to the decline of nuclear relative to coal power. The intervention of environmental groups and Congress are of particular interest.

The first two commercial size reactors were begun in late 1962 and early 1963; they were the last light water reactors to receive Congressional subsidies.[3] The capital cost of these plants (after AEC subsidization) was about $180/KW. Though this disadvantageously compared with new coal plants (capital costs in the $110-160/KW range), General Electric soon announced it would build a light water reactor at Oyster

Creek, New Jersey at $132/KW. Nuclear power was cheaper than coal at Oyster Creek due to the low capital costs and cheaper fuel costs.

Nuclear power now stood on its feet. Table 12-1,"Orders for Nuclear Plants," shows the response of the nation's utilities. Orders for new plants picked up a few years after Oyster Creek. In 1966, utilities ordered 20 new plants followed by 30 new plants in 1967. Known as the "turnkey era," this period saw the industry's transformation from heavy reliance on subsidies to vigorous competition with fossil fuels for base load power plants.

TABLE 12-1: ORDERS FOR NUCLEAR POWER PLANTS

	NSSS Orders
Year	No.
1955	5
1956	2
1957	2
1958	3
1959	1
1960	--
1961	1
1962	1
1963	4
1964	--
1965	7
1966	20
1967	30
1968	14
1969	7
1970	14
1971	15
1972	31
1973	36
1974	23
1975	4
1976	1

Source: Status of Central Station Nuclear Power Reactor, Significant Milestones, ERDA-30, July 1976.

Each new plant ordered must be licensed by the AEC prior to its construction and operation. The first evidence of regulatory lag set in following the great upswing in new orders. The lag defines the delays imposed by the formal licensing period between the time a plant is ordered and the time it receives commercial status. One contribution to regulatory lag is the bottleneck created by the huge increase in applications. The data in Table 2, "Average Time to Complete the Regulatory Process," show the dramatic escalation in the time required for an application to complete the entire process. (Other factors such as construction bottlenecks imposed delays as well.) An application submitted in 1966 took 86 months to complete the process. Two years later, this process had lengthened by 20 months; by 1970, an another 16 months were added.

Lengthening the regulatory process increases the capital costs of the plant by pushing the revenue received from operation further into the future and by adding to the total interest payments on the construction loans. In part because of unexpected delays, the actual costs of nuclear facilities greatly exceeded initial estimates. A plant ordered in 1965, at an estimated cost of $120/KW, cost $240/KW on completion. By 1968, the differential had increased to a factor of three; plants estimated at $155/KW were coming on line with actual costs above $460/KW. This trend continued through the early 1970s as the intial cost estimates rose rapidly from $200/KW in 1970 to above $700/KW in 1975.

TABLE 12-2: AVERAGE TIME TO COMPLETE THE REGULATORY PROCESS

Application Year	Average Time from Application to Commercial Status
1966	86 months
1968	106 months
1970	122 months

Source: Status of Central Stations Nuclear Power Reactors, Significant Milestones, ERDA-30, July 1976

By this time orders for nuclear facilities dropped off; many Previously announced orders were cancelled.[5] Table 12-1 shows that new orders dropped from a high of 36 in 1973 to just 4 in 1975 and to only 1 in 1976. As Montgomery and Quirk persuasively argue, rational utilities simply altered their new captial acquisitions from high cost nuclear facilities to lower cost coal plants. New nuclear plants coming on line in 1972 cost 70% more than new coal plants.[6]

Several factors account for the lapse in nuclear power's viability. The first is inflation. Nuclear plant construction projects require specialized labor of various kinds. Since these projects are often large relative to the local economy, the increase in demand for certain specialized services raises their prices faster than the general rate of inflation.

The second is the procedural delay imposed by the regulatory process; the third is cost increases which result from more stringent safety and environmental standards. Reviewing the details of the latter indicates the potential for Congressional intervention to stem the

increases at several points. As the discussion shows, Congress has chosen not to intervene.

The two major sources of procedural delay are the bottleneck problems (present from 1966 on) and intervention in the licensing process. During the last decade, two different groups sought to influence AEC decisions through intervention; municipalities sought to become part of nuclear power pools,[7] and later, environmental groups sought to halt the deployment of plants.

While intervention is associated with delay, Table 12-4, "Average Time Increases in the Regulatory Process," reveals it was not the major factor. The data represent the average time to complete the construction permit process (the first of four stages in the licensing proceedings). They indicate that throughout the period, contested applications took, on average, one and a half times longer than uncontested applications. However, over the four years, the time taken by both contested and uncontested applications increased by a factor of three. Despite claims that intervention is the major cause, delays imposed by the regulatory bottleneck problems seem to be a greater factor.

Congress did attempt some changes in the regulatory procedure, notably the "limited work authorization" (LWA), in response to the problem associated with regulatory lag.[8] LWA's allowed construction on all components of nuclear plants except the emergency core cooling system prior to the AEC's granting a construction permit.

Another potential route for Congress would be to expand significantly resources for the AEC's regulatory functions in an effort

to clear the bottleneck. The budgetary figures cannot be used to test actual Congressional behavior in the mid to late 1960s (see the next section) when producers were the sole interest group. It can be observed for a later period (1972) at the height of the controversy over nuclear power. A good test of the cartel-by-design thesis against the political cycles model compares Congressional response in the early period (only one interest group) with that in the later period. The political cycles approach predicts a change in Congressional behavior while the cartel-by-design view does not. The test cannot be performed, however, because of data limitations.

Observations from the 1970s reveal favorable Congressional intervention on behalf of producers. Table 12-3, "Backlogs in the Licensing Process," presents the total backlog in cases for each year in the first column, and total funds appropriated by Congress for license processing in the second column. The third column calculates dollars per case. (This number is meaningful for the AEC proceedings since license proceedings for nuclear plants are fairly uniform in complexity, duration, and importance. It is not informative for FTC proceedings since the FTC has a wide latitude of discretion over the significance of each case.) The fourth column presents the percentage increase in dollars per case. Changes in real resources per case is an indicator of Congressional intervention in the proceedings. Increases in real resources favor producers by facilitating the applications process; decreases favor environmentalists by hampering the process.

Congress appropriated increases of 16 percent/year (on average) during the period 1972 through 1976, about double the rate of general inflation at this time. The increase favors producers but not by a considerable amount; the bottleneck remained in spite of Congressional efforts. The telling comparison of the relative favorability of Congress during this period with that in the mid-sixties cannot be made.

TABLE 12-3

BACKLOGS IN THE LICENSING PROCESS
(Figures for end of the year)

Year	Total Backlog	Congressional Appropriations for Licensing (Millions of Dollars)	Dollars/ Case (Thousands of Dollars)	Percent increase over previous year
1971	89			
1972	88	12.4	141	
1973	109	18.0	165	17
1974	141	26.9	191	16
1975	140	28.5	204	7
1976 July	134	34.3	256	25

Sources: (a) Total Backlog.

Status of Central Station Nuclear Power Reactors, Significant Milestones, ERDA 30 July 1976

(b) Congressional Appropriations: Table 12-6

The second source of cost escalation resulted from the increasing stringency of regulations which plants must satisfy prior to

the AEC granting of commercial status. Throughout this period, safety and environmental considerations increased. According to WASH 1345 published by the AEC in 1974, direct construction costs more than doubled between 1971 and 1973.[9] It estimated that $90/KW of the increase (for a hypothetical plant of 1000/MWe capacity) resulted from environmental and safety related changes in plant design mandated during this period.

TABLE 12-4

AVERAGE TIME INCREASES IN THE REGULATORY PROCESS
CONSTRUCTION PERMIT APPLICATIONS 1966-1970

	Applications		Uncontested		Contested	
	No.	Avg. Time (Months)	No.	Avg. Time (Month)	No.	Avg. Time (Month)
1966	13	10.5	7	8.7	6	13.8
1967	21	13.2	10	13.7	11	13.0
1968	9	22.8	5	16.0	4	31.3
1969	9	26.5	1	41.0	8	25.0
1970	12	37.7	3	28.3	9	40.8

Source: Status of Central Station Nuclear Power Reactors, Significant Milestones, ERDA-30 July 1976

Congress could have negated the last factor in whole or in part. A significant portion of this increase resulted from the successful intervention of the environmental groups through the Courts.

In 1971, an Appellate Court ruled in Calvert Cliffs[10] that the National Environmental Policy Act (NEPA) applied to AEC proceedings, requiring an environmental impact statement for all new plants. Had it chosen to do so, Congress could have intervened to reverse this setback for nuclear power by granting exemption to all applications already in the process or even by exempting the AEC from NEPA's coverage. In the past, Congress has acted similarly in the other regulatory arenas. For example, in 1948, it passed the Reed-Bulwinkle Act which exempted industries regulated by the Interstate Commerce Commission from the antitrust laws. Also, Congress could have resumed subsidies to the industry. Congressional subsidies to airlines vary inversely with the health of the industry.[11]

In sum, the recent history of the nuclear power industry reveals several factors which contribute to the decline in its ability to compete with coal-fired plants. Two of these, regulatory delays from bottle-neck problems and the Court ruling in Calvert Cliffs, could have partially been negated by Congressional intervention. Instead, both were allowed to stand substantially unaltered.

THE AEC AND NRC BUDGETARY HISTORY

The evidence from the appropriations process substantiates the interpretations of the previous section. Congress let stand the outcomes reached by the various groups through the regulatory and judicial processes.[12]

Ideally, budgetary data could be used to gauge Congressional reaction to the regulatory backlog that began in the mid-1960s. The

funds for licensing proceedings might reveal substantial increases appropriated by Congress in an effort to counter this trend, were the data available. Unfortunately, the data is unavailable. Regulation does not appear as a budgetary category until 1970 and is not disaggregated before 1972.

The data are available from 1972 on. Recent Congressional intervention in response to climbing costs can be observed. Nuclear power plant costs can be observed. Nuclear power plant costs were escalating by a factor of three and a half (in part through licensing delays) during this period. The pattern reveals a slight, relatively insignificant attempt to stem the general trend.

Table 12-4 summarizes the AEC and NRC regulatory budgets (Table 12-5 presents the actual amounts for 1972 through 1976). The two categories of interest are "standards development," and "licensing." The former activities develop and implement design and safety regulations for nuclear plants. Activities under the latter category include the oversight of the applications process, ruling on construction permits, operating licenses, etc. These proceedings were shown to be a major source of increased costs through imposed delays. By adjusting funds for this category Congress can influence the speed of the licensing process; fewer funds mean greater delays and greater cost escalation.

Turning to the numbers in Table 12-4, all categories increase throughout this period. Comparing standards development with

TABLE 12-5

AEC [fiscal years 1973, 1974] AND NRC [fiscal year 1976]

AVERAGE ANNUAL INCREASE PER BUDGET CATEGORY

	Requests	Congressional Appropriation	% of Total Budget (AEC 1973)
1. Standards Development	57	41	11
2. Licensing	32	45	46
3. Administration	26	34	9
4. Other			34
TOTAL	41	53	

Source: Table 12-6

TABLE 12-6

AEC AND NRC BUDGETS (1000's of $) FISCAL YEARS 1972-1977

	1972	1973		1974		1975		1976		1977
	Actual	AEC Request	Congressional Appropriation	Request	Congressional Appropriation	AEC Request	Congressional Appropriation	AEC Request	Congressional Appropriation	Request
AEC REGULATORY PROGRAM										
1. Standards Development	2.7	5.1	4.6	5.8	5.1	7.7				
2. Licensing	12.4	16.7	18.0	25.6	26.9	32.6				
3. Operations	6.3	9.0	10.0	13.3	12.2	15.3				
4. Executive Direction	3.4	4.2	3.7	4.9	5.1	6.1				
5. (Adjudicatory) Boards			3.1	4.9	5.2	6.2				
TOTAL	24.4	35.0	39.3	54.5	54.5	67.8				
N.R.C.										
1. Power Plant Licensing							28.5	33.8	34.3	38.9
2. Standards Development							7.1	11.1	10.1	11.4
3. Inspections & Enforcement							16.3	20.8	21.4	26.3
4. Reactor Safety Research							57.9	79.8	78.7	85.0
5. Program Direction and Admin.							19.8	24.0	30.7	32.4
6. Other							11.0	28.4	33.5	42.3
TOTAL							140.6	198.0	222.2	249.4

Source: The Budget of the United States Government, Fiscal years 1973-1977

licensing reveals that requests for the latter fare better than requests for the former. Congress decreases agency requests for standards development from 57 percent/year increases to 41 percent/year increases; licensing, on the other hand, receives bigger increases than the AEC requests. Congress expands this category by 45 percent per year (AEC requests 32 percent per year increases).

Congressional intervention represents a small countertrend to the events noted in the previous section. By allocating fewer resources to standards development than the agency requests, Congress slightly slows the pace of increased requirements; increasing appropriations for licensing slightly improves the speed of the proceedings over that implicit in the agency's request. By and large, however, the trends in cost escalation are unaffected by these marginal adjustments.

CONCLUSION

This chapter summarized the recent history of nuclear power demonstrating the decline in its economic viability. It indicated the points for potential congressional intervention on behalf of the industry. In general this did not occur. Except for marginal adjustments through the budgetary process, Congress has let stand the curtailment on nuclear power's development.

Following the focus of public attention and the active involvement of organized nonindustry groups (chiefly the environmentalist), Congressional behavior changed from actions supportive of the industry to others more neutral, allowing the policy outcomes of the regulatory and judicial process to stand. This is the pattern

predicted by the political cycles model and is counter to that predicted by the cartel-by-design thesis.

FOOTNOTES TO CHAPTER 12

1. This chapter does not evaluate the merits of these goals nor whether the environmental movement represents a substantial portion of voters in the United States. The main point is to show that nonproducer interest groups' influence policy outcome.

2. For a detailed discussion of commercial nuclear power development see W. David Montgomery and James P. Quirk, "Cost Escalation in Nuclear Power," in Perspectives on Energy: Issues, Ideas, and Environmental Dilemmas, 2nd ed., ed. Morris Firebaugh (New York: Oxford University Press, forthcoming). See also I. Bupp et al., "Trends in Light Water Reactor Capital Costs in the United States: Causes and Consequences," Center for Policy Alternatives, CPA 74-8 (Cambridge: Massachusetts Institute of Technology, 1974); and C. Komanoff, Power Plant Performance: Nuclear and Coal Capacity Factors and Economics (New York: Council of Economic Priorities, 1976).

3. Montgomery and Quirk, "Cost Escalation."

4. See Margaret Rouse Bates, "Background Memorandum: The Regulation of Atomic Energy for Power Generation," Social Science Working Paper no. 64 (Pasadena: California Institute of Technology, 1974) for the details of this process.

5. Reflecting the poor state of the economy, orders for coal-fired plants dropped off as well. However, as the economy began to pick up a year later, so did orders for coal plants -- with no change in orders for new nuclear facilities.

6. Nonturnkey plants. The differential fell to 50 percent in the next two years as costs for coal plants rose due to increasingly stringent environmental standards.

7. See Linda R. Cohen, "Power in the Power Industry: An Analysis of Antitrust Policy in the AEC," mimeographed (Pasadena: California Institute of Technology, 1977).

8. NEPA, 42 USCA 2201 (W) 1973. See Paul J. Joskow, "Inflation and Environmental Concern: Structural Change in the Process of Public Utility Price Regulation," Journal of Law and Economics 17 (1974):317, especially footnote 23.

9. Atomic Energy Commission, "Power Plant Capital Costs: Current Trends and Sensitivity to Economic Parameters," WASH-1345, Washington, D.C., 1974.

10. Calvert Cliff's Coordinating Committee vs AEC, 449 F. 2d 1109, D.C.C.A., 1971.

11. For data on congressional subsidies for 1954-1971, see Civil Aeronautics Board, Service to Small Communities, pt. 3 (Washington, D.C.: Government Printing Office, 1972):30; data for 1972-1976 are from various volumes of appropriations hearings: U.S. Congress, Department of Transportation and Related Agencies Appropriations [for Fiscal Years 1972-1976]: Hearings before the House Committee on Appropriations Washington, D.C.: Government Printing Office, 1971-1975).

12. See Cohen, "Power in the Power Industry."

CONCLUSION

The cases studied in the previous five chapters were selected because the agencies were either recently created or recently revitalized by Congressional action. This allowed three different views of the policy making process to be tested against one another to determine which most adequately explained the observed behavior.

The five cases exhibit a wide range of behavior. The analysis showed that in all cases except the FDA, the political cycles model, developed in Part II, best explains agency behavior. CPSC and OSHA operate in a policy environment in which the nominal beneficiaries (consumers and labor, respectively) are organized and participate to oppose the regulated industries. Neither producers nor their opposition has dominated CPSC's or OSHA's regulatory arena in the early years of the agency's policy making. Each agency has responded to the interests of the two relevant groups. Only the political cycles view predicts that both participants will influence agency decisions. The cartel-by-design view predicts that the agencies will benefit producers; the life cycle approach predicts that they will benefit nonproducers (consumers and labor, respectively) to the detriment of producers during the period of agency policy making studied here.

The FTC, the FDA, and the AEC/NRC have all experienced a

change in the political participation in their policy environments. Congressional intervention followed (to some degree) in each case, resulting in a change of agency policy. In the three regulatory arenas, nonproducer groups appeared and changed the political environment. The effect on the FTC and AEC/NRC policy outcomes benefited these participants.

The FTC and AEC/NRC were long established regulatory agencies at the time of Congressional intervention. Both agencies primarily benefited producers prior to the change. The cartel-by-design thesis has no endogenous mechanism for policy change. It predicts that producers will benefit from the time of the agency's creation. The life cycle view has a mechanism for only one endogenous policy change. It predicts that consumers will benefit initially, followed by a decay period in which the producers will benefit. Once in the last stage, agency policy does not alter. The political cycles view is the only model which allows a change from decisions benefiting producers to others benefiting nonproducers.

The FDA is the most curious case of all. Nearly all investigations of the effects of the recent Congressional intervention conclude that all groups, producer and nonproducer alike, have been hurt by the change. None of the three models is consistent with the observed outcome; each predicts the same pattern in this case as in the FTC and the AEC/NRC examples.

These studies have shown that the policy making process responds to the interests of nonproducers as well as producers. All participating groups, not merely the most organized, are afforded a

degree of influence in the political process, as predicted by the political cycles view. The interpretations of the cartel-by-design and the life cycle approaches have been shown to be too narrow to describe the variations in regulatory agency policy making.

These conclusions are tentative; two lines of further research are needed. First, the five case studies must be extended. Each relied on a comparison of stylized facts and budgetary patterns; corroborative evidence was presented when available. More detailed work is required to substantiate the conclusions reached in each case. Specifically, each agency's decisions must be studied in greater depth to discover the actual economic effects.

Second, more case studies are required. The National Highway and Transportation Board, the Federal Aviation Administration, the Office of Pipeline Safety, and the Coal Mine Safety Board were formed after World War II to regulate safety, and seem to be natural extensions of the cases presented here. Further work is also required on the older economic regulatory agencies. The discussion of the Interstate Commerce Commission in Chapter 2 showed that previous researchers failed to prove their conclusions of capture, that farmers may have been a prime beneficiary of railroad regulation. The Civil Aeronautics Board also deserves further attention. Investigations of airline regulation examine policy making twenty to thirty years after the CAB's creation. The evidence that the agency benefits producers at this time is insufficient to conclude that the agency was actually designed years before for this purpose. A final case which seems to be a counterexample to the cartel-by-design view is the Federal

Communications Commission's regulation of the telephone system. Decisions in the last ten years have gone against AT&T and have allowed competition over a range of services offered by Bell. These decisions presumably benefit consumers; this is a striking contrast to the Commission's regulation of the airwaves. Further work may confirm the argument of this thesis -- that the prevailing theories of regulatory agency capture are unsatisfactory.

BIBLIOGRAPHY

American Bar Association. Report of the ABA Commission to Study the Federal Trade Commission. New York: American Bar Association, 1969.

Atomic Energy Commission. "Power Plant Capital Costs: Current Trends and Sensitivity to Economic Parameters." WASH-1345. Washington, D.C., 1974.

Baily, Martin Neil. "Research and Development Cost and Returns: The United States Pharmaceutical Industry." Journal of Political Economy 80 (1972).

Barry, Brian M. Sociologists, Economists, and Democracy. London: Collier-Macmillan, 1970.

Bartlett, Robert. Economic Foundations of Political Power. New York: Free Press, 1973.

Bates, Margaret Rouse. "Background Memorandum: The Regulation of Atomic Energy for Power Generation." Social Science Working Paper no. 64. Pasadena: California Institute of Technology, 1974.

Benham, Lee. "The Effects of Advertising on the Price of Eyeglasses." Journal of Law and Economics 15 (1972).

_____, and Benham, Alexandra. "Regulating through the Professions: A Perspective on Information Control." Journal of Law and Economics 18 (1975).

Bernstein, Marver. Regulating Business by Independent Commission. Princeton: Princeton University Press, 1955.

Bupp, I.; Derian, J.; Donsimoni, M.; and Treitel, R. "Trends in Light Water Reactor Capital Costs in the United States: Causes and Consequences." Center for Policy Alternatives. CPA 74-8. Cambridge: Massachusetts Institute of Technology, 1974.

Bureau of National Affairs. Occupational Safety and Health Reporter: Current Report, May 6, 1971.

Cary, William L. Politics and the Regulatory Agencies. New York: McGraw-Hill, 1967.

Cass, Glen. "Air Pollution Control Agency Behavior: Implementing Legal Mandates in an Uncertain World." Paper prepared for the CIT/IA Conference on Regulatory Policies, 1976.

Caves, Richard E. Air Transport and Its Regulation. Cambridge: Harvard University Press, 1962.

_____, and Roberts, Marc J., eds. Regulating the Product: Quality and Variety. Cambridge: Ballinger, 1975.

Civil Aeronautics Board. Service to Small Communities. Pt. 3. Washington, D.C.: Government Printing Office, 1972.

Coase, Ronald. "The Federal Communications Commission." Journal of Law and Economics 2 (1959).

Cocks, Douglas L. "Product Innovation and the Dynamic Elements of Competition in the Ethical Pharmaceutical Industry." In Drug Development and Marketing. Edited by Robert B. Helms. Washington, D.C.: American Enterprises Institute, 1975.

Cohen, Linda R. "Power in the Power Industry: An Analysis of Antitrust Policy in the AEC." Mimeographed. Pasadena: California Institute of Technology, 1977.

_____. "Cyclic Sets in Multidimensional Voting Models." Mimeographed. Pasadena: California Institute of Technology, 1977.

Cornell, Nina W.; Noll, Roger G.; and Weingast, Barry R. "Safety Regulation." In Setting National Priorities: The Next Ten Years. Edited by Henry Owen and Charles L. Schultze. Washington, D.C.: Brookings Institution, 1976.

Cox, Edward F.; Fellmeth, Robert C.; and Schulz, John E. The "Nader Report" on the Federal Trade Commission. New York: Baron, 1969.

Cushman, Richard. The Independent Regulatory Commissions. New York: Oxford University Press, 1941.

Dahl, Robert A. Who Governs? New Haven: Yale University Press, 1961.

_____. Pluralist Democracy in the United States: Conflict and Consent. Chicago: Rand McNally, 1967.

Davis, Kenneth C. Administrative Law Text. 3rd ed. St. Paul: West Publishers, 1972.

Davis, Lance E., and North, Douglass C. Institutional Change and American Economic Growth. Cambridge: Cambridge University Press, 1971.

Davis, Otto A.; Dempster, M. A. H.; and Wildavsky, Aaron. "A Theory of the Budgetary Process." American Political Science Review 60 (1966).

Davis, Otto A.; Hinich, Melvin J.; and Ordeshook, Peter. "An Expository Development of a Mathematical Model of the Electoral Process." American Political Science Review 64 (1970).

Downs, Anthony. An Economic Theory of Democracy. New York: Harper and Row, 1957.

Edelman, Murray. The Symbolic Uses of Politics. Urbana: University of Illinois Press, 1964.

Edwards, Corwin D. The Price Discrimination Law. Washington, D.C.: Brookings Institution, 1959.

Epple, Dennis, and Raviv, Artur. "Product Safety: Liability Rules, Market Structure, and Imperfect Information." Mimeographed. Pittsburgh: Carnegie-Mellon University, 1976.

Fenno, Richard F. Power of the Purse: Appropriations Politics in Congress. Boston: Little, Brown, 1966.

_____. Congressmen in Committees. Boston: Little, Brown, 1972.

Ferejohn, John F., and Fiorina, Morris P. "The Paradox of Not Voting: A Decision Theoretic Analysis." American Political Science Review 68 (1974).

Fiorina, Morris P. "The Case of the Vanishing Marginals: The Bureaucracy Did It." American Political Science Review 71 (1976).

_____. Congress: Keystone of the Washington Establishment. New Haven: Yale University Press, 1977.

Forester, John. "Toy Bike Syndrome." Bike World 2 (1973).

Froman, Lewis A., Jr. The Congressional Process, Strategies, Rules, and Procedures. Boston: Little, Brown, 1972.

Grabowski, Henry G. Drug Regulation and Innovation. Washington, D.C.: American Enterprises Institute, 1976.

Galloway, George B. History of the House of Representatives. New York: Crowell, 1976.

Goldberg, Victor P. "The Economics of Product Safety and Imperfect Information." Bell Journal of Economics and Management Science 5 (1974).

Goodwin, George. The Little Legislature: Committees of Congress. Amherst: University of Massachusetts Press, 1970.

Helms, Robert B., ed. Drug Development and Marketing. Washington, D.C.: American Enterprises Institute, 1975.

Hilton, George W. "The Consistency of the Interstate Commerce Act." Journal of Law and Economics 9 (1966).

Hinich, Melvin J. "A Social Choice Model for Consumer Support for Food Regulation." Mimeographed. Virginia Polytechnic Instutute, 1975.

_____, and Staelin, Richard. "A Process Model of Food Regulation." Mimeographed. Virginia Polytechnic Institute, 1976.

Hoogenboom, Ari, and Hoogenboom, Olive. A History of the ICC from Panacea to Palliative. Urbana: University of Illinois Press, 1976.

Hunt, Michael S. "Trade Associations and Self-Regulation: Major Home Appliances." In Regulating the Product: Quality and Variety. Edited by Richard E. Caves and Marc J. Roberts. Cambridge: Ballinger, 1975.

Jordan, W. A. Airline Regulation in America: Effects and Imperfections. Baltimore: Johns Hopkins Press, 1970.

_____. "Producer Protection, Prior Market Structure, and the Effects of Government Regulation." Journal of Law and Economics 15 (1972).

Joskow, Paul J. "Inflation and Environmental Concern: Structural Change in the Process of Public Utility Price Regulation." Journal of Law and Economics 17 (1974).

Kahn, Alfred. The Economics of Regulation. New York: John Wiley and Sons, 1970.

Kelman, Steven. "Regulation by the Numbers: A Report on the Consumer Product Safety Commission." Public Interest 36 (1974).

Kolko, Gabriel. Railroads and Regulation, 1877-1916. New York: W. W. Norton, 1965.

Komanoff, C. Power Plant Performance: Nuclear and Coal Capacity Factors and Economics. New York: Council of Economic Priorities, 1976.

Lamb, Ruth de Forest. American Chamber of Horrors: The Truth about Food and Drugs. New York: Arno Press, 1976.

Levine, Michael E. "Is Regulation Necessary? California Air Transportation and National Regulation." Yale Law Journal 74 (1965).

Lowi, Theodore, J. The End of Liberalism. New York: W. W. Norton, 1969.

Masters, Nicholas. "Committee Assignments in the House of Representatives." American Political Science Review (1961).

Mathews, Donald R. United States Senators and Their World. New York: Vintage, 1960.

Mayhew, David. Congress: The Electoral Connection. New Haven: Yale University Press, 1974.

MacAvoy, Paul W. Economic Effects of Regulation: The Trunk-Line Railroad Cartels and the Interstate Commerce Commission before 1900. Cambridge: MIT Press, 1965.

McConnell, Grant. Private Power and American Democracy. New York: Vintage, 1966.

Meehl, Paul E. "The Selfish Voter Paradox and the Thrown-Away Argument." American Political Science Review 71 (1977).

Meyer, John R.; Peck, Merton J.; Stenason, John; and Zwick, Charles. The Economics of Competition in the Transportation Industries. Cambridge: Harvard University Press, 1959.

Mintz, Martin. By Prescription Only. Boston: Beacon Press, 1967.

Montgomery, W. David, and Quirk, James P. "Cost Escalation in Nuclear Power." In Perspectives on Energy: Issues, Ideas, and Environmental Dilemmas. 2nd ed. Edited by Morris Firebaugh. New York: Oxford University Press, forthcoming.

Nadel, Mark. The Politics of Consumer Protection. Indianapolis: Bobbs-Merrill, 1971.

Noll, Roger G. Reforming Regulation. Washington, D.C.: Brookings Institution, 1971.

_____; Peck, Merton S.; and MacGowan, John J. The Economics of Television Regulation. Washington, D.C.: Brookings Institution, 1973.

_____, and Fiorina, Morris P. "Voters, Legislators, and Bureaucrats: A Rational Choice Interpretation of the Growth of Bureaucracy." Mimeographed. Stanford: Stanford University, 1976.

Ogul, Morris S. Congress Oversees the Bureaucracy. Pittsburgh: University of Pittsburgh Press, 1976.

Oi, Walter W. "The Economics of Product Safety." Bell Journal of Economics and Management Science 4 (1973).

Olson, Mancur. The Logic of Collective Action. Cambridge: Harvard University Press, 1965.

Owen, Bruce M., and Braeutigam, Ronald. "The Regulation Game: Strategic Use of the Administrative Process." Mimeographed. Stanford: Stanford University, 1977.

Owen, Henry, and Schultze, Charles L., eds. Setting National Priorities: The Next Ten Years. Washington, D.C.: Brookings Institution, 1976.

Peltzman, Sam. "An Evaluation of Consumer Protection Legislation: The 1962 Drug Amendments." Journal of Political Economy 82, 1973.

_____. Regulation of Pharmaceutical Innovation. Washington, D.C.: American Enterprises Institute, 1974.

_____. "Toward a More General Theory of Regulation." Center for the Study of American Business Working Paper no. 10. St. Louis: Washington University, 1976.

Plott, Charles R., and Levine, Michael E. "A Model of Agenda Influence on Committee Decisions." Social Science Working Paper no. 143. Pasadena: California Institute of Technology, 1976.

Polsby, Nelson. "The Institutionalization of the House of Representatives." American Political Science Review (1968).

Posner, Richard A. "Taxation by Regulation." Bell Journal of Economics and Management Science 2 (1971).

_____. "Theories of Economic Regulation." Bell Journal of Economics and Management Science 5 (1974).

Price, David. The Commerce Committees. New York: Grossman, 1975.

Riker, William, and Ordeshook, Peter. An Introduction to Positive Political Theory. Englewood Cliffs: Prentice-Hall, 1973.

Sabatier, Paul. "Social Movements and Regulatory Agencies: Toward a More Adequate -- and Less Pessimistic -- Theory of 'Clientele Capture.'" Policy Sciences 6 (1975).

Scherer, F. M. Industrial Market Structure and Economic Performance. Chicago: Rand McNally, 1970.

Schwartzman, David. "Pharmaceutical R&D Expenditures and Rates of Return." In Drug Development and Marketing. Edited by Robert B. Helms. Washington, D.C.: American Enterprises Institute, 1975.

Shepsle, Kenneth. "Congressional Committee Assignments: An Optimization Model with Institutional Constraints." Public Choice 22 (1975).

_____. The Giant Jigsaw Puzzle: The Democratic Committee Assignments in the House of Representatives. Chicago: University of Chicago, forthcoming.

Smith, Robert Stewart. The Occupational Safety and Health Act. Washington, D.C.: American Enterprises Institute, 1975.

Spann, Robert M., and Erickson, E. "The Economics of Railroading: The Beginning of Cartelization and Regulation." Bell Journal of Economics and Management Science 1 (1970).

Steiner, Peter O. "Public Expenditure Budgeting." In The Economics of Public Finance. Washington, D.C.: Brookings Institution, 1974.

Stigler, George J. "The Theory of Economic Regulation." Bell Journal of Economics and Management Science 2 (1971).

Truman, David B. The Government Process. New York: Alfred A. Knopf, 1951.

Tullock, Gordon. "Regulating the Regulators." Mimeographed. Virginia Polytechnic Institute, 1976.

Turner, D. "Conglomerate Mergers and Section 7 of the Clayton Act." Harvard Law Review (1965).

Ulen, Thomas. "The ICC as a Cartel Manager: Was It Necessary?" Ph.D. dissertation, Stanford University, 1977.

U.S. Congress. Administrative Procedure Act: Legislative History. Washington, D.C.: Government Printing Office, 1947.

_____. Department of Transportation and Related Agencies Appropriations [for Fiscal Years 1972-1976]: Hearings before the House Committee on Appropriations. Washington, D.C.: Government Printing Office, 1971-1975.

_____. Consumer Product Safety Commission Oversight: Hearings before the Subcommittee for Consumers of the Senate Committee on Commerce, 94th Cong., 1st sess. Washington, D.C.: Government Printing Office, 1975.

_____. Department of Housing and Urban Development, and Certain Independent Agencies Appropriations for Fiscal Year 1976: Hearings before a Subcommittee of the Senate Committee on Appropriations, 94th Cong., 1st sess. Washington, D.C.: Government Printing Office, 1975.

_____. Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies Appropriations for 1976: Hearings before the House Committee on Appropriations, Subcommittee on the Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies, 94th Cong., 2nd sess. Washington, D.C.: Government Printing Office, 1975.

_____. Department of Housing and Urban Development -- Independent Agencies Appropriations for 1978: Hearings before the Subcommittee on HUD -- Independent Agencies of the House Committee on Appropriations, 95th Cong., 1st sess. Washington, D.C.: Government Printing Office, 1977.

_____. Implementation of the Consumer Product Safety Act: Hearings before the Subcommittee on Consumers of the Senate Committee on Commerce, Science, and Transportation, 95th Cong., 1st sess. Washington, D.C.: Government Printing Office, 1977.

Wardell, William M., and Lasagna, Louis. Regulation and Drug Development. Washington, D.C.: American Enterprises Institute, 1975.

Weidenbaum, Murray L. Congressional Budgeting. Washington, D.C.: American Enterprises Institute, 1964.

Weingast, Barry R. "A Rational Choice Interpretation of Congressional Norms." Social Science Working Paper no. 142. Pasadena: California Institute of Technology, 1976.

_____. "A Representative Legislature and Regulatory Agency Capture." Mimeographed. Stanford University, 1977.

White, Lawrence J. "Quality, Competition, and Regulation: Evidence from the Airline Industry." In Regulating the Product: Quality and Variety. Edited by Richard E. Caves and Marc J. Roberts. Cambridge: Ballinger, 1975.

Wildavsky, Aaron. The Politics of the Budgetary Process. 2nd ed. Boston: Little, Brown, 1974.