

The Regulation Game

**Strategic Use of the
Administrative Process**

**Bruce M. Owen
Ronald Braeutigam**

Ballinger Publishing Company • Cambridge, Massachusetts
A Subsidiary of J.B. Lippincott Company



This book is printed on recycled paper.

Copyright © 1978 by Ballinger Publishing Company. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic mechanical photocopy, recording or otherwise, without the prior written consent of the publisher.

International Standard Book Number: 0-88410-066-9

Library of Congress Catalog Card Number: 78-558

Printed in the United States of America

Library of Congress Cataloging in Publication Data

Owen, Bruce M
The regulation game.

Bibliography: p. 259

Includes index.

1. Industry and state—United States. 2. Trade regulation—United States. 3. Antitrust law—United States. I. Braeutigam, Ronald, joint author. II. Title.

HD3616.U4709

338.973

78-558

ISBN 0-88410-066-9

For our parents



Contents

List of Figures	xi
List of Tables	xiii
Preface	xv
 Chapter 1	
Introduction	1
Strategic Use of the Administrative Process	2
The Literature on Regulation: A Brief Overview	9
Toward a Theory of Regulation	18
The Role of Antitrust Law	32
Conclusion	35
Appendix	36
 Chapter 2	
Regulation of Oligopoly:	
International Communication	43
Background	43
The TAT-6 Decision	52
Behavior	62

Chapter 3	
Regulating a Depletable Resource: The Natural Gas Industry	65
Introduction	65
Background	67
Some Consequences of Wellhead Price Regulation	77
Behavior	84
The Recent Reassessment of Public Policy	88
 Chapter 4	
Regulation of Service Industries: Real Estate Brokers and Title Insurers	97
Introduction	97
Title Insurance	100
Brokers	111
The Role of Regulation	118
 Chapter 5	
Regulation of a New Technology: Cable Television	121
Introduction	121
Historical Background	125
Forces and Issues	135
The Current Regulatory Scheme	138
The Impact of Cable Regulation	143
Policy Studies	155
Conclusion	157
 Chapter 6	
Surface Freight Transportation: The Regulation of Intermodal Competition	159
Introduction	159
Legislation and Intermodal Competition: A Brief Background	161
The Role of the Administrative Process	170
Optimal Pricing with Intermodal Competition	177
Conclusion	190

Chapter 7	
Regulating Prices and Entry: The Domestic Telephone Industry	195
Introduction	195
Background and Industry Structure	197
Toll Private Line Services	205
Specialized Common Carriers	220
Customer Terminal Equipment	230
Conclusions	233
 Chapter 8	
Conclusions	239
 Notes	243
 Bibliography	259
 Index	265
 About the Authors	271



List of Figures

2-1	Overseas Communication Industry: Operating Revenues	47
2-2	Overseas Telegraph Rates	48
2-3	Overseas Telephone Rates	49
3-1	Effects of Regulation in Wellhead Markets	81
5-1	A Basic Cable Television System	124
6-1	Mode 1 Could Be Profitable When Mode 2 Clears	188
6-2	Mode 1 Earns Negative Profit When Mode 2 Clears	191
6-3	Unregulated Mode 1 Just Breaks Even	191



List of Tables

1-1	Summary—18th Period Allocations and Welfare	32
2-1	International Communication Revenues by Company (1969)	44
2-2	International Communication Revenues	45
2-3	International Communication Technology	46
2-4	Comparative Costs of International Facilities (1971)	55
2-5	Cost Per Circuit for Alternative Investment Policies	59
3-1	Percentage of Total Energy Furnished	65
3-2	Uses of Natural Gas by Sector, 1974	66
3-3	Ranking of Largest Companies in the Petroleum Industry (1970)	73
3-4	Selected Concentration Ratios for Producers	74
3-5	Natural Gas Purchases by Interstate Pipelines: Concentration Ratios for Selected Gas Areas	76
3-6	United States Natural Gas Production	78
3-7	National Curtailment Trends	79
3-8	Comparison of Intrastate and Jurisdictional Weighted Average Prices	82
3-9	FPC Curtailment Priorities	86
3-10	Average Annual Net Reserve Additions to Interstate and Intrastate Pipelines	87
4-1	Title Companies and Plants, Selected California Counties	104
4-2	Market Shares of Largest California Title Insurers, 1969-74	105

4-3	California Title Insurance Prices, 1975	108
4-4	Rate for \$25,000 Liability Standard Coverage Homeowner's Policy in Southern California	109
5-1	Television Households and Cable Subscribers, 1955-1975	122
5-2	The Top 100 TV Markets	126
5-3	Profitability of Television Stations, 1974	130
5-4	Cities Among Largest 100 SMSAs With No Local VHF Commercial TV Stations	131
5-5	FCC Survey of Franchising and Other State Law and Regulation Pertaining to Cable Television—Coded Summary	144
5-6	Increase in Cable Households in Top 100 Markets Due to Two More Independent Imported Signals Plus 0, 1, 2, and 3 Duplicate Network Signals	149
5-7	Estimated Percentage Change in Revenue Due to Cable During the 1970s	151
6-1	Intercity Freight Traffic in the United States, by Mode of Transport and by Percentage Federally Regulated	160
6-2	Effect of Selected Legislation on Intermodal Competition	164
6-3	Modal Cost Findings of the ICC in Ingot Molds	172
6-4	National Market Shares for Freight Transported by Railroads, Motor Vehicles, and Inland Waterways, 1940-1974	181
7-1	Selected Types of Telephone Services	196
7-2	Number of Bell System and Independent Telephone Stations	199
7-3	The Telecommunications Industry of the United States	202
7-4	Toll Service Revenues for Telephone Carriers, 1975	206
7-5	Rate of Return on Net Interstate Investment by the Bell System, by Principal Service Categories, 1964	211
7-6	Fully Distributed Embedded Cost Study, Bell System Interstate Services, 1971	215
7-7	TELPAC: Burden Analysis (1970 rates)	217
7-8	TELPAC: Burden Analysis (1972 rates)	218
7-9	Specialized Common Carriers	224
7-10	Operating Revenues: Telephone Company Private Line and Specialized Common Carriers	225
7-11	Selected Telecommunications Statistics	234



Preface

We hope that students of economic regulation and administrative law will find one or two useful ideas in this book.

The main themes are set out in Chapter 1. The remaining chapters illustrate our themes with case studies of specific industries and specific regulatory decisions. The case studies are intended to have independent value.

Although this book is very much a joint effort, it may be useful to identify which author had primary responsibility for which chapter. Owen was primarily responsible for Chapters 1, 2, 4, and 5; Braeutigam for Chapters 3, 6, and 7.

We are indebted to many of our friends, students, and colleagues for helpful advice at various stages of the work reported here. A partial list of acknowledgments follows: Stanley Besen, Henry Block, Constance Dunham, Donald Dunn, Paul Goldstein, Joseph Grundfest, Sergiu Hart, J. Hilman, Michael Klass, Alvin Klevorick, Sebastian Lasher, John Ledyard, Roger McNitt, Charles Meyers, Bridger Mitchell, Roger Noll, John Panzar, Ed Park, Merton J. Peck, Owen Phillips, James Rosse, Antonin Scalia, F.M. Scherer, Sherrill Shaffer, Michael Spence, Leonard Weiss, and Robert Willig. In addition, we gratefully acknowledge useful suggestions from participants in various seminars at Stanford, Northwestern, and Duke Universities, and at the National Science Foundation. Marianna Scherrer, Florence Stein, and Alice Coldren provided, as usual, efficient and good-humored secretarial services.



Introduction

This chapter will deal with two closely related but nevertheless distinct issues: The actual behavior of participants in the administrative process or what we have called “the regulation game,” and the economic purpose of the process itself. We are interested in how the game works and in why it is played. We have also tried to provide an overview of the extensive but not very coherent literature on regulation.

The chapter is organized as follows. First, we put forward some suggestions as to the strategies that might be useful to a firm playing the regulation game. For purposes of exposition, we have chosen to write this as a “how-to” manual. This first section ends with some tentative hypotheses about the purposes of a regulatory game with the features that have been described, at least implicitly, by the strategic rules. The second section provides a brief overview of some of the literature on regulatory behavior. The third section is intended to address the question: Why does the regulation game exist and what economic purpose does it serve? We conclude with a brief discussion of the role of antitrust law and some normative speculations.

The two major conclusions can be briefly summarized. First, a major effect of the administrative or regulatory process is to attenuate the rate at which market and technological forces impose changes on individual economic agents; it is rational for voters to prefer such a mechanism for avoiding risk to a laissez-faire market system, even at the cost of some efficiency loss. The administrative process is “fairer” than the ungoverned market because it imposes due process requirements on any change in the existing set of goods, prices, and

market structures. The result is to give individuals and firms some legal rights to the status quo. The second point is that regulated firms and industries operate within the administrative process just as they operate in the market; the environment provides opportunities for strategic behavior in pursuit of economic objectives. Given the first point, it must be emphasized that this strategic *use* of the administrative process does not necessarily constitute *abuse* of that process. Indeed, this chapter rather carefully avoids such normative judgments. Normative issues are discussed in the concluding section.

STRATEGIC USE OF THE ADMINISTRATIVE PROCESS

No industry offered the opportunity to be regulated should decline it. Few industries have done so. Railroads, airlines, telephone companies, radio stations, and most other industries have warmly embraced regulation when it was offered and have strenuously resisted efforts to remove it. With the exception of natural gas suppliers, whose prices have been held below competitive levels, every industry violently resisted the Ford administration deregulation program. Regulation protects such industries against competition from outsiders and from within the industry. It provides protection from antitrust attack. It provides a degree of protection from congressional investigation. Regulation greatly reduces the risk of bankruptcy from causes other than competition. And, while regulation may make very high rates of return difficult to achieve, it does virtually guarantee a steady stream of adequate profits.

Strategic use of the regulatory process is at least as important to many industries as the traditional decision variables: prices, entry, and innovation. In order to take full advantage of the process, it is useful to understand the motives and behavior of regulators, and the tools available to manipulate that behavior.

Government regulators are usually collegial bodies. The individual members are, on average, politicians. These politicians fall into two classes. The first, and by far the largest, consists of candidates who were not elected or reelected to office, and their former aides. As a group, they have strong political instincts but little imagination, and they regard their jobs as sinecures. The second and smaller group consists of not unsuccessful politicians, with larger ambitions, who are in their jobs in a temporary holding pattern. Their political instincts are even more sensitive since they are anxious to get ahead in the world. The members of the second group must walk a narrow line: they must build or maintain a reputation, and at the same time

they must not make too many enemies. Generally speaking, they walk this line by being "efficient." They reorganize bureaus and try to make dockets move faster, and they make newsworthy but ultimately nonsubstantive speeches.

The behavior of a regulatory agency is guided by the nature of its commissioners, within the arguably very narrow constraints imposed by the statutory framework of the agency, the administrative process, and precedent. For this reason, it would be wrong to put great emphasis on the character and capability of the commissioners in explaining regulatory behavior.

The statutory framework which establishes the agency's charter should generally be regarded as a set of minimum constraints. Agencies can and do extend their charters when necessary to effectuate their "scheme" of regulation, and in doing so are regularly upheld by the courts [1]. The main reason for this is the broad injunction to protect the "public interest, convenience, and necessity" which nearly all the enabling statutes contain. This is a vague and open-ended license, and can be used to rationalize virtually any degree of intervention. (It cannot so easily be used to justify disengagement by the regulatory authority from some field, however [2]).

The administrative process is a set of procedures quite similar to those governing courts of law, which regulatory agencies follow in making decisions. Hearings are generally required to establish issues of fact, and there is usually ample opportunity for appeal within the agency, and then to the federal courts. All parties must be accorded due process. This jurisprudentially laudable set of constraints on agency behavior has an interesting side effect, which is the creation of substantial delays and legal expenses. Any party to a decision may impose these delays and expenses on the other parties. Thus, the administrative process provides important opportunities for strategic behavior by regulated firms.

Any established regulatory agency possesses a body of policies and past decisions that act as precedents for future decisions. Precedent is important because it has generally been sanctified on review by the federal courts. Even though some new departure may be legal, it must be tested on appeal, and thus carries with it certain doubts and risks. Finally, commissioners and especially agency staffs are often committed, intellectually or emotionally, to the previous policies and decisions of the agency.^a This provides a significant constraint on behavior.

^aWitness the FCC's stubborn commitment to UHF long after it was clearly a failure.

Strategies for Established Firms and Industries

Make Strategic Use of Information. The ability to control the flow of information to the regulatory agency is a crucial element in affecting decisions. Agencies can be guided in the desired direction by making available carefully selected facts. Alternatively, the withholding of information can be used to compel a lawsuit for "production" when delay is advantageous. Delay can also be achieved by overresponse: flooding the agency with more information than it can absorb. Sometimes, when a specific item of information is requested and it is difficult or impossible to delay in providing it, the best tactic is to bury it in a mountain of irrelevant material. This is a familiar tactic of attorneys in antitrust suits. It is also sometimes useful to provide the information but to deny its reliability and to commence a study to acquire more reliable data. Another option is to provide "accurate" information unofficially to selected personnel of the agency who are known to be sympathetic. If another party has supplied damaging information, it is important to supply contrary information in as technical a form as possible so that a hearing is necessary to settle the issues of "fact."^b

In the context of a hearing, it is often useful to control access to information within the firm itself so that officials testifying for the company do not have knowledge of damaging facts. Thus, the internal information system of the firm must be carefully structured so that there are officials at various levels who can testify truthfully about various issues, and who are themselves ignorant of strategically important information. It is unwise to have a centralized management information system whose existence is known to many employees. Instead, information processing should be highly decentralized, and control should be exercised by careful personnel policies. It is always important that managers be loyal, and promotion policies should select this quality. The American Telephone and Telegraph Company has over the years made masterful use of information strategies, some of which are described in Chapters 2 and 7.

Make Strategic Use of Litigation. Litigation costs are usually small compared to the stakes in a regulatory decision for an established firm or industry. On the other hand, they are likely to be proportionally much more important to new firms, prospective entrants,

^bAn example is the FCC's newspaper-TV cross-ownership proceeding, in which the NAB commissioned a study by a private consulting firm to counter evidence submitted by a public interest intervenor regarding economic effects. The result was that the FCC saw the economic experts "cancel out."

and public interest advocates. If the established firm has correctly manipulated agency policy, then the status quo is a state congenial to the firm, and the strategic use of administrative procedure can prolong the status quo. A demonstration of willingness to do this may even forestall efforts by outsiders to engage in the process. The delay which can be purchased by litigation offers an opportunity to undertake other measures to reduce or eliminate the costs of an eventual adverse decision. These measures include strategic innovation, legislative proposals, and lobbying activity. If the administrative process goes on long enough, it is even possible to ask for a new hearing on the grounds that new and more accurate information may be available. The agency usually cannot resist the effort to delay through exhaustion of process because this would be grounds for reversal on appeal to the courts.

Make Strategic Use of Innovation. It is extremely useful to have available a well-managed research and development activity whose output of inventions can be controlled for strategic purposes. This is not applicable to many regulated industries, but for those involving developing technology it can be a crucial element in winning the regulatory game. A well-timed announcement of an innovation or technological breakthrough can moot a difficult issue which threatens to go against the firm. At a minimum, the terms of the debate may change sufficiently to require the decision process to begin anew. The optimal timing of innovation is affected by the presence of regulation. Examples include AT&T's invention of "SG" under-seas cable (Chapter 2), cellular mobile radio systems, and "data under voice" digital communications capacity (Chapter 7).

A steady stream of cost-reducing innovation is useful to the maintenance of high profits in the face of rate of return regulation. A firm in this situation can continuously lower prices at a rate less than the rate at which costs decline, and thus avoid regulatory review that is either strict or frequent.

Produce More than One Product or Service, and Price Some Below Cost. An extremely successful strategy is to provide below cost service to classes of customers who are favored by redistributive policies of the government. Rural, residential, and poor customers are ideal subjects for this treatment, as opposed to urban, business, or wealthy consumers. It is important to have this policy recognized and endorsed by the regulatory agency. Most federal regulatory agencies, with strong lingering New Deal traditions, welcome the opportunity to engage in redistribution. The existence of cross-subsidization is an

extremely powerful barrier to entry. The agency will not allow competition to affect profits if it is convinced that those profits are necessary to continue the cross-subsidy. Local airline service is an important example. It is not always necessary to actually cross-subsidize in fact, if the cost allocations are sufficiently complex and if the regulated firm claims the subsidy exists with sufficient conviction and frequency. Sometimes it is useful to give these subsidies in kind, if no opportunity for price subsidies is available. Public service expenditures endorsed (or, preferably, mandated) by the regulatory agency are as useful as cross-subsidies. Public service programming on TV stations is a good example of this.

Another reason for producing more than one product or service is that in doing so one has the opportunity to shift assets, profits, and costs (for accounting purposes) from one to another as the occasion demands. It is particularly useful to participate in one or more markets that are not regulated, at least by the same agency. For years the TV networks have played this game, with profits shifting from the network operation to the owned and operated stations.

Use the Agency as a Cartel Manager. One of the worst fears of a regulatory agency is the bankruptcy of the firm it supervises, resulting in "instability" of service to the public or wildly fluctuating prices. Thus, it is in the interest of the agency to prevent price competition among the firms it regulates. The ideal strategy is to get the agency to endorse "self-regulation" by the industry so that the industry cartel can manage things under an umbrella of antitrust immunity. Transportation and insurance rate bureaus and the NAB code (limiting quantities of advertisements in TV and radio) are excellent examples of this strategy. The cartel rates or practices thus determined are immune from the usual tendency toward cheating because they carry the force of law, or at least the threat of direct intervention by the agency.

Lobby the Agency Effectively. Effective lobbying requires close personal contact between the lobbyists and government officials. Social events are crucial to this strategy. The object is to establish long-term personal relationships transcending any particular issue. Company and industry officials must be "people" to the agency decisionmakers, not just organizational functionaries. An official contemplating a decision must be led to think of its impact in human terms, and not in institutional or organizational terms. Officials will be much less willing to hurt long-time acquaintances than corporations. Of course, there are also important tactical elements of lobbying, of which not the least is information gathering at low levels of

the agency staff. Each contact must be carefully tailored to the background and personality of the official being lobbied. For this reason, it is useful to keep files on the backgrounds of agency officials, and to maintain a diverse and well-informed lobby staff as well as one not too remote from the corporate organization so as to maintain loyalty.

Coopt the Experts. Regulatory policy is increasingly made with the participation of experts, especially academics. A regulated firm or industry should be prepared whenever possible to coopt these experts. This is most effectively done by identifying the leading experts in each relevant field and hiring them as consultants or advisors, or giving them research grants and the like. This activity requires a modicum of finesse; it must not be too blatant, for the experts themselves must not recognize that they have lost their objectivity and freedom of action. At a minimum, a program of this kind reduces the threat that the leading experts will be available to testify or write against the interests of the regulated firms. AT&T has made a major investment, for instance, in very high grade economic talent over the past decade. It is not entirely accidental that this group of economists has produced a formidable new theory of multiproduct natural monopoly that may serve as a powerful argument in favor of barriers to entry and the exclusion of competitors in AT&T markets [3]. The only other apparent beneficiary of the normative implication of this theory is the postal service.

A special case of cooption applies to Washington law firms. The Washington law firm is essential to success in the regulatory game. Thus, it is useful, at a minimum, to deny potential competitors access to the best firms by keeping them on retainer. It is not possible, of course, to do this with all of the firms; those with particular expertise and influence in the fields of interest should be selected.

Trade-off the Agencies. The established regulated firm will find opportunities to play one agency against another. The most common instance of this occurs with respect to geographic jurisdiction: state versus federal, or one state versus another. The interests of these agencies often diverge, and one can court the assistance of one agency in dealing with another, particularly in the event of an appeal to Congress or public opinion. In matters of rate regulation, it is as useful to be able to transfer assets, costs, and profits among jurisdictions as among product lines.^c

^cThe telephone industry has an extremely complicated set of "separations" principles, which have been manipulated to the advantage of intrastate service rates and to the political advantage of AT&T with state public utility commissions.

Strategies for New Firms and Industries

A firm or industry which is new to the economy must be able to take wise action with respect to regulation. If the firm produces something that competes with the products of a regulated firm, then regulation is a *sine qua non* of existence. But this is no matter; any firm with aspirations to steady but not spectacular profits should embrace regulation willingly. A prospective entrant with a new technology or service not identical to that provided by existing regulated firms should try very hard to be regulated by a different agency or at least by a new bureau of the old agency. This is useful in countering the powerful establishment forces that will be put in the path of entry. The airlines took advantage of this strategy in the thirties. What might have happened to the airlines at the tender mercies of the ICC beggars the imagination. Another example is the creation of the FCC's cable television bureau to promote cable interests within the FCC. An industry or firm which is not providing a service that threatens an existing regulatory protectorate should strive to be regulated by an agency that has other and more important responsibilities. The ideal situation is to have the protection of the regulatory machinery and its immunities, but to be sufficiently obscure that the agency spends little effort in trying to regulate. Examples here include the international telegraph companies, title insurance underwriters, and small independent telephone companies, discussed elsewhere in this book.

The newly regulated firm should arrange, if possible, to be regulated by more than one agency, or in several jurisdictions. This creates administrative problems in the short run, but in the long term it provides a helpful degree of flexibility in dealing with any one of the agencies. The charter of one or more of these agencies should include the power to grant antitrust immunity.

Strategies for Conflict

Regulated firms face the most serious financial threats, not from their regulators, but from potential competitors. Regulation is an excellent device for eliminating competition within the industry and for preventing direct entry. It is not as foolproof in dealing with competing technologies, especially ones not reachable by the agency under its statutory charter. In order for the agency to control the threat it must first assert jurisdiction over it. In itself, this implies only that the established regulated industry must be prepared to give up something to the new industry, but under carefully controlled and gradual circumstances. The more serious case occurs when the new technology manages to become regulated by a different or new

agency. In this case, as with issues affecting the regulated firm arising from other quarters such as public interest intervenors, the stage is set for a major conflict. Such conflicts generally end up in the halls of Congress and in the White House.

It is important to understand that the politicians who will decide such issues are seldom interested in the technical details; they are certainly not concerned with sophisticated analysis. They are interested in appearances and in the political power and influence of the parties. Any halfway significant industry which claims loudly enough that it will be irreparably harmed by another can usually succeed in blocking the decision, often indefinitely. Congress, like the agencies of the executive branch, much prefers to sanctify a compromise endorsed by the warring parties than to make a hard decision. Thus, the party with the most to gain from the continuance of the status quo is in a position of power in the negotiations for a compromise. The party making the challenge must acquire sufficient political influence to be able to block decisions on some other issue where delay would harm the established firm. Eventually, in a kind of logrolling environment, the conflict is resolved.

The Regulation Game

The regulation game has not been effectively modeled. One of the major reasons for this is that it has been very difficult to produce convincing arguments to justify workably specific objective functions for the agency itself. However, it is worth asking whether the regulatory agency does have an objective function at all, or whether it is better modeled as a passive mechanism, reacting according to simple rules derived from its constraints. In inventing the collegial form for most administrative agencies, Congress has virtually guaranteed that agencies will not have consistent decision-guiding objectives. And even if agencies do have objectives, they have little freedom of action within the constraints of process, precedent, and charter. Thus, it seems best to regard the regulatory agency as an endogenous force whose behavior can be strategically manipulated by the firms it regulates.

THE LITERATURE ON REGULATION: A BRIEF OVERVIEW [4]

The literature on regulation is so extensive and eclectic as to defy any neat taxonomy. We provide here brief reviews of the hypotheses associated with a few individual scholars, followed by a partial categorization. The Chicago school of economists and lawyers—George Stigler [5] and Richard Posner [6] in particular—are associated with

the idea of agency "capture" by organized interest groups, either by initial design or as a result of subsequent machinations. Sam Peltzman [7], also of the Chicago school, has recently generalized this model to the point that it can no longer be called a "capture" model. A leading political science theory of regulation is provided by Marvar Bernstein's [8] "life cycle" hypothesis. The notion that agencies are in fact creatures of the interest group being regulated is now implicit in much of the political science literature [9]. Roger Noll and Morris Fiorina [10] provide a political-science-based model of congressional demand for administrative activity based on the voters' demand for congressional facilitation services. Finally, because of its novel perspective, we will review Victor Goldberg's idea of regulation as contract [11].

Until the 1960s, the prevailing view of regulation was that it provided, or at least was intended to provide, a degree of protection for consumers from the depredation of monopolists, from shoddy and dangerous fly-by-night operators, or that it protected producers from the harmful effects of certain fundamentally unstable markets. Classical case studies, for instance, insisted that the purpose of the Interstate Commerce Commission was to protect farmers from the discriminatory pricing practices of railroad cartels [12]. The initial intention of the Pure Food and Drug Act was to deal with the fake drug remedies marketed by marginal operators [13]. And the primary purpose in creating the Civil Aeronautics Board was to bring about and insure a stable air transport market [14].

During the 1960s, the economics profession at least came to hold contrary (and sometimes inconsistent) views of regulation. We came to believe that regulation was ineffective in restraining monopoly power, that regulatory agencies were often captured by industry groups and used as cartel managers, and that regulation introduced potentially serious distortions in the resource allocation process, particularly by causing utilities and other industries with heavy capital investment to select inappropriate factor proportions [15]. We came to believe that public utility commissions did something other than make natural monopolies behave as if they were competitors.

Averch and Johnson made the study of regulation respectable by snatching it from the institutional and bringing it into the mathematical realm. Unfortunately, most of the tractable models of regulated behavior require that the constraints be exogenous. The notion that regulated firms interact with their regulators, or that the regulators themselves may be trying to do something more complicated than limiting rates of return, causes difficulties for these models. This fact has never gone unnoticed. Economists, lawyers, and political

scientists have tried to cope with the problem of endogenous regulation, a task which must at least begin with institutionalism. If regulation is endogenous, the problem is much more complicated than maximizing a profit function subject to some set of constraints. The complications are of the same sort as those encountered in the study of oligopoly behavior, with the added difficulty that the objective function of one participant, the agency, is unknown, if indeed one exists at all.

Capture Theory

There are two versions of the capture theory (or what Posner calls the "economic" theory) of regulation. In the first, regulatory agencies are established for "public interest" purposes, but subsequently they become the tools of the industry they regulate. This version of the theory is really indistinguishable from the life-cycle hypothesis to be discussed below. The other version of the theory is that regulatory agencies are in fact *created* to serve the interests of the industry they regulate, as a direct response by congressmen to the demands of industry for cartel management. That industries might have such a demand is obvious. But it was not until Peltzman's 1976 paper that the capture theory enthusiasts had any explanation of the supply side of the market for regulation. Peltzman provides a supply side by assuming that politicians and agencies desire to maximize vote margins, and by using the redistributive powers of regulatory agencies to benefit groups that can supply these vote margins. The theory is thus a special case of the general proposition that government will seek to redistribute income to benefit majorities of the electorate. The capture theory model is a framework in which the purpose of regulation is to redistribute incomes in favor of groups that will supply electoral rewards to the politicians who engineer the redistribution. The regulatory agency is only one of the tools available for this purpose. Various direct tax and expenditure programs, of course, may be used, and presumably are used, to similar effect. Peltzman's model is by far the most sophisticated, formal, and testable statement of the capture or "economic" theory of regulation.

Life-cycle Theory

The political science literature reaches roughly the same conclusion about the effect of regulation as the capture theory—that it favors industry groups at the expense of consumers, even though its initial purpose and effect may have been different. Bernstein's life-cycle theory suggests that short-lived coalitions of consumer interest groups are formed to pass regulatory legislation that is intended to

benefit consumers, but that the machinery thus established subsequently becomes captured by the industry. The consumer interest coalition fades in potency as the issue loses political salience. The loss of salience is due in part to the perpetuated myth that the agency is acting to protect consumer interests. This is what Edelman calls "symbolic politics" [16]. The symbolism is useful; the myth of consumer protection reduces the potential for political protest and alienation by evoking the symbols and rituals of the state.

Edelman's position that regulation is a useful symbolic charade must be assessed in light of the fact that the activity involved, however symbolic, is not costless. A very large part of the legal profession is employed in its operation, and there are numerous additional costs imposed by the process, quite aside from the substantive transfer from impotent to potent political groups. Indeed, as Posner has suggested in another context, much of the gains from the transfer process may be competed away by expenditures on the process of maintaining a politically or economically potent position [17]. One is left with the question whether both groups have not ended in a "low level equilibrium" trap, with lawyers, lawmakers, and consulting economists as the only beneficiaries.

Another early hypothesis describing regulatory behavior resulted from attempts to explain the political decision-making process. Writing in 1953, Robert Dahl and Charles Lindblom pictured regulatory agencies as one among many competing interest groups [18]. For example, the Food and Drug Administration (FDA), the medical profession, the pharmaceutical industry, and various consumer groups are all viewed as special interests attempting to influence policies affecting the development of new drugs. In such a context, decisions eventually handed down by the FDA are more the result of bargains and compromises than independent deliberation.

It must be emphasized that agencies are not to be mistaken as passive tools yielding to the strongest pressure of the time. Presumably they too have an identifiable interest, whether it be to satisfy a congressional mandate, an administrator's personal goals, or something else. Most writers adhering to the bargaining hypothesis are hesitant, or simply unable, to identify the specific interests of the regulators [19]. They prefer to interpret these interests within the context of case studies, which is tantamount to saying the bargaining hypothesis does well with hindsight, but is short on foresight. The hypothesis also suffers from the same problem of generality present in the life-cycle hypothesis; specifically, too many different kinds of behavior are explainable as outcomes of compromises, while no particular behavior is predictable, aside from being the result of a compromise. In

short, the hypothesis lacks a basis for testing. Moreover, the hypothesis cannot adequately explain why some interests are more effectively represented than others, or under what conditions some groups succeed and others fail. As a consequence, since the writing of Dahl and Lindblom, the bargaining hypothesis has undergone continual refinement.

Interest group interaction in the administrative process is of increasing importance as the courts have steadily expanded the scope of interest group representation, a trend documented by Stewart [20]. Recently James Q. Wilson has tried to give the hypothesis more substance by speculating on what the most likely regulatory behavior will be under three contrasting interest group settings [21]. He argues that if the benefits of regulation are distributed over a large cross-section of the population while the costs are concentrated (for example, automobile safety standards), then regulatory policy will be stalled in the administrative process. Or secondly, if the benefits go to a small group and the costs are diffused, as in the case of milk price regulation or occupational licensing, the regulator tends to serve the interests of the smaller group. And finally, if both costs and benefits are concentrated between competing groups, the regulator will act as an arbitrator. The structure of the problem will be familiar to those who have read Olson's *Logic of Collective Action*. Note that Wilson's arguments still spring from the original interest-group hypothesis: the fundamental determinant of regulatory behavior is the political context of the regulating agency, a position clearly consistent with Peltzman's more formal model. The principal difference lies in the perception of the degree of control exercised by the political decisionmakers.

Regulatory Goals

Porter and Sagansky [22] argue that the key variable in understanding the phenomenon of regulation is the set of *goals* of the regulatory agency. This emphasis on agency goals contrasts with emphasis on agency *decisions* or the efficiency and welfare *impacts* of agency decisions that are the primary concern of most students of the regulatory agencies. Porter and Sagansky assert that one cannot infer agency goals from an examination of agency decisions or from the effects of such decisions on the economy because there are likely to be intermediating constraints and information-related mistakes.

The importance of this distinction between goals and decisions can be seen through an example of two alternative, competing hypotheses of agency goals: (1) the agency pursues the public interest, (2) the agency seeks to promote the welfare of the group it regulates. Porter

and Sagansky contend that the socially inefficient agency decisions that are observed can be consistent with both hypotheses, not merely with the second. It is consistent with the first hypothesis, for example, when there are constraints such as limited information or limited analytical capacity. The distinction between goals and decisions becomes extremely important when remedies for economically inefficient results of regulation are sought. One cannot assume that the agency's actual goal is to protect regulated firms and then prescribe an appropriate restructuring of the agency's incentives. It is entirely possible that the agency's actual goal is to protect the public interest, in which case a sufficient remedy would be the removal of constraint by increasing agency resources for gathering data or for enforcing decisions.

The distinction between decisions and goals also becomes important in the choice of data that describe regulators' behavior. If there is an unconstrained relationship between agency goals and agency decisions, then it is sufficient to examine the decisions themselves; studying the actual process of decision-making is unnecessary. Indeed, studying the decision processes themselves may be misleading in the event that the administrative process is a charade, masking the agency's true intentions toward the group disadvantaged by its actions. However, if there are constraints which prevent one from making inferences about goals simply on the basis of decisions, then studying the decision-making process assumes critical importance.

Porter and Sagansky argue that the agency is best viewed as optimizing a multi-argument objective function subject to multiple constraints. They contrast this with the pre-Peltzman capture theory which implies that the agency has one unambiguous goal (serving the regulated firms) that is pursued subject to no binding substantive or procedural constraints.

Joskow suggests that regulatory agency behavior can be, at any one time, characterized as in one of two modes: (1) the agency in equilibrium with its interest group environment and (2) the agency in a period of innovation [23]. In the first case, there is a well-established organizational structure for the regulatory agency and well-defined regulatory procedures and instruments which the agency uses repetitively and predictably. This is the period during which the agency has attained its goal of minimizing conflict and criticism from the industry and consumer groups, subject to its legislative and judicial constraints. Once procedures with satisfactory results have been adopted, decision rules emerge and agencies operate relatively independently of economic conditions. These particular decision rules will withstand moderate changes in the economic

environment. However, severe hardships such as those caused by inflation beginning in the late 1960s can lead to a disequilibrium situation—the innovative stage.

The period of innovation is essentially dynamic: a period during which the agency's rules are no longer satisfactory to the interest groups it faces. Because of the ensuing conflict, the agency is pushed into a search process for new rules which will eliminate conflict. Typically, in the case of state regulatory commissions, several "leader" commissions can be identified that initiate most of the development of the new rules. (In the case of electric utility regulation, these states are New York, Wisconsin, and California.) Through a process of trial and error, new principles are developed, many of which have "struck at the heart of long accepted administrative principles viewed from 'inside'." Each new attempt at a set of rules which might quell the criticism of interest groups is applied to a few firms at a time. When a successful system has been devised, it is then rapidly diffused throughout the nation by imitation by the "follower" regulatory agencies.

Joskow's model of the regulatory agency bears a strong family resemblance to the so-called cybernetic approach to modeling bureaucratic behavior [24]. The idea is to recognize the agency not as an economic "rational actor" maximizing some objective function, as Peltzman would have it, but as an organization with bounded rationality, conflicting goals, and limited information. While this is a sensible idea, it is not clear whether it can be useful outside of the context of replicated tasks, such as budget-setting and rate of return regulation.

Bureaucrats and Legislators

Although market competition does not compel bureaucrats to maximize net revenue, or minimize costs, as the case may be, they still have preferences that influence the behavior of their bureau. Therefore, economists have sought to model these preferences as a means to study and predict regulatory behavior. While the interest group hypothesis views bureaucratic preferences as merely one factor among the many that determine regulatory policy, the utility maximization approach focuses on these preferences, and more exactly on the maximization of the administrator's satisfaction subject to certain constraints, such as opposing interests and legal restrictions.

William Niskanen bases his model on what he considers two critical characteristics of bureaus [25]. First, bureaucrats strive to maximize the total budget of their bureau, and second, bureaus exchange a specific output for a specific budget. This second characteristic

gives the bureau's sponsors, for example, the House appropriations committees, a take it or leave it choice—implying that bureaus wield some monopoly power. Underlying the first characteristic is the maximization of the administrator's utility function with arguments such as salary, office space, power, and public recognition. Niskanen's model leads him to conclude: "For different reasons . . . both monopolies and bureaus operate in output regions that are inherently nonoptimal. The substitution of a bureau for a monopoly to provide some product or service . . . solves no problem" [26]. The chief criticism of Niskanen's model is that its assumptions are strong. For instance, budget maximization may be a poor proxy for bureaucrats' real objectives.

Roger Noll and Morris Fiorina [27] provide the essential link between Niskanen-type bureaus and voters. The link is forged by demonstrating the importance of "facilitation" services provided by congressmen to their constituents who must deal with the federal bureaucracy. The role of a congressman is not merely, perhaps not even primarily, to legislate public services, but to facilitate their delivery. Modern congressmen function as ombudsmen for their constituents, and they do so because it contributes to electoral success, and provides an important advantage to incumbents. Congressmen have become increasingly aware of this role. There has been a steady increase in effort devoted to their home office. For instance, between 1960 and 1974 the percentage of all congressmen's staff devoted to district offices increased from 14 to 34 percent, and the proportion of congressmen listing multiple offices has risen by 43 percentage points! Hence it appears to be in the interest of both bureaucrats and congressmen to have bureaucracy grow, while it is not necessarily in their interest to be efficient.

Regulation as Contract

Victor Goldberg [28] proposes a novel approach. He observes that "relational contracts" (long-term contracts between parties with a continuing economic relationship) have many of the features of administrative regulation. Such contracts may give suppliers a right to serve and consumers a right to be served as a result of a process in which both parties voluntarily limit their future options in order to minimize costs or uncertainty. Long-term contracts may not specify prices so much as procedural mechanisms for determining prices, and so on. There is a striking analogy with regulatory procedures. Goldberg goes one step further and suggests that a regulatory body may usefully be treated as if it were the "agent" of the consumer group in negotiating and administering such a relational contract. This is an interesting idea, although it seems inconsistent with the theory of

administrative law, wherein the regulator is supposed to be an impartial arbiter of the public interest (where "public interest" includes the interest of the firm being regulated). Goldberg is not very explicit about this, but it is possible that the correct view is that the agency is a sort of court administering a "contract" in which consumers are represented by a fictitious agent. Then the regulatory body "estimates" the negotiating position of the fictitious agent and, as a court would, helps administer the contract. Whether or not this is plausible, Goldberg's main point is that the deals that would be made by such an agent might well include, say, restrictions on entry of competing suppliers. The reason for this is that in public utility type industries, consumers want to avoid the increased capital costs that would result from risky heavy investment under free entry. If this were a theory of administrative agency behavior, it might easily explain both the traditional behavior of the agencies in acting like cartel managers and the otherwise anomalous behavior of agencies in promoting competition, such as the FCC's policy toward AT&T. Unfortunately, it is far from obvious that this is an acceptable theory of the behavior of such agencies, although it may very well be a useful normative framework. One difficulty with testing the theory is that contrary evidence may simply be interpreted as "mistakes." Bounded rationality and uncertainty are the motivation for relational contracts in the first place.

Goldberg's approach is critical of the standard objections to agency behavior, which use static analysis of "discrete transactions" to condemn stability-augmenting policies such as entry barriers. The proper question, according to Goldberg, is whether the policies of the agency are different from those that would be freely negotiated by an agent entering into a long-term supply contract on behalf of a consumer coalition, and whether such a long-term contract is itself desirable in preference to a spot market. The areas where agency behavior can be viewed most sympathetically from this perspective are the heavily capitalized public utilities, such as electricity and telephone service.

An Assessment

Within the range of discretion left by the operation of administrative procedure, the problem of predicting agency behavior is about as difficult as the problem of predicting oligopoly behavior. When the number of actors is small, and the variety of contexts large, general models are extremely difficult to construct. At best, given the current state of knowledge, we can hope to predict behavior only within a rather constrained set of circumstances, or to show that individual agencies behave in internally consistent ways.

We have a grab bag of theories, but there are a number of tanta-

lizing links among them. Clearly the political scientists' interest group approach to agency decision-making can be linked up with Peltzman's model of regulatory income redistribution. Goldberg's notion of regulation as contract may provide the insights necessary to construct a formal normative model of the "public interest" theory of regulation in a way that allows us to distinguish empirically between "good" and "bad" agency behavior. Noll and Fiorina provide the all-important link between agencies and voters through the electoral process.

The various ways of thinking about the process of regulation that have been described in this section can be sorted very roughly into three broad categories. The first is the old "naive" public interest notion that regulators in fact do what they are supposed to do—protect the consuming public from the effects of a variety of market imperfections. Goldberg's approach perhaps comes closest to making this notion operational and testable. The second category includes the various "rational actor" models, such as those of Peltzman, Noll and Fiorina, and Niskanen. In these models rational regulators with well-defined objectives seek their own ends. Generally, such models regard regulators as politicians seeking essentially political rewards by use of the government's power to redistribute income. These models tend to be cynical, or probably appear so to noneconomists. The third general category of models tends to emphasize the limited information and bounded rationality of organizational decision-making bodies with perhaps conflicting internal goals. Approaches such as those of Joskow, Porter and Sagansky, and the "cybernetic" or organizational theorists fit into this category.

It should be clear at once that these approaches need not be mutually exclusive. A really general theory of regulation would include elements from each. But all of these theories fail to explain some regulatory phenomena and, in particular, they fail to explain why administrative regulation takes the special form that it does. Why should the benefit-distributing regulators of Peltzman's model bother with the forms and awkwardness of due process? Why not redistribute by fiat? Why do some powerful interest groups sometimes not get their way in regulatory proceedings? The answer to these questions may lie in a better understanding of the actual process of decision-making imposed upon regulators by administrative law.

TOWARD A THEORY OF REGULATION

In this section we put forward the notion that the effect of administrative procedure, the legal rules that constrain the forms of regulatory decision-making, is to slow down or delay the operation of

market forces. From this observation we deduce that the effect may be intentional, and look for a reason why it may be intended and a mechanism by which the intention is carried out. The result will be a hypothesis about the "cause" of regulation that may provide a useful framework into which the various ideas explored in the previous two sections can be fit. The effort is motivated in part by the inability of any of these older models to explain the existence and peculiar form of administrative procedure, and partly by the existence of obvious counter-examples to the predictions of these theories.

It seems unreasonable not to begin with individuals. At least, the choice of any alternative "primary actor" requires greater justification. Thus, it seems sensible to assume, at least at the outset, that on average and over the long-term Congress reacts to voters' preferences and that regulatory agencies behave the way Congress wants them to act. Of course, it is possible that voters are continually frustrated with the behavior of congressmen (or that voters do not care about this sort of policy issue), or that Congress in turn is continually frustrated by the behavior of regulatory agencies but has no better alternative. These are serious objections to the proposition that regulatory agencies tend to behave the way voters want them to behave. The objections are serious because there is a substantial amount of evidence and a mass of literature that support them. As to the link between voters and particular congressional policy-making on individual regulatory *issues*, the objections simply cannot be assumed away. But the objections to assuming that long-term consistent policies covering a wide range of similar issues reflect the attitudes of median voters are not so serious. The second part of the objection, that regulatory agency actions may not be used to infer congressional objectives because the agencies may act to frustrate those objectives, is easier to assume away. Congress has too many controls over the behavior of the agencies, their budgets, and the law under which they operate to make this objection plausible as a long run characterization of behavior. The continual establishment, over the years, of new agencies with the same form and the same rules is strong evidence that Congress is reasonably content with their behavior. Other tests of this hypothesis are possible, and we will return to the issue later.

So, at some risk, we are going to infer the objectives of Congress (and therefore of median voters) from generalizations about the behavior of regulatory agencies. This approach appears to leave no room for agency discretion, and is therefore in itself no theory of agency behavior. Surely administrative agencies have some range of choice in policy-making, within and consistent with the broad objectives of congressional intent. This is precisely where those theories of agency behavior discussed in the previous section come into play.

The present hypothesis provides an explanation of some sources of broad consistency in the decision-making process. These consistencies are related to the single element that guides all agency decisions, namely, administrative law. Within the framework of administrative law, and consistent with its imperatives, agency policy-making may follow one or more of the hypotheses that have been constructed to explain it. The important point is that certain important aspects of the policy-making process are constrained to follow rules that bias the outcome in predictable ways, and that these rules have a plausible explanation in individual preferences. In contrast to much discussion of regulatory behavior, this is not necessarily a theory of pathology.

The idea put forward here is simple. The courts and Congress have collaborated in constructing a law of administrative procedure that has certain economic implications. Congress has simultaneously expanded the range of economic decisions that are subjected to the forms of this process. We should therefore be willing to accept the implication that Congress (and voters) intend this result. Examining the nature of the result gives insight into the objectives sought. The objective is economic justice or fairness. This is quite explicit; this is what law is all about. There are two features of the administrative process that are of interest. The first is delay. The second is derivative: the grant to individuals and their interest groups of equity rights in the status quo.

Delay is inherent in any decision-making procedure that is formalized. But the peculiar nature of the administrative process is to accentuate that delay and to make the period of delay responsive to the actions of the parties. In particular, any party disadvantaged by the prospective decision is granted the right to delay that decision for many years. The extensive delay is not automatic. The easing of standing criteria and the promotion, by the courts, of interest group representation have increased the importance of this right [29].

The argument that it is an intended and rational policy depends on the assertion that voters agree that the victims of economic change should not be placed at the mercy of the impersonal market, but should instead be protected by a mechanism that provides economic justice.^d A very primitive, minimum response to this desire is the

^dThe words "justice" and "fairness," with certain exceptions made obvious by the context, are used synonymously in this chapter. Legal fairness or justice, is sometimes said to mean treating equals equally, as opposed to giving each what he deserves. Both definitions are fuzzy at best. However, in this chapter the central concern is with procedural fairness, a concept that implies the ability to rank economically identical outcomes on the basis of the manner in which they were attained. If the representative voter prefers one such manner or method to another, we shall call it "fairer," or more just.

grant of a period during which adjustment can take place and useless fixed costs amortized. Noneconomists are great respecters of sunk costs; the transformation of useful physical and human capital into an irrelevant sunk cost by market or technological forces is a process that is easily viewed as unjust and even inhumane. In addition, substantive policy decisions are affected: people cannot be deprived of existing services at existing prices without due process. Examples of this abound: cable television, radio formats, local service airlines, passenger railroads, natural gas.

The Noll-Fiorina theory predicts increasing use of administrative procedure because of congressmen's desire to increase the demand for their facilitation services. There is no contradiction. But congressional facilitation services are not as effective in the regulatory area as in the normal executive bureau precisely because administrative law protects the process from them. The facilitation model works best (or most plausibly) for social security and veterans' benefits matters, and is least plausible for the sorts of decisions governed by the strict form of administrative law (e.g., in non-rulemaking procedures). Indeed, the major impact of Congress in individual *regulatory* agency processes is not facilitation but rather increased delay, and then mostly in policy (rulemaking) matters.

What needs to be supplied to complete the model? First, we need to show that individual voters may prefer that all economic changes be subjected to administrative procedure. One way to do this is to assert that people prefer the forms of justice to the forms of the marketplace simply because courts are fair and markets are not; but this is tautological. Can it be demonstrated that it is in people's economic interest to prefer judicialized decision-making to economic decision-making? The second step is to analyze the efficiency and distributive consequences of replacing markets with courts. The third step is normative: can the objectives defined in step one be achieved more efficiently with alternative procedures?

The Search for Procedural Fairness

It is easy enough to find examples of agency behavior that contradict at least the simpler versions of the capture theory of regulation. Certainly neither the telephone company nor natural gas suppliers would agree with the proposition that its respective regulators were sympathetic cartel managers. Nor would stockbrokers or passenger railroads. Each of these industries has reason to complain about the behavior of its regulators. The FCC has been trying to encourage other firms to enter AT&T's previously monopolized markets. Natural gas prices have been held not merely below monopoly levels, but below market-clearing levels. Stockbrokers have been forced by the

SEC to decartelize their rates. Passenger railroads have been forced into bankruptcy by the ICC's insistence on continued service.

The hypotheses that predict agency capture by or identification with the industry being regulated are thus not wholly consistent with the evidence. Of course, there is also a great deal of observable behavior that is consistent with these theories, such as regulation designed to "stabilize the market" (federal agricultural policy, occupational licensure, and early airline regulation). Roger Noll's review [30] of the Ash Council Report provides many other examples.

Until the Great Depression, regulatory agencies were severely circumscribed by direct judicial review of their decisions affecting prices and profits [31]. The judiciary saw a clear conflict between the role of administrative agencies and the due process guarantee of the Bill of Rights. Accordingly, the fairness of rates of return and the like could only be settled by courts of equity. As the scope of regulation increased with the altered climate of opinion in the New Deal, the judges ceded much of their substantive decision-making power to the agencies, reserving for themselves only the right to review decisions for conformity with accepted standards of fairness in the agencies' procedures. This gave at least the appearance of increased administrative power in the agencies, and the Congress reacted by codifying the rules of procedural fairness in the Administrative Procedure Act of 1946.

The essence of administrative law is that the decision-making process must conform to reasonable standards of fairness, which in practice means that decision-making is judicialized. Within each agency factual issues must be resolved in hearings that are in fact trials employing the traditional adversary process before an "administrative law judge." The judge's decision is appealed to the commissioners themselves, and then to the courts. There are rules of evidence, rules against *ex parte* contacts, discovery procedures, and subpoena powers; in short, there is a wholly judicial process. Even "rulemaking"—broad policy decisions—is increasingly forced into this mold [32].

The purpose of this process is to give every interested party a day in court, to ensure that all relevant information is adduced and scrutinized, and to ensure that secret, fiat decision-making is eliminated. The reviewing courts have acted to strengthen the integrity of this process, and to enlarge the scope of interest group representation.^e Recent "sunshine" laws underscore the intent of Congress.

The effects of judicialization are well known. Decision-making is, or can be, extensively delayed by the process of hearings and appeals.

^eThe demonstration of this tendency and its evaluation are Stewart's main theses.

Parties with superior resources have an advantage in being able to sustain heavy litigation costs, but even parties with few resources can use them strategically to delay resolution of the issue. The advantage lies with those who gain from the status quo, which can in many cases be perpetuated for years. For example, it is commonly known that the 1962 Kefauver-Harris Drug Amendments have operated to impede the introduction of new drugs. The administrative process is so lengthy and involved that it now takes five to seven years before a new drug can reach the market, usually several years after the same compound has been introduced in Europe. Needless to say, the amendments work to the advantage of those drugs already established [33]. That this advantage does not always lie with the regulated industry is a point well illustrated by the Alaska pipeline controversy and the problems of electric utilities in an age of environmentalists and inflation [34].

Legislators and successive democratically elected administrations, reacting to the preferences of voters, or median voters, have been steadily replacing markets with courts. We can reject the notion that this is done because markets are inefficient compared to fiat allocation. The regulatory agencies are almost never told what sort of allocational criteria they are to use. Legislators, and therefore presumably median voters, are concerned that the *process* of resource allocation be fair, and are apparently prepared to accept the outcome so long as the procedure is fair. From this, it is possible to infer that people dislike the very process of free market allocation, no doubt because its outcome is regarded as risky and therefore unfair. Alternatively, we might say that voters prefer a system that provides some leverage when the market confronts them with an economic loss, particularly one that is unexpected. This is hardly inconsistent with producers' demands for cartel management, and it explains why the political system does not react favorably to the economist's calls for deregulation.

Market forces, particularly those associated with innovative activity, necessarily pose a threat to human beings with less than instantaneous adaptive capabilities. It is not merely that investments in physical capital with few alternative uses may be threatened, but also investments in human capital: specialized skills, knowledge of an industry or a firm, and the like. Political activities designed to protect these investments from sudden, unexpected reductions in value may be indistinguishable from actions designed to achieve an increased return on investment through monopoly. But to the extent legislators see the proposals for regulation as being principally an attempt to obtain the benefits of due process, with its slow deliberation, in

order to protect human investment, they may reasonably be sympathetic. This point of view, when coupled with the symbolic political usefulness of the notion that regulation is to protect the consumer from monopoly prices or unsafe practitioners and products, may be quite persuasive. In a sense, then, regulation is not much different from unemployment insurance and agricultural price supports, both of which are intended to protect human as well as financial interests from the shocks and blows of market forces.

It is, however, an open question whether the effect of the administrative process is merely to soften, to draw out, the effects of underlying market forces, or whether a fundamentally *different* result is achieved. Can we predict the likely direction of structural changes in the absence of regulation? Did the railroads merely fail later than they otherwise would have? Will cable and pay television arrive in due course, twenty or thirty years late?

It is worth mentioning again that process delay is available not just to vested regulatory interests, but to others as well. The delay is beneficial to those who wish to preserve the status quo. In the normal regulatory context, therefore, the beneficiaries are the existing regulated firms and the "victims" are new entrants and consumers. But there are other contexts in which the regulated firms are the victims of process delay: electric utilities seeking to build new power plants of any type are a dramatic example. Relatively small organized environmental groups have successfully delayed construction of such plants for years. This supports the point, that the effect (if not the purpose) of the administrative process is to slow down the rate at which things *change*, but it must be admitted that the evidence is equally consistent with the proposition that the point is to make sure that the change is "fair." Thus, even when the policy of the agency is to deprive the regulated industry of some power or benefits, that policy can only be enacted with painful and frustrating deliberation. The FCC's pro-competitive policies have been in existence for years, but AT&T has used the administrative process to delay their realization. The SEC was not able to end fixed exchange rates quickly.

The search for fairness in the economic decision-making process is attended by the persistent myth of the free enterprise ideal, and the fundamental conflict between this ideal and the interest of every actor in the economic system. The myth has substance, for it is embodied in the laws of private property so that there is a contradiction between the reality of intervention and the legal basis of economic activity. Once we see that individuals no less than business enterprises desire the intervention of the state to provide shelter from the free market, we see the necessity for judicial constructions that seek

to preserve both myth and reality. But the veil of administrative due process with which the judiciary has shrouded this contradiction has its own substantive implications. In effect, it provides a new set of rules for resource allocation.

A Preference for Stability

In choosing among those policies by which they wish to be governed, voters are moved by personal interests as well as abstract principles. If there is any single ideological principle governing regulation, it is that free markets should be left alone because government is not competent to improve them. But if there is any general statement that can be made about regulation over the past fifty years, it is that the scope of administrative regulation has steadily increased. How are we to reconcile these observations? They must be reconciled by examining the incentives of voters with respect to their own interests.

It is well known that free market economies are subject not merely to the greater or lesser periodic booms and busts of the various cycles of macroeconomic activity, but also to sudden and total dislocation of particular micro-sectors as a result of shifts in technology and demand. The free market is, in a word, risky. It is reasonable to suppose that most people wish to reduce the risks that they face, and even that they will pay something to reduce those risks, at least when the risk of a very great loss is present. In other words, voters may be expected to be risk averse.

If the effect of regulation is to reduce the risks faced by individuals (by delaying change and subjecting it to a judicial process that is "fair") then it is easily demonstrated that voters in a society of risk-averse individuals will prefer a regulated economy to a free market economy, even if it costs something (see the Appendix to this chapter).

On the surface, at least, it would appear that the newest regulatory agencies—the Environmental Protection Agency, the Consumer Product Safety Commission, the Occupational Health and Safety Administration—have been created not to impede change but to accelerate it. But a closer look suggests that this need not necessarily be true. Of course, it would be silly to argue that the *only* purpose of regulation is delay. Congressmen do indeed want to clean up the environment and improve safety conditions. But they choose a mechanism for achieving these ends that is perhaps much less direct than such feasible alternatives as improved liability rules. And in *operation*, a major impact of environmental and safety regulation often is to delay economic growth and change. But there are exceptions. The Consumer Product Safety Commission was not given the power to

hold up marketing of all new products until their safety had been demonstrated. (The EPA has such power for pesticides, as the FDA has for drugs.) Does legislation to provide the CPSC with such power lie in the future?

Even though the facilitation-services model of congressional candidate success be valid, congressional candidates will still take positions close to those of median voters on policy issues. Thus, we have a clear link between voters and congressional policy in establishing regulatory agencies and in setting the rules by which they operate. The intention is to attenuate the rate at which income is redistributed in society as a result of market forces and technological progress. This is achieved not so much by the substantive policies of the agency as by its mere existence in the context of the administrative process. The contrast between this model and Peltzman's should be clear: regulation exists in Peltzman's model because it is a device whereby the politician achieves electoral success by redistributing income. Regulation exists in the present model in order to slow down the rate at which the free market redistributes income, thus reducing the market risks faced by voters. Unfortunately, at least for purposes of testing, delay is consistent with both models.

As Mordecai Kurz [35] has persuasively argued, income redistribution must be regarded as an endogenous part of any democratic society. The relative stability of the shares of middle-income groups in the American economy is evidence consistent with the view that those who are most likely to be risk-averse are those who enjoy real political power.

With this statement of the hypothesis, it is possible to inquire into the behavior of the agencies themselves, using some of the theories reviewed earlier. It is the procedure as much as the ultimate outcome that matters. Or rather, the procedure *is* the outcome. It is nevertheless instructive to ask whether Congress is generally satisfied or frustrated with the behavior of regulatory agencies, since evidence of general frustration might suggest that the agencies were acting contrary to the wishes of median voters. The most powerful tool of congressional control is the budget process. A budget committee that was dissatisfied with the behavior of a regulatory agency might either increase that budget (to allow the agency to get on with the job) or cut the budget (to punish the agency for bad performance). In either case, the variability of regulatory agency budgets would be greater than that of other agencies. The evidence is that the budgets of regulatory agencies over the last twenty years have not behaved differently from the budgets of nonregulatory independent agencies [36].

The model of regulation proposed here is derived from a generalized observation about the *effect* of regulation, an argument that it would be rational for voters to wish for this effect, and a political link between voters and the legislated procedures, charters, and budgets of agencies. As such, the model does not in any important sense compete with the rational actor models of Peltzman and others, or with the "cybernetic" models of scholars like Joskow and Allison. There is room within the present paradigm of regulation as a filter for the other two approaches. The cybernetic theory explains how rules of thumb develop to guide decisions in an environment of limited information and bounded rationality, but it does not explain why this particular organization of means and ends came into being, or why it resists rationalization. Thus, the theory of administrative procedure as micro-market stabilization provides a framework within which the cybernetic approach makes even greater sense. Similarly, while rational actor models of the Peltzman type abstract from the frictions and imperfections of the real world, they too can be fit into the model in order to explain policy decisions that lie within the set left feasible by administrative procedure and judicial delay. It would be foolhardy to argue at the end that administrators, active agency chairmen, and their related congressional committees have no power whatever over policy choices. Models such as Peltzman's are entirely appropriate to explaining the use of that power.

Equity in the Status Quo

The stress on procedural fairness and judicial forms breeds a preference for fairness in substantive outcomes. The ideal court of equity determines, on the basis of fair procedure, the parties' substantive *rights*. The outcome may well be one in which one of the parties loses substantial amounts of money or property which "rightfully" belong to another party. But in the world of regulation, there is no body of substantive rights, or at least not a well-developed body of rights. Consequently, there is a tendency to seek outcomes which appear distributionally fair, according to prevailing social norms. This results in market-splitting arrangements, for instance, in cases where competing firms or industries are regulated by the same agency. Economic survival is one fundamental index of fairness. Ensuring the survival of all parties requires entry barriers, price fixing, and the like. Surely regulators who were striving for the most efficient industries would not be embarrassed by the exit of marginal firms. Yet when the Penn Central Railroad filed for bankruptcy in the early 1970s, the ICC found itself in a very difficult position. The commission

was forced to explain why Penn Central should be bankrupt and not other railroads. In other words, why was Penn Central treated unfairly? It is predictable that agencies will reject economists' efficiency-oriented solutions if these fail to take account of equity considerations. Regulated firms have, in effect, a legal right to their market shares, and their customers have, in effect, legal rights to the existing prices and quality of services. And it is important that regulatory agencies recognize these rights. The Federal Trade Commission was brought to this realization in its first major confrontation with big business. In 1917 the FTC issued a report stating there was "only artificial show of competition among the largest five meatpackers" [37], and that the Big Five had formed unlawful combinations to control the livestock market. This convinced the Justice Department that the industry should be more competitive. However, when charges were brought against the meatpackers there was such an uproar in Congress that the case never got to court. Senator James Watson of Indiana held the FTC responsible for the indictments and sponsored a resolution to investigate the commission which reportedly was invested with Bolsheviks. The resolution did not pass, but regulatory jurisdiction over the meatpacking industry was soon transferred to the Department of Agriculture where the competitiveness of the industry went unquestioned.

The case of radio formats serves as another example. In large cities there are dozens of radio stations, comprising a highly competitive industry. Changing consumer tastes and other factors lead these stations, from time to time, to alter the nature of their programming. But the D.C. Circuit Court of Appeals has recently held that stations are not free to do so at will. In particular, "unique" programming formats (and what format is not in some sense unique?) may not be abandoned without a formal adjudicatory proceeding before the FCC. In effect, listeners have been granted a legal right to their present level and type of service, of which they may not be deprived without due process. The economic effect of the due process requirement is that an expensive blockade stands in the path of change, and the status quo achieves a more substantial stability. It is worth noting that this is the court's idea, and that the FCC is actually opposing it [38].

The point can be further illustrated by returning to the FCC's common carrier regulation. Economists have generally welcomed the commission's pro-competitive entry policies in this field, not so much because it is well known that competition is optimal in this industry (a proposition in current dispute) as because we do not know that monopoly is optimal. A policy favoring free entry and

exit of competitors looks like a good way to find out, although it requires a fairly high prior estimate of the probability that competition will turn out to be the right policy in order to offset the costs of wasted investment in the event that it is not. Nevertheless, everyone is very nervous about the possibility that entry that turns out *ex post* to be unwarranted will not be followed by exit because the FCC will artificially preserve these entrants, as it has with Western Union over the years.

In a *laissez-faire* economy agents vote with units of purchasing power. The status quo in such an economy can be disturbed by a technological change or by a change in tastes. Exogenous shocks in such an economy set off forces which move the economy from one position on the Pareto frontier to another position on the frontier or to a new frontier. It will not always happen that such changes will move the economy to a position which is Pareto superior to the old position (even if the effect of the change is to move the frontier outwards) in the sense that no agent is hurt by the change. The principal effect of the proposition that our economy is now controlled by administrative law is that the voting power of such harmed agents is significantly increased. In effect, they are granted some legal rights in the status quo, of which they cannot be deprived without "due process." Compensation may take the form of an outright bribe or subsidy, or it may take the form of a substantial delay in implementing the change which threatens. Sometimes compensation cannot be paid and the change is effectively vetoed. This observation is not novel. Political economists interested in public policy issues have traditionally accepted the necessity of paying off politically effective groups that stand to lose from a policy change. The difference here is that compensation is not limited to groups that are politically effective, since the courts insist on interest group representation even when there is no effective representative. This allows self-styled public interest advocates to wield influence in directions that may in fact be contrary to the interest they nominally represent. For example, despite its newness and apparently strong mandate, it is not entirely clear just whose interest the Consumer Product Safety Commission (CPSC) serves. Recently, in the interest of "public safety," the CPSC, aided by the trade association for American bicycle manufacturers, developed bicycle safety standards which included some designs that would have effectively excluded foreign-made bicycles from the market. However, due to protests from the bicyclists' lobby the designs were never used [39]. In the more traditional political system, interest groups wield political power only if they can be effectively organized, and this necessarily results in a representation that is attuned

to the real interests of the group. When consumer groups, for instance, are represented by proxy advocates, it may be much more difficult to design or even conceive of compensation schemes that unblock the proposed allocation. Political reality confines the policy-maker to the task of finding the least costly compensation mechanism, and the effect of administrative procedure is to severely limit the available options. Finally, the nature of administrative law makes it virtually impossible for one important interest group to be represented—that group which does not exist until the proposed change has been made, and which could be organized or even identified only after the change. Decentralized market systems do not discriminate against such groups.

Formal analysis of the effect of administrative fairness could presumably proceed on a very abstract level by constructing a general equilibrium model of an economy with agents who, individually, have legal right to the status quo. Such a model would doubtless show that compensation schemes are necessary to achieve any reasonable definition of efficiency. *The problem then may be seen merely as an excessively inflexible menu of compensation options.* But this may be inaccurate if people view money transfers as inherently inferior (“distasteful”) to economically equivalent compensation in the form of delay, outright blockage, or alternative concessions.

Models of resource allocation under various rules of fairness are apparently extremely sensitive to assumptions that are difficult to make realistic. Consider an economy with three agents, starting out with the unequal allocation 10, 1, 1. This economy is subject to exogenous shocks that are cyclic over three periods. In period 1 we alter these allocations by +1, +1, -1. In period 2, the alteration is +1, -1, +1, and in period 3 it is -1, +1, +1. In a laissez-faire economy this sequence proceeds without hindrances. After eighteen periods, the allocations are 16, 7, 7. An economy, subject to rules of procedural fairness that simply delay all allocations (that hurt anyone) by one period, will lag one period behind the laissez-faire economy. After eighteen periods, the allocations are 17, 6, 6, which is equivalent to the seventeenth period of the laissez-faire economy. A second possible model of procedural fairness would block permanently any change that lowered aggregate social welfare. We define a garden variety social welfare function, $w = \sum_i \sqrt{\alpha_i}$, where α_i is the resource

allocation of agent i . If a change is blocked, the allocation of the previous period remains in force. After eighteen periods, such an economy has allocations of 10, 7, 7 and a welfare number of 8.45, which

is *lower* than the welfare of either the laissez-faire economy or the simple delay model. Finally, we might consider a myopic Rawlsian rule that permanently blocks alterations that reduce the allocation of the poorest agent. Such an economy after eighteen periods has allocations 6, 7, 7. The Rawlsian rule results in a drastic trend toward equality, but when equality is reached, it proceeds as if it were laissez-faire. The period required to attain equality is extremely costly to the total wealth of the economy, however, and it never recovers. (Note that the poorest agent in the Rawls model after eighteen periods has the same wealth as the poorest agent in the laissez-faire model.)

The changes in the preceding examples (+1, +1, -1, etc.) are very mild ones, in which poor agents gain disproportionately. One might wish to consider changes that are proportionate to initial endowments, one drastic version of which is the pattern:

period 1	+20%	+20%	-20%
period 2	+20%	-20%	+20%
period 3	-20%	+20%	+20%

After eighteen periods of this, the economy that is unconstrained by procedural fairness has allocations of 23.38, 2.34, 2.34, and welfare of 7.89, while the economy in which changes that reduce w are blocked forever has allocations of 89.19, 0.78, 0.78, and welfare of 11.21. A myopic Rawlsian rule results in a quick move toward equality followed by the same pattern as the laissez-faire economy. The results of all these alternatives are summarized in Table 1-1.

It is clear that the comparison of these rules is sensitive not only to the rules themselves but to the assumptions made about the initial conditions and the nature and size of the exogenous changes. In particular, the pattern of changes in the first few periods (which may each be a generation long) is very important. It is very far from obvious what the proper set of assumptions is from the point of view of realism. This suggests that it will be difficult not only to build a reasonably comprehensive model of the actual procedural rule (the examples above are very primitive) but to say what the implications of that model will be. One thing that this exercise has shown is that procedural fairness may be extremely costly in terms of total societal wealth, and that it does not necessarily result in a global pattern that satisfies its own myopic criteria.

Table 1-1. Summary—18th Period Allocations and Welfare

	Resources				
	#1	#2	#3	Σ	w^{**}
<i>A. (+1, +1, -1) etc.</i>					
Delay 1 period	17	6	6	29	9.02
Block if $w \downarrow$	10	7	7	24	8.45
Laissez-faire	16	7	7	30	9.29
Rawls*	6	7	7	20	7.74
<i>B. (+20%, +20%, -20%) etc.</i>					
Block if $w \downarrow$	89.19	.78	.78	90.75	11.21
Laissez-faire	23.38	2.34	2.34	28.06	7.89
Rawls*	2.62	2.99	2.99	8.60	5.08

Source: See text.

*After equality is achieved, Rawls economies are laissez-faire.

**Welfare in the first period in each case is 5.16.

THE ROLE OF ANTITRUST LAW

Antitrust law is an obvious candidate counterexample to the proposition that markets have lost political legitimacy. But the counterexample will not stand up to scrutiny. First, much antitrust policy historically has protected competitors, not competition. The whole notion of "unfair" competition and its regulation is consistent with our hypothesis. Second, antitrust law is not concerned with competition in the efficiency sense, but with competition in the fairness sense. Small firms are better than large ones. Economies of scale are no defense. All mergers are bad. Despite a good deal of wishful thinking on the part of economists, antitrust law, and usually antitrust policy, has little to do with the legitimacy of the price system. A gloss on antitrust law might, with only slight exaggeration, read "in those markets where courts do not directly control allocation, market actors must be fair to each other."

There is a second aspect of antitrust which is of interest here. This is the conflict between antitrust and regulation, involving antitrust attack on regulated firms and even regulatory agencies. Within our present system, there is a clear and long-standing antagonism between the regulatory statutes and the antitrust laws, and their respective agents. This antagonism is reconciled at times in statutes granting antitrust immunity to regulated firms, but there remain two areas in which direct interaction takes place. The first is in actual antitrust litigation involving regulated firms, where the courts must decide

issues of implied immunity, exclusive and primary jurisdiction, and state action. The second is in the policy-making process, where the Antitrust Division is frequently a party to rule-making procedures of the regulatory agencies. The division has been particularly active in banking, communication, and airline issues. Both of these areas of antitrust activity, however, involve traditional issues of industry structure, entry, and competition, rather than the interaction of agencies with their industries and strategic anticompetitive use of the administrative process.

The law of antitrust in the area of regulated industries is very far from being settled. Recent decisions swing both ways, with such cases as the Detroit Edison Company's sale of light bulbs [40] and the preliminary jurisdictional ruling in *U.S. v. AT&T* [41] on one side, and *U.S. v. NASD* [42] on the other. These cases really turn on statutory construction. A more interesting approach from the present perspective is the use by regulated firms of the administrative process itself to achieve ends repugnant to the antitrust laws. The notion here is that such firms may "abuse" the administrative process. The resolution of this issue by law is important, since we have argued that the behavior involved, far from being an abuse of process, is precisely the behavior for which the process is intended. It is therefore worthwhile to examine the cases which deal with this issue.

First, there is some common law and some patent case law dealing with abuse of judicial process. An example of abuse is the initiation of a law suit to compel payment of a debt which is not the subject of the complaint, accompanied by an express offer to terminate the suit if the debt is paid [43]. The use of process to intimidate others, or to preclude their own access to process, is a tort, provided that the transgressor has taken specific collateral actions which prove intent. Inquiry into subjective motives is generally insufficient. "Acts which in themselves are legal lose that character when they become constituent elements of an unlawful scheme" [44].

Second, there is a line of patent cases in which infringement suits by the patentee were viewed as abuse of process because their intent was proven to stem from a pattern of behavior designed to eliminate competition in violation of the antitrust laws [45].

Third, when abuse of process comes squarely up against the First Amendment rights of persons to petition public officials for redress of grievances (i.e., to lobby for special interest treatment by government), the activity is protected. Two cases in this area severely limit actions for abuse of process. They are *Eastern Railroad President's Conference v. Noerr Motor Freight*, and *United Mine Workers v. Pennington* [46]. For a time these two cases seemed to eliminate

anticompetitive abuse of process as a Sherman Act violation by reason of First Amendment immunity. In the *Noerr* case, a group of railroads conducted a publicity and lobbying campaign to influence state of Pennsylvania officials to the detriment of the trucking industry. They were successful. The Supreme Court unanimously upheld the railroads' right to "attempt to influence the passage or enforcement of laws . . ." [47]. In *Pennington*, the court said, "*Noerr* shields from the Sherman Act a concerted effort to influence public officials regardless of intent or purpose" [48].

The *Noerr-Pennington* doctrine was applied and extended by the lower courts in a long series of cases in the 1960s [49]. But there were exceptions. One court refused to grant *Noerr* immunity to a knowing submission of false data to a regulatory commission [50]. In two cases involving the D.C. Circuit, attempts were made to "balance" the antitrust policies of the nation with the defendants' First Amendment rights [51]. Generally, the effect of these decisions was to widen an exception written into *Noerr* by the Supreme Court: that "sham" conduct is nonimmunized abuse of process.

The pendulum swung back from *Noerr* in two recent cases where abuse of process was found to be an antitrust offense. In the first, *California Motor Transport v. Trucking Unlimited* [52], a group of truckers joined in an announced plan to exhaust process in opposition to each and every new application for certification by the California PUC, and to share the expenses of doing so. The Supreme Court found an antitrust violation in this because the effect was to deprive entrants from having "free and unlimited access" to the agencies and the courts by means of the conspirators' massive, concerted, and purposeful activities.

The crucial distinction seems to be between the right of a group to seek its own advantage from the government and a program of action which prevents another group from doing the same. This is a narrow and awkward distinction, and one wonders whether it can be a viable tool in deciding future cases. On the other hand, it is consistent with the hypotheses put forward in the preceding section. The second case, *Otter Tail Power Co. v. U.S.* [53], involved efforts by Otter Tail to discourage municipalization of power service by entering into litigation with the cities, thus hampering the sale of "litigation-free" revenue bonds. The district court found that "repetitive use of litigation by Otter Tail was timed and designed principally to prevent the establishment of municipal electric systems and thereby to preserve defendant's monopoly. . . . The litigation comes within the 'sham' exception to the *Noerr* doctrine . . ." [54].

These cases pretty clearly leave the legal issues undecided. If our characterization of the purposes of administrative regulation is sound,

one should expect that the courts will eventually strike down the use of antitrust law to prevent anticompetitive use of process, and to strengthen procedural norms in order to deal with abuse of process. In doing so, the courts will be bound to further strengthen the role of interest group representation, and may be forced, in effect, to protect the agencies from "excessively" powerful interest groups.

CONCLUSION

When there is a sudden shortage of gasoline or natural gas, or water, an overpowering instinct in favor of rationing and price controls seems to motivate both public opinion and political action. The market system, at least when it responds to abrupt changes, is regarded as an unfair allocation mechanism. The first instinct of an economist is to say that this behavior reflects dissatisfaction with the distributional effects of a price system, and that an efficient and also just result could be achieved by using some compensation scheme in conjunction with market prices. Such schemes are seldom used. Perhaps the reason is that distributional effects in the usual sense are not the real issue. The medium is the message. *The fairness of the allocation mechanism itself is the real economic issue.* People are willing to trade off some efficiency for increased procedural fairness. In other words, compensation schemes that preserve the preexisting distribution of wealth may nevertheless be regarded as inferior to rationing schemes with lower economic efficiency. This is essentially the point that Robert Nozick makes in *Anarchy, State & Utopia* regarding means and ends in economic choice.

The climate of intellectual opinion regarding regulation has essentially reversed itself since the days of the New Deal. Government activities that were then thought to be humanistic and liberal are now "known" to be illiberal and regressive. But perhaps we have gone too far in our criticism of the behavior of regulators and regulatory institutions. It is easy enough for economists to get caught up in the fantasy of assuming that the world cares or should care about some narrowly defined notion of efficiency, and we have apparently persuaded other disciplines to the same view. Too little attention has been paid to the implications of the institutional framework of procedure in the administrative process. When we do focus on this process, it becomes at least arguable that regulation, at the cost of some efficiency and of some progressivity, may have provided substantial benefits to individuals by protecting them from some of the risk they would otherwise face from the operation of the efficient but ruthless free market. Whether this is so is a question that must be

addressed by further research; it is certainly not self-evident. The hypotheses that we have been discussing in this chapter do not yet have normative implications; we do not regard the phenomena of regulation as either good or bad. Future research that is aimed at normative conclusions must consider, first, whether the administrative process does provide people with a means of avoiding risk in the market system, and second, whether it does so at acceptable cost or whether it is superior to alternative means of achieving economic security and justice. We do not know the answers to these questions. Nevertheless, we are reminded of Edward Gibbon's comment on the fall of Athenian democracy: "In the end they valued security more than they valued freedom, and they lost both."

Appendix

The proposition stated on page 25 of the text is trivial in mean-variance analysis with one good. In the following note Mr. Sherrill Shaffer demonstrates its validity under somewhat more general conditions.

To motivate the discussion, we note that, whenever parties can forestall or diminish a threatened loss through regulation, the uncertainty of their endowment in the next period is reduced on the downward side. However, since blocking such losses also involves blocking corresponding gains to other parties, the regulatory process may be expected to reduce endowment uncertainty on the upward side as well.

NOTATION

Consumers:	$i = 1, \dots, H$	
Goods:	$j = 1, \dots, G$	
Endowments:	$\bar{w}_i \in \mathbb{R}^G$	date 1 to consumer i . (\mathbb{R}^G is the G -dimensional real Euclidean space).
	$\tilde{e}_i \in \mathbb{R}^G$	date 2 to consumer i , a G -vector of continuous random variables
	$e_i \in \mathbb{R}^G$	a realization of \tilde{e}_i

Consumption:	$w_i \in \mathbb{R}^G$	date 1 to consumer i
	$\tilde{x}_i \in \mathbb{R}^G$	date 2 to consumer i , a G -vector of bounded, continuous random variables
	$x_i \in \mathbb{R}^G$	a realization of \tilde{x}_i
Trades:	$t_{1i} = w_i - \bar{w}_i$	date 1, net to consumer i
	$t_{2i} = x_i - e_i$	date 2, net to consumer i
Noise:	$\tilde{z}_i \in \mathbb{R}^G$	date 2 to consumer i , a G -vector of bounded continuous random variables
Utility:	$U_i = U_i(w_i, x_i) \in \mathbb{R}$	
Regulation:	The superscript r on a variable indicates that the variable is being considered in a state of the economy in which one, several, or all goods are regulated; absence of the superscript denotes an unregulated economy. Alternatively, absence of the superscript may be taken to mean a partially regulated economy, in which case the superscript will denote regulation of an additional good or goods.	

ASSUMPTIONS

1. Regulation affects only date 2 variables.
2. \tilde{e}_i has the same distribution as $\tilde{e}_i^r + \tilde{z}_i$ for all i . This assumption expresses the filtering effect of the regulatory process. Note that it allows the possibility of different effects on different people; also, it does not require that $\tilde{e}_i = \tilde{e}_i^r + \tilde{z}_i$.
3. $E(\tilde{e}_i^r) = E(\tilde{e}_i)$. This assumption will be relaxed slightly.
4. $E(\tilde{z}_i | e_i^r) = 0$, for all e_i^r .
5. Regulation does not alter date 2 prices. This simplifying assumption may be regarded as a Nash condition: each consumer in evaluating regulation examines only his own expected endowment change and realizes that it alone has a negligible influence on prices when there are many consumers. It is necessary in this interpretation to assume that prices have no stable joint distribution with \tilde{e}_i for any i (e.g., one could assume that \tilde{e}_i 's are distributed independently over consumers), since otherwise consumers

could learn the distribution over time and predict prices with and without regulation.

6. $t_{2i}^r = t_{2i}$ for all e_i^r and e_i . This assumption will hold in expectation given assumptions 3 and 5, with price-taking, utility-maximizing consumers.
7. $U_i(w_i, x_i)$ is continuous, weakly concave, bounded, and monotone increasing for all i .

RESULT

$$E\{U_i(w_i, \tilde{x}_i^r)\} \geq E\{U_i(w_i, \tilde{x}_i)\} \quad \text{for all } i. \quad (1)$$

That is, regulation is unanimously, weakly preferred.

Proof: By Assumptions 1 and 6 we can take w_i , t_{1i} , and t_{2i} as given, so that

$$E\{U_i(w_i, \tilde{x}_i^r)\} = E\{U_i(\bar{w}_i + t_{1i}, \tilde{e}_i^r + t_{2i}) \mid \bar{w}_i, t_{1i}, t_{2i}\}$$

which is a function of \tilde{e}_i^r only; and similarly for the unregulated economy. Assumptions 2, 3, and 4 allow us to apply to \tilde{e}_i and \tilde{e}_i^r the ordering \leq_a defined in Rothschild and Stiglitz [55]. Assumption 7 and our definition of \tilde{e}_i and \tilde{z}_i as vectors of real, bounded, continuous, random variables enable us to apply the generalized ordering \leq_u of Rothschild and Stiglitz [56]. The equivalence of the two orderings mentioned in Rothschild and Stiglitz [56] and proved in Strassen [57] proves (1). Q.E.D.

COMMENTS

- (a) Note that it has not been necessary to assume a fixed relation between $E(\tilde{e}_i)$ and \bar{w}_i . The model thus allows for expectations of growth or recession, which may change over time (e.g., set $E(\tilde{e}_i) = \bar{w}_i + \alpha$, where α may vary and assume either sign). What is required is that $E(\tilde{e}_i) = E(\tilde{e}_i^r)$.
- (b) The result of weak regulation preference was obtained for consumers who are either risk averse or risk neutral. A more interesting result is obtained when consumers are risk averse (U_i is strictly concave): then, for all z_i not identically equal to the zero vector, $E\{U_i(w_i, \tilde{x}_i^r)\} = E\{U_i(w_i, \tilde{x}_i)\} + \delta_i$, $\delta_i > 0$, for regulation of some good or goods. This implies that, holding w_i con-

stant, there is some nonrandom, compensating variation of the date 2 endowment, Δe_i , such that

- (i) $\Delta e_i = \Delta e_i(\delta_i)$, a rising function of δ_i , and
- (ii) $E\{U_i(w_i, \tilde{x}_i^r - \Delta e_i)\} = E\{U_i(w_i, \tilde{x}_i)\}$,

by Assumption 7.

Thus we may construct a new, random, date 2 endowment \tilde{e}_i^r such that

- (i) $e_i^r = e_i^r - \Delta e_i$ for all e_i^r (where e_i^r is a realization of \tilde{e}_i^r), and
- (ii) $E\{U_i(w_i, \tilde{e}_i^r + t_{2i}) \mid w_i, t_{2i}\} = E\{U_i(w_i, \tilde{e}_i + t_{2i}) \mid w_i, t_{2i}\}$

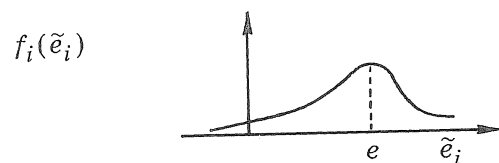
That is, regulation may incur a real cost of Δe_i (i.e., reduce the expected date 2 endowment by that amount) and still be weakly preferred. Reductions by less than Δe_i will leave regulation strictly preferred. This, then, is the promised relaxation of Assumption 3: instead of requiring that $E(\tilde{e}_i) = E(\tilde{e}_i^r)$, we only need the weaker condition that $E(\tilde{e}_i) \leq E(\tilde{e}_i^r) + \Delta e_i$. Note that, for any given δ_i , Δe_i is a G -manifold.

- (c) Assumptions 3 and 4 are not necessary in modeling regulation as a noise filter, but they are necessary to the above proof of unanimous regulation preference. However, unanimity is a much stronger result than that required for the theory of regulation established in Chapter 1.
- (d) Assumption 7 is not necessary for unanimous regulation preference. The result would still hold if, for instance, we omitted Assumption 7 and replaced assumptions 2, 3, and 4 by
 - (2a) $(\tilde{e}_i + t_{2i})$ has the same distribution as $(\tilde{e}_i^r + t_{2i}^r) + \tilde{z}_i$ where t_{2i} is a function of \bar{w}_i and e_i , and t_{2i}^r is a function of \bar{w}_i and e_i^r ;
 - (3a) $E(\tilde{e}_i + t_{2i}) = E(\tilde{e}_i^r + t_{2i}^r)$; and
 - (4a) $E\{\tilde{z}_i \mid (e_i^r + t_{2i}^r)\} = 0$.

Interpreting these new assumptions, though, is not straightforward.

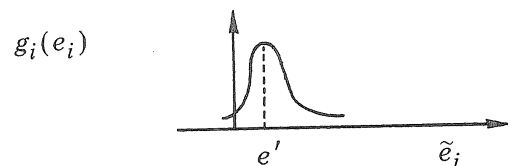
(e) Note that quite general distributions of \tilde{e}_i are allowed. In particular, examine the case of $G = 1$, so that the endowment consists of one good, say income. We may treat the notion of unemployment of a consumer, even though no production or labor market has been modeled, as follows:

- (1) Assume that without regulation there is a probability π that a given consumer will be unemployed in date 2.
- (2) Assume a unimodal distribution $f_i(\tilde{e}_i)$ of \tilde{e}_i given that consumer i is employed:



where e is the mean of $f_i(\tilde{e}_i)$.

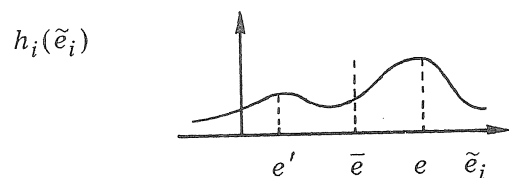
- (3) When consumer i is unemployed, assume that his endowment follows a unimodal distribution $g_i(e_i)$ with mean less than that of his "employed endowment":



where e' is the mean of $g_i(\tilde{e}_i)$.

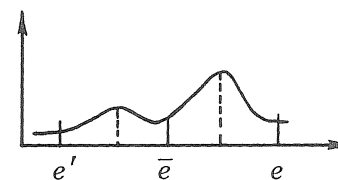
(The variances of $f_i(\tilde{e}_i)$ and $g_i(\tilde{e}_i)$ may take any finite values.)

- (4) Thus the distribution of \tilde{e}_i unconditional on i 's employment, $h_i(\tilde{e}_i)$, is given by $\pi g_i(\tilde{e}_i) + (1 - \pi) f_i(\tilde{e}_i)$ and is a bimodal distribution with mean \bar{e} :

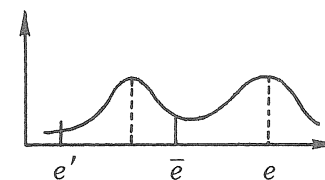


Now, one may approach the effect of regulation on this distribution in several ways.

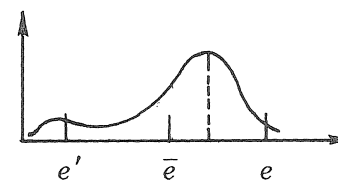
- (1) Our mechanism of risk reduction (Assumptions 2–4) may (a) leave $h_i(\tilde{e}_i)$ bimodal but shrink e and e' toward \bar{e} ; it may, alternatively, leave e unchanged, but raise e' and π ; (b) it may leave e' the same but lower e and π (c); or it may convert $h_i(\tilde{e}_i)$ into a unimodal distribution (d):



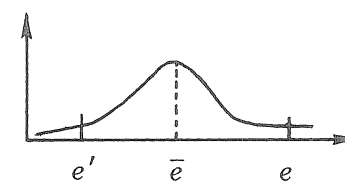
(a)



(b)



(c)



(d)

(These four outcomes are representative, not exhaustive.)

- (2) Approaching the issue from a fairness perspective, one expects regulators to be concerned with a consumer's right to a maintained value of his human capital, or more simply with his right to work. Thus we would expect effective regulation either to lower π (alternatives (c) and (d) above, where (d) is interpreted as a full employment economy) or to raise the mean endowment of an unemployed consumer (alternatives (a) and (b)). Alternative (d) does not necessarily imply a full employment economy; but as long as $f_i(\tilde{e}_i)$ and $g_i(\tilde{e}_i)$ remain unimodal, the only other interpretation is that in (d) the mean endowment of an individual is the same whether he is employed or not, an unlikely outcome.

There are several interesting points about all this:

- (1) The risk reduction approach in this simple example gives the same result as a fairness approach, and is therefore empirically indistinguishable.
 - (2) The result in alternatives (c) and (d) is to lower the expected endowment of a working consumer below that obtained without regulation. Therefore, if people compare outcomes using e rather than \bar{e} as a reference point (as seems likely), it will appear that regulation has cost something in cases (c) or (d); but, by the very construction of our model (Assumptions 2–4), regulation has zero cost in this example.
 - (3) The illusion that results (c) and (d) are costly may create an incentive to regulate by methods (a) or (b). But fairness considerations may offset this incentive, since a “right to work” may appear fairer than a “right to be compensated for not being allowed to work.”
- (f) Systematic transfers to each consumer under regulation, τ_i^r , may be incorporated into the model. Let

$$x_i = e_i + t_{2i}$$

$$x_i^r = e_i^r + t_{2i}^r + \tau_i^r$$

$$\tau_i^r \text{ positive, negative, or zero}$$

$$\sum_{i=1}^H \tau_i^r = 0.$$

Assume here that regulation is costless. Then regulation is at least weakly preferred by all consumers i for whom $E(\tilde{e}_i) \leq E(\tilde{e}_i^r) + \tau_i^r + \Delta e_i$ (or $\tau_i^r \geq -\Delta e_i$ for $E(\tilde{e}_i) = E(\tilde{e}_i^r)$; see Comment (b)).

The significance of such a transfer scheme is obvious: suppose a group of individuals were to increase their wealth through balanced-budget transfers alone. They would find no one willing to support the scheme, as it demands contributions (in our notation, $\tau_i^r < 0$) from persons outside the benefiting group. On the other hand, if the group combines the transfer scheme with a costless, risk-reducing regulatory plan, the transfers may be designed so that the complete package is preferred to nonregulation without transfers, even by persons for whom $\tau_i^r < 0$. If the Δe_i 's may be observed or inferred then any group of consumers may thus explicitly maximize the redistribution to itself subject to retaining unanimous (or majority) preference for the plan.



Regulation of Oligopoly: International Communication

In this and subsequent chapters we begin to illustrate some of the phenomena described in Chapter 1. The aim is to present actual examples of the strategic use of the administrative process, and to shed further light on the issue of whether regulation achieves the goals it seems to have been designed for.

The example in this chapter is the international communications industry in the context of a particular decision faced by the FCC in 1971: whether or not to approve AT&T's application for permission to build a new transatlantic telephone cable facility called “TAT-6” using a particular technology called “SF-type” cable. There are important lessons to be learned from the FCC's and AT&T's behavior in this decision-making process as well as from the regulatory framework that provides the backdrop for the decision. We will review these lessons after the story has been told.

BACKGROUND

The Industry

The international communications industry consists of five important firms: American Telephone and Telegraph Company (AT&T), Communication Satellite Corporation (COMSAT), Western Union International (WUI), RCA Globcom, and ITT Worldcom (see Table 2-1). There are, in addition, several minor companies. The history of these companies is recited elsewhere [1].

The products or services provided by the industry consist of (1) international telegraph (or “record”) communications made up of