Paradoxes of the Regulatory State

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By “paradoxes of the regulatory state,” I mean self-defeating regulatory strategies—strategies that achieve an end precisely opposite to the one intended, or to the only public-regarding justification that can be brought forward in their support. This definition excludes, and I will not discuss, a number of pathologies of the regulatory state that are clearly related to the phenomenon of regulatory paradoxes, such as strategies whose costs exceed their benefits, or that have unintended adverse consequences. An example of a regulatory paradox would be a Clean Air Act that actually made the air dirtier, or a civil rights law that increased the incidence of racial discrimination.

A large literature, inspired by public choice theory and welfare economics, has grown up around the theory that purportedly public-interested regulation is almost always an effort to create a cartel or to serve some private interest at the public expense. Although I shall be drawing on much of that literature here, I do not conclude,}

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1 For a more precise discussion, see Section II.
2 The current Clean Air Act does reflect this paradox in some contexts, though its overall effect is beneficial. See text at notes 10-12 (regulatory successes) and 40-42 (shortcomings of Clean Air Act).
as some of that literature appears to, that the appropriate response to regulatory paradoxes is to abandon regulation altogether and rest content with the operation of private markets. In many cases the market itself produces harmful or even disastrous results, measured in terms of efficiency or justice. The appropriate response to the paradoxes of regulation is not to return to a system of "laissez faire," but to learn from past failures. To this end, I outline the lessons, for legislators, judges, and administrators, that are to be drawn from the omnipresence of regulatory paradoxes. My most general goal is to describe some reforms by which we might restructure regulatory institutions so as to achieve their often salutary purposes, while at the same time incorporating the flexibility, respect for individual autonomy and initiative, and productive potential of economic markets.

I. THE PERFORMANCE OF THE REGULATORY STATE: A PREFATORY NOTE

In even the most prominent evaluations of the performance of the regulatory state, explorations of the real world consequences of regulatory intervention are strikingly infrequent. Work in administrative law, throughout the long history of that subject, has been conspicuously silent on the question. That silence is unfortunate, for evaluation of regulatory controls and legal doctrines must depend in large part on their effects in the world. The purpose of the

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6 Much of the relevant literature focuses on the evils of "rent-seeking"—the expenditure of resources on the transfer of wealth through law rather than on the production of wealth through markets. Insofar as this is a normative critique, it is an ideological one, and a peculiar one at that. All laws have redistributive functions, and some such laws have powerful arguments in their support. Consider measures preventing environmental degradation or race and sex discrimination. Moreover, the expenditure of resources on laws is part and parcel of the practice of citizenship, and it would be wrong to devalue that practice because of the admittedly frequent phenomenon of self-interested political behavior on behalf of causes lacking public-regarding justifications.

7 The term is of course misleading insofar as it suggests an absence of governmental controls. Even a system of laissez faire is pervaded by legal duties and disabilities that arise from contract, tort, and property law.

Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Federal Communications Commission (FCC) is to alter the conduct of private actors in certain ways. Evaluations that refer to "checks and balances" or "legitimacy," or that deal in general or speculative terms with the effects of bureaucratic incentives or well-organized private groups, are of limited use if unaccompanied by a solid understanding of the actual consequences of regulatory programs. Attention to those consequences, and their implications for legislative and administrative policy, is perhaps the principal task for administrative law in the next generation.

Unfortunately, empirical assessments of the consequences of regulation remain in a primitive state; but it is possible to draw several general conclusions. I outline some of them here. Though fashionable in many circles, the view that regulation has generally proved unsuccessful is far too crude. For example, efforts to reduce air pollution have in many respects been quite successful. Regulatory controls have helped to produce substantial decreases in both the levels and emissions of major pollutants, including sulfur dioxide, carbon monoxide, lead, and nitrogen dioxide. Ambient concentrations of lead have decreased especially dramatically, declining eighty-five percent between 1975 and 1988; transportation emissions of lead decreased from 122.6 million metric tons in 1975 to 3.5 in 1986. Most important, the vast majority of counties in the United States are now in compliance with air quality goals.

Water pollution control has shown significant successes as well. The Great Lakes are substantially cleaner than they were in 1965. A number of harmful nutrients have been reduced by nearly fifty percent in national rivers. Governmentally-required lead and nitrate reductions have produced significant improvements in

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* Two disclaimers are necessary. First, the methodological problems are severe, partly because of the difficulty of valuing costs and (especially) benefits, and partly because of the difficulty of holding everything else constant in measuring regulatory effects. For this reason the numbers and assessments in the text are contestable. Second, any evaluation must have a significant normative dimension; it cannot depend on the facts alone. For more details, see Cass R. Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State* ch 3 (Harvard, forthcoming 1990).
12 CEQ, *Environmental Quality* at 49 (cited in note 10).
water quality. All in all, both air and water are substantially cleaner than they would have been without regulatory controls, and despite a wide range of errors, the American experience serves in some respects as a model for the rest of the world.

Similarly, automobile safety regulation has significantly reduced deaths and serious injuries. Automobiles are much safer for occupants. For example, highway fatalities would have been about forty percent higher in 1981 if not for governmental controls. Between 1966 and 1974, the lives of about 34,000 passenger car occupants were saved as a result of occupant safety standards. The annual benefits from regulation exceed ten billion dollars. Moreover, for automobile regulation the ratio of benefits to costs is extremely high. Indeed, some of the regulations pay for themselves in terms of health and related savings, and the large number of deaths actually prevented is of course a bonus.

More generally, studies of the costs and benefits of regulatory initiatives show that a number of other measures have produced health and other benefits at especially low costs. OSHA's regulation of asbestos prevents an estimated 396 deaths per year, and it does so at relatively low expense. EPA's regulation of trihalomethanes saves a life at only $300,000 per year; the National Highway Traffic Safety Administration's (NHTSA) fuel system integrity controls, also $300,000; the Consumer Product Safety Commission's (CPSC) mandatory smoke detector rule, between $0 and $85,000; NHTSA's roadside hazard removal rule, $0.2

Finally, regulatory successes are not limited to the areas of safety and health. The Civil Rights Act of 1964 has led to a de-
crease in racial discrimination in employment.\textsuperscript{21} There have been gains in the area of sex discrimination as well.\textsuperscript{22} And the Endangered Species Act has saved a number of species from extinction and endangerment.\textsuperscript{23}

On the other hand, regulation has frequently failed. Sometimes it has imposed enormously high costs for speculative benefits; sometimes it has accomplished little or nothing; and sometimes it has aggravated the very problem it was designed to solve. For example, the United States spent no less than $632 billion for pollution control between 1972 and 1985, and some studies suggest that alternative strategies could have achieved the same gains at less than one-fifth the cost.\textsuperscript{24} The fuel economy standards for new cars appear to have produced no substantial independent gains in fuel economy, given consumer demands for fuel efficient cars in response to gas shortages and high gas prices.\textsuperscript{25} Worse, they have led manufacturers to produce smaller, more dangerous cars; an estimated 2,200-3,900 mortalities are expected over the next ten years as a result of regulatory changes in 1989 alone.\textsuperscript{26} There is little question that the administration of the Natural Gas Act helped produce the energy crisis of the late 1970s—with huge attendant costs to investment and employment—by artificially restraining the price of gas.\textsuperscript{27} Some of OSHA's carcinogen regulations impose enormous costs for uncertain gains. Indeed, the pattern of OSHA regulation of carcinogens is a crazy quilt; regulations costing up to $40 million per life saved exist in some areas, with no regulations at all in others.\textsuperscript{28} The EPA has promulgated only seven regulations controlling toxic substances, so that a huge number of such sub-


\textsuperscript{22} See Donohue, 56 U Chi L Rev at 1360-62 (cited in note 3).


\textsuperscript{25} See Crandall, \textit{Regulating the Automobile} at 157-58 (cited in note 14).


\textsuperscript{27} See Stephen Breyer, \textit{Regulation and its Reform} 244 (Harvard, 1982).

\textsuperscript{28} See Mendeloff, \textit{The Dilemma of Toxic Substance Regulation} at 22 (cited in note 18).
stances remain uncontrolled. By delaying the entry of beneficial drugs into the market, the Food and Drug Administration has, in many settings, dramatically increased risks to life and health.

The general task of regulatory reform raises issues far beyond the scope of this discussion. Ironically, a large source of regulatory failure in the United States is the use of Soviet-style command and control regulation, which dictates, at the national level, technologies and control strategies for hundreds, thousands, or millions of companies and individuals in a nation that is exceptionally diverse in terms of geography, costs and benefits of regulatory controls, attitudes, and mores. A valuable perspective on this problem can be obtained by examining the paradoxes of regulation, which pose a particular dilemma for the administrative state. A government that eliminated self-defeating regulatory strategies would eliminate a significant source of regulatory failure. And although the paradoxes are numerous, six of them have been of major importance in the last generation.

II. THE PARADOXES

I have defined a regulatory paradox as a self-defeating regulatory strategy; but whether a strategy is self-defeating depends on how its purposes are described. Any statute that fails to produce a net benefit to society can be described as self-defeating if its purpose is described as the improvement of the world. But if the statute's purpose is to benefit a particular group or segment of society, and that purpose is achieved, then the statute is not self-defeating at all. For example, a statute benefiting the agricultural industry at the expense of the public will not be self-defeating if its purpose is described as helping farmers. Throughout this discussion I describe the relevant statutory purposes at an intermediate level of generality and as public-regarding rather than as benefitting special interest groups. Under this approach, a statute whose costs outweigh its benefits, or that produces irrationality of various sorts, is not necessarily paradoxical.

31 See generally Breyer, Regulation and its Reform (cited in note 27); Richard B. Stewart, The Discontents of Legalism: Interest Group Relations in Administrative Regulation, 1985 Wis L Rev 655, 680-82; and Sunstein, After the Rights Revolution ch 3 (cited in note 9).
Moreover, I mean to assess whether a statute is self-defeating by comparing the result it has produced to the likely state of affairs had Congress enacted a different and better statute or no statute at all.\textsuperscript{32} Measured against these benchmarks, regulation has produced a wide range of paradoxes.

Importantly, nearly all of the paradoxes are a product of the government's failure to understand how the relevant actors—administrators and regulated entities—will adapt to regulatory programs. The world simply cannot be held constant after regulations have been issued. Strategic responses, the creation of perverse incentives for administrators and regulated entities, unanticipated changes in product mix and private choice—these are the hallmarks of the paradoxes of the regulatory state. The adoption of strategies that take account of these phenomena would produce enormous savings in both compliance costs and safety and health gains. In this sense, a response to the regulatory paradoxes would produce no losers, or at least no losers who have a legitimate basis for complaint.

A. Paradox 1: Overregulation Produces Underregulation

The first paradox is that especially aggressive statutory controls frequently produce too little regulation of the private market. This surprising outcome arises when Congress mandates overly stringent controls, so that administrators will not issue regulations at all, or will refuse to enforce whatever regulations they or Congress have issued.\textsuperscript{33}

The imposition of extremely stringent controls on regulated industries is a common strategy in Congress. Such controls typically ban cost-benefit balancing or indeed trade-offs of any sort.\textsuperscript{34} The expectation is that these controls will bring about safety in the workplace, or clean air and water, even if both the agency and industry are reluctant to act, and even if the costs of regulation are high. This strategy was especially popular during the dramatic growth of regulation in the 1960s and 1970s. It both fueled and was fueled by the notion that a safe workplace, or clean air and water,

\textsuperscript{32} Additional benchmarks include the intended effects of the regulation and the status quo ante. Of course the "alternative statute" and "no statute" benchmarks point in different directions; the context should make those differences clear.

\textsuperscript{33} This is similar to a more general phenomenon in the criminal law: severe or mandatory sentences can actually produce less deterrence, because they make prosecutors reluctant to bring charges and juries reluctant to convict.

should be treated as involving a right to be vindicated rather than a risk to be managed. Consider President Nixon’s proclamation: “Clean air, clean water, open spaces—these should again be the birthright for every American.” This form of rights-based thinking was also inspired by evidence that recalcitrant agencies, suffering from inertia or immobilized by the power of well-organized private groups, frequently disregarded regulatory controls.

The strategy of imposing stringent regulatory controls or banning cost-benefit balancing is not hard to understand. It is only natural to think that if air pollution is a severe problem, the correct response is to reduce it as much as possible; and this idea quickly translates into a command to the EPA to reduce dangerous substances in the atmosphere to a level that will not adversely affect human health. Similarly, an obvious method for controlling toxic substances in the workplace is to tell OSHA to eliminate these substances “to the extent feasible.” Such strategies might produce too much regulation, but this might be thought a small price to pay for (finally) reducing pollution in the air or deaths in the workplace. In addition, a prohibition on “balancing” might be thought desirable by those fearful that any effort to balance would be distorted by the enforcement agency’s undervaluation of life and health, especially in the context of seemingly permanent political divisions between the executive and the legislature.

But consider the record of both the EPA and OSHA in these settings. Of the several hundred toxic substances plausibly posing significant risks to human health, the EPA has regulated only seven—five as a result of court orders. Of the many toxic substances in the workplace, OSHA has controlled only ten. Stunningly, this is so even though the private organization that once performed some of OSHA’s functions has recommended lower exposure limits for hundreds of chemicals. To be sure, those substances that EPA and OSHA regulate are stringently controlled.

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35 State of the Union Address, 8 Public Papers of President Richard M. Nixon 13 (GPO, 1970). See also statutes cited in note 34.
36 See Kay Lehman Scholzman and John T. Tierney, Organized Interests and American Democracy 63-87 (Harper & Row, 1986).
37 Clean Air Act, 42 USC § 7409(b)(1).
38 Occupational Safety and Health Act, 29 USC § 655(b)(5).
39 Of course any gain in this tradeoff depends on the magnitude of the relevant consequences.
40 See Note, 63 NYU L Rev at 613-14; 626 (cited in note 29).
41 See Mendeloff, The Dilemma of Toxic Substance Regulation at 2, 82 (cited in note 18).
42 Id at 73-102.
The current pattern, however, includes not only substantial over-regulation of the substances that are subject to federal standards, but also, and possibly more serious, substantial underregulation of dangerous substances, such as chromium, perchloroethylene, and trichloroethylene.\textsuperscript{43}

Despite the stringency of statutory standards, many activities in the United States are entirely free from regulatory controls. There is no evidence that the United States generally does a better job than England in protecting workers and citizens from occupational and environmental hazards, even though the English system consciously allows balancing in most contexts and the American system consciously rejects it.\textsuperscript{44}

Statutes containing stringent regulatory requirements have thus yielded no protection at all in many settings. What is responsible for this astonishing outcome? One is tempted to find answers in the power of regulated industries or in the intransigence and deregulatory zeal of government officials. But the pattern of under-regulation can be found in the Carter Administration as well as the Reagan Administration, even though President Carter's appointees, drawn in large number from the consumer and environmental movements, were hardly eager to prevent the government from curbing the proliferation of toxic substances. Elaborate and costly procedural requirements for the promulgation of federal regulations undoubtedly provide some explanation, since the process, including judicial review, has built into it enormous delays and perverse incentives.\textsuperscript{45} These requirements surely slow down and deter rulemaking. Industry has every opportunity and every incentive to fend off regulation by making plausible claims that additional information is necessary before regulation can be undertaken. This explanation is not in itself adequate, however, because organized interests have not prevented agencies from being far more aggressive in other settings.

\textsuperscript{43} Id at 74-102.
\textsuperscript{44} See David Vogel, \textit{National Styles of Regulation: Environmental Policy in Great Britain and the United States} 163 (Cornell, 1986).
\textsuperscript{45} See Stewart, 1985 Wis L Rev 655 (cited in note 31); and Mendeloff, \textit{The Dilemma of Toxic Substance Regulation} at 115-24 (cited in note 18).

For an intriguing solution to this problem, see the discussion of California's Proposition 65 in David Roe, \textit{An Incentive-Conscious Approach to Toxic Chemical Controls}, 3 Econ Dev Q 179 (1979). Proposition 65 requires businesses to warn people exposed to any one of a list of specified chemicals, unless there has been a governmental finding that the chemical in question poses no significant risk. By putting the burden of inertia on regulated industry, Proposition 65 creates incentives rather than disincentives for the issuance of regulations distinguishing safe from unsafe levels.
A large part of the explanation lies in the stringency of the regulatory standard itself. A stringent standard—one that forbids balancing or calls for regulation to or beyond the point of "feasibility"—makes regulators reluctant to act. If, as is customary, regulators have discretion not to promulgate regulations at all, a stringent standard will provide them with a powerful incentive for inaction. Their inaction is not caused by venality or confusion. Instead, it reflects their quite plausible belief that the statute often requires them to regulate to an absurd point. If regulators were to issue controls under the statute, government and private resources would be unavailable to control other toxic substances; domestic industry costs would increase; and ultimately industries competing in world markets would face a serious risk of shutdown. Under these circumstances, a stringent standard will mobilize political opposition to regulation from within and without government. It will also increase the likelihood of judicial invalidation. Finally, it will require agencies to obtain greater supporting information to survive political and judicial scrutiny, while at the same time making it less likely that such information will be forthcoming from regulated class members. All the incentives are therefore in the direction of issuing fewer regulations.

It is thus unsurprising that a draconian standard produces underregulation as well as overregulation. A crazy quilt pattern of severe controls in some areas and none in others is the predictable consequence of a statute that forbids balancing and tradeoffs.

The problem goes deeper still. Even if the resistance of the agency has been overcome, and some or many regulations have been issued under a statute calling for stringent regulatory controls, the risk of underregulation does not disappear. Levels of enforcement—inspections and fines—will reflect the agency's reluctance. This has in fact been the pattern with OSHA's safety and health regulations, some of which have been effectively unenforced by Democratic as well as Republican administrations. This, then, is the first paradox of the regulatory state: stringent regulatory standards produce underregulation.

48 See Mendeloff, The Dilemma of Toxic Substance Regulation at 11-12 (cited in note 18).
47 Low appropriations are also a predictable consequence.
45 At least in theory, it is possible that this effect will not occur—if the agency has no enforcement discretion, or if it is determined (for example) to eliminate all risk-creating substances from the atmosphere. But the absence of enforcement discretion is rare, and an
B. Paradox 2: Stringent Regulation of New Risks Can Increase Aggregate Risk Levels

Frequently Congress is presented with a risk or problem that can be found both in existing entities and in potential entrants. For example, automobiles produce carbon monoxide; modern electricity plants emit sulfur dioxide; many existing buildings are inaccessible to the handicapped; and drugs currently on the market pose health hazards to consumers. In such situations, a common strategy has been to impose especially severe limitations on new sources but to exempt old ones. Indeed, such exemptions might be a political prerequisite for enactment of the regulation. Congress might require that new automobiles be equipped with pollution control devices, that new plants emitting pollution meet stringent regulatory controls, that new buildings be accessible to the handicapped, and that new drugs survive special safety requirements.

This strategy is a pervasive one in current regulatory law, and it has obvious advantages. Retroactive application of regulatory requirements can be extremely costly; the expense of altering existing practices is often high. Requiring the specified approach only prospectively can achieve significant savings. In addition, it may be unfair to impose costs on people who would have ordered their affairs quite differently had they been informed beforehand of the regulatory regime.

As a control technique, however, the strategy of imposing costs exclusively on new sources or entrants can be self-defeating. Most important, it will discourage the addition of new sources and encourage the perpetuation of old ones. The problem is not merely that old risks will continue, but that, precisely because of regulatory programs, those risks will become more common and last longer than they otherwise would.

Two different phenomena underlie the old risk-new risk paradox. First, those who plan regulatory programs often assume that the programs will not influence private choices. Private choices are, however, a function of current supply and demand. If the program
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raises the price of new products it will shift choices in the direction of old risks. Second, a focus on new risks reduces the entry of potentially superior sources or technologies and thus perpetuates old ones. Regulatory controls eliminate possibilities that might have turned out to be substantially safer than currently available options. The result is to increase the life of those options.

Examples are not difficult to find. The EPA’s program requiring the installation of anti-pollution technology in new automobiles belongs in the first category. This program has prolonged the use of old, dirty vehicles, retarding the ordinary, salutary retirement of major sources of environmental degradation. Command and control regulation of new pollution sources creates incentives to use existing facilities longer, with harmful consequences for the environment. Prescription requirements probably discourage people from purchasing beneficial drugs and to that extent impair health. Imposition of high, safety-related costs on new airplanes may well encourage airlines to retain (and repair) old, risky planes.

One might put the EPA’s requirement of costly “scrubbing” strategies for new sources of sulfur dioxide in the second category. This rule has perpetuated the existence of old sources of sulfur dioxide, thus aggravating in many parts of the country the very problem it was designed to solve. So too, the imposition of stringent barriers to nuclear power plants has perpetuated the risks produced by coal, a significantly more dangerous power source. And perhaps worst of all, the FDA’s stringent regulatory standards for approving new drugs have forced consumers to resort to old drugs, which are frequently more dangerous or less beneficial than the new drugs being kept off the market.

A final example of the old risk/new risk paradox is the Delaney Clause, which prohibits manufacturers from using food addi-

52 See Bruce Ackerman and William T. Hassler, Clean Coal/Dirty Air 27 (Yale, 1981).
56 See Ackerman & Hassler, Clean Coal/Dirty Air at 2, 11-12 (cited in note 52).
tives containing carcinogens. Ironically, this provision has probably increased safety and health risks. The Clause forces manufacturers to use noncancer-causing, but sometimes more dangerous, substances. In addition, it makes consumers resort to substances already on the market that often pose greater risks than new entrants would. Since the newest and best detection equipment is used on proposed new additives, the statutorily prohibited additive may well pose fewer risks to consumers than substances already on the market that were tested with cruder technology. Thus the De-
laney Clause defeats its own purpose.60

The phenomenon of careful regulation of new risks and lenient or no regulation of old ones may not simply reflect legislative myo-
pia or confusion. Public choice theory provides a plausible expla-
nation for the phenomenon. A system of regulation that imposes controls solely on new products or facilities should have consider-
able appeal for those in possession of old ones. If new sources will face regulatory costs, the system of government controls will im-
munize existing producers from fresh competition. Indeed, the reg-
ulatory statute will create a partial cartel, establishing a common interest among current producers and giving them a significant competitive advantage over potential new entrants. The victims of the old-new division, however, often do not yet exist. They are usu-
ally hard to identify, do not perceive themselves as victims, and are not politically organized.

It may be for this reason that the careful regulation of new risks is such a popular strategy. It is apt to be favored both by existing industry and by many of those who seek to impose con-
trols in the first instance. The potential victims—consumers and new entrants—often have insufficient political strength to counter the proposals. When this phenomenon is combined with the appar-
ently sensible but sometimes self-defeating idea that a phase-in strategy is better than one that requires conversions of existing producers, it is no surprise that the old risk-new risk division re-
ains so popular.


A qualification is necessary here. It is possible that people are especially fearful of cancer and not so fearful of other, equally dangerous health risks, and that this configuration of fears underlay the Delaney Clause. In that case, the Clause would serve its specific purpose of keeping carcinogens off the market, irrespective of the relative health risks of various products. Although the Clause might in fact increase overall health risks, it would not be a regulatory paradox, since it successfully implements its primary goal.
C. Paradox 3: To Require the Best Available Technology is to Retard Technological Development

Industry frequently fails to adopt the best technology for controlling environmental or other harms. The technology exists or can be developed relatively cheaply, but polluters simply refuse to use it. Congress and the EPA have often responded by requiring that all industries use the best available technology (BAT). The BAT strategy is pervasive in federal environmental law, and may indeed be its most distinctive characteristic.

The BAT strategy is motivated by a desire to produce technological innovation, and here it has a surface plausibility. As discussed above, recent years have witnessed large decreases in air and water pollution, and these decreases are partly attributable to the use of emission control technologies. Requiring the adoption of the best available control technology seems a sensible way to ensure that all industries are doing their utmost to prevent pollution. This strategy also appears inexpensive to enforce. The government simply decides on the best technology and then requires all industries to comply.

The BAT approach, however, can defeat its own purposes and thus produce a regulatory paradox. It is an extremely clumsy strategy for protecting the environment. To be sure, the approach is a plausible one if the goal is to ensure that all firms use currently established technology. But a large goal of regulation should be to promote technological innovation in pollution control. Regulation should increase rather than decrease incentives to innovate. Government is rarely in a good position to know what sorts of innovations are likely to be forthcoming; industry will have a huge comparative advantage here. Perversely, requiring adoption of the BAT eliminates the incentive to innovate at all, and indeed creates disincentives for innovation by imposing an economic punishment on innovators. Under the BAT approach, polluting industries have no financial interest in the development of better pollution control technology that imposes higher production costs. Indeed, the opposite is true. The BAT approach encourages industry to seek any means to delay and deter new regulation. Industry will have the information as well as the incentive to persuade administrators,

61 See, for example, 42 USC § 7411(a)(1)(C) (Clean Air Act); 33 USC § 1316(a)(1) (Clean Water Act).
courts, and other authorities that a suggested technology is not "feasible" and should not be required.

If government requires whatever technology is available, then, industry has no economic reason to develop new mechanisms for decreasing safety and health risks. Moreover, the BAT approach, applicable as it is only to new sources, raises the cost of retiring old facilities, which delays capital turnover and in that way aggravates environmental degradation. The paradox, in a nutshell, is this: designed to promote good control technology, the BAT strategy actually discourages innovation. It is therefore self-defeating.

One might respond to this hypothesis by arguing that under the BAT approach outsiders should have an incentive to innovate, precisely because government will force industry to adopt the resulting technology. But no well-functioning market in pollution control technology exists for those outside of the regulated industries, and for good reasons. First, outsiders often lack the relevant information, which is unusually expensive because it turns on facts that are highly technical and known best to participants in the industry. In practice, outsiders must depend on cooperation from regulated class members, which is unlikely to be forthcoming. The start-up costs are therefore exceptionally high for third parties. Second, regulation often changes dramatically over time, a phenomenon that discourages a stable market in control technology. The result is that innovations by outsiders have not come about under BAT approaches.

D. Paradox 4: Redistributive Regulation Harms Those at the Bottom of the Socioeconomic Ladder

A common justification for regulation is redistribution. The legislature imposes controls on the market to prevent what it sees as exploitation or unfair dealing by those with a competitive advantage. In principle, the claim for redistribution is often a powerful one. Market wages and prices depend on a wide range of factors that are morally irrelevant: supply and demand curves at any particular point; variations in family structure and opportunities for

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64 See Stewart, 69 Cal L Rev at 1283 (cited in note 63).

65 The term "exploitation" should be taken as a normative one, pointing to (for example) insufficient wages, unduly long hours, and so forth. See Jon Elster, Making Sense of Marx (Cambridge, 1985).
education and employment; existing tastes; and perhaps even differences in initial endowments, including talents, intelligence, or physical strength. So long as the regulation can be made effective and does not produce high ancillary costs (an important qualification), government should not always take these factors as "natural," or let them be turned into social disadvantages.

Minimum wage legislation, for example, prevents workers from having to settle for market wages that do not even approach the poverty level and thus offer minimal incentives to work; occupational safety statutes protect workers against extremely hazardous workplaces; rent control legislation prevents tenants from being subject to unanticipated price increases and perhaps thrown into significantly inferior housing; and implied warranties of habitability protect tenants from living in disgraceful and indeed dangerous apartments.

In all these cases, however, regulation is a poor mechanism for redistributing resources, precisely because it is often self-defeating. The problem is that if everything else is held constant, the market will frequently adjust to the imposition of regulation in a way that will harm the least well-off. It is a mistake to assume that regulation will directly transfer resources or create only ex post winners and losers—an idea exemplified by the assumption that the only effect of the minimum wage is to raise wages for those currently working. An important consequence of the minimum wage is to increase unemployment by raising the price of marginal labor; and those at the bottom of the ladder—the most vulnerable members of society—are the victims. In the same vein, rent control legislation and implied warranties of habitability create incentives for producers (landlords) to leave and disincentives to enter the housing market, with perverse redistributive consequences and

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66 See John Rawls, A Theory of Justice 311 (Harvard, 1971) ("Surely a person's moral worth does not vary according to how many offer similar skills, or happen to want what he can produce. No one supposes that when someone's abilities are less in demand or have deteriorated (as in the case of singers) his moral deservingness undergoes a similar shift."); G.A. Cohen, Robert Nozick and Wilt Chamberlain, in John Arthur and William Shaw, eds, Justice and Economic Distribution 246 (Prentice-Hall, 1978).
67 See Margaret Jane Radin, Residential Rent Control, 16 Phil & Pub Aff. 350 (1986).
69 See text at notes 74-75 (noting that redistributive regulation may be more justifiable if accompanied by other departures from the status quo).
especially harsh results for the poor, who may be left without housing at all. 71

Laws forbidding discrimination or requiring affirmative action will to some extent have the same effect, since they will make it more expensive to hire blacks, women, and older people by increasing the likelihood that employers will be subject to a lawsuit in the event of a discharge. 72 Similarly, occupational safety and health regulation does not unambiguously promote the interests of workers. By raising costs, it may depress wages and increase unemployment, thus harming the least well-off. 73 In each of these cases, the group that is harmed is likely to be poorly organized and incapable of expressing itself through the political process.

In sum, redistributive regulation will have complex distributive consequences, and the group particularly disadvantaged by the regulation will typically consist of those who are already most disadvantaged. Efforts to redistribute resources through regulation will therefore have a serious perverse result.

Two often overlooked qualifications are necessary here. First, the redistributive regulation, though in some ways perverse, might be part of a system of redistribution that is effective overall. A minimum wage law might be justified as a means of protecting the working poor if it is accompanied by a welfare system to take care of those who cannot work at all. For this reason, plausible arguments can be made for the minimum wage despite its self-defeating aspect. It has been argued, for example, that an increase in the minimum wage is necessary to guarantee that work will be sufficiently remunerative to keep people out of poverty and to send a signal about the importance and value of work, thereby increasing the supply of and demand for labor. These effects might outweigh the unemployment effect. According to some estimates, a ten percent increase in the minimum wage would increase unemployment among young people by only one percent. 74

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72 See Posner, 56 U Chi L Rev at 1326, 1331, 1333 (cited in note 3).

73 This is hardly a decisive argument against such laws. The existence of inadequate information provides a good argument for regulatory controls here, quite apart from redistribution. See Rose-Ackerman, 98 Yale L J at 355-57 (cited in note 7). Moreover, the redistributive gains from the statute might justify it on balance notwithstanding its costs in harming some people. See text at notes 103-07.

A second qualification of the redistribution paradox relates to the fact that preferences are not static. Preferences are usually taken as exogenous to and independent of the legal rule, but sometimes this is a mistake. If the statute in question transforms preferences and beliefs, the self-defeating effect just described will not occur. For example, laws forbidding sexual harassment aim to alter the desires and beliefs of would-be harassers; and if the laws succeed in this goal, any perverse side effects may be minimal or nonexistent. The same argument may apply to antidiscrimination laws generally. If such laws change attitudes, they may not on balance harm the least well-off. There is, however, little empirical evidence on the effects of law in changing preferences and beliefs, and in any case this is not likely to result from such redistributive regulation as minimum wage legislation.

E. Paradox 5: Disclosure Requirements May Make People Less Informed

Sometimes markets fail because people are deceived or lack information. Regulatory agencies commonly respond by requiring correction or full disclosure. Congress and agencies have imposed disclosure regulations in many areas, ranging from occupational and environmental risks to potentially deceptive advertising. Here the rationale is straightforward. Whether or not ignorance is bliss, it is an obstacle to informed consumer choice. Surely, it might be asked, regulation cannot be condemned for increasing information?

Disclosure strategies are indeed valuable in many circumstances. But for two reasons, they can be self-defeating. The first is that people sometimes process information poorly. After being given certain data, they actually "know" less than they did beforehand. In particular, when people receive information about probabilities, especially low ones, they frequently rely on heuristics

For discussion, see Cass Sunstein, Legal Interference with Private Preferences, 53 U Chi L Rev 1129 (1986); and Sunstein, After the Rights Revolution (cited in note 9).

See Peter Asch, Consumer Safety Regulation: Putting a Price on Life and Limb 48-59 (Oxford, 1988), for a good discussion.


that lead to systematic errors.  

Thus, for example, people assess probabilities by asking if the event was a recent one and by misunderstanding the phenomenon of regression to the mean. In addition, disclosure or corrective language can help straighten out one form of false belief but at the same time increase the level of other kinds of false beliefs. Finally, there is a risk of information overload, causing consumers to treat a large amount of information as equivalent to no information at all. All this suggests that with respect to information, less may be more. Additional information can breed confusion and a weaker understanding of the situation at hand.

The second problem is that a requirement of disclosure or perfect accuracy will sometimes lead producers or other regulated entities to furnish no information whatsoever. For example, if producers are prohibited from advertising unless they eliminate all potential deception or offer strong substantiation for their claims, they might not advertise at all. The result will be the removal from the market of information that is useful overall. If advertisers must conduct extensive tests before they are permitted to make claims, they will be given a strong incentive to avoid making claims at all. More generally, almost all substantive advertisements will deceive at least some people in light of the exceptional heterogeneity of listeners and viewers. If this is so, efforts to eliminate deception will significantly reduce advertising with substantive content.

These various difficulties suggest that the recent enthusiasm for disclosure requirements is in at least some settings a mistake, for the simple reason that it defeats its own purpose. Disclosure requirements sometimes ensure that people are less informed.

79 See Kahneman et al, Judgment Under Uncertainty 1-20 (cited in note 78).
80 See id at 7, 9-16.
F. Paradox 6: Independent Agencies are not Independent

The distinctive institutional legacy of the New Deal period is the "independent" agency. An agency is independent if Congress has provided that its members can be discharged by the President only for specified causes. If Congress has so provided, it is ordinarily understood that the President cannot discharge independent commissioners simply because he disagrees with their views, and that his supervisory authority is sharply limited. Independent agencies, some of them antedating the New Deal, include the Federal Trade Commission, the Federal Communications Commission, the Interstate Commerce Commission, and the National Labor Relations Board. The paradox at issue here is one of institutional design rather than substantive regulatory policy.

The argument for the independent agency stems largely from a belief in the need for expert, apolitical, and technically sophisticated administration of the laws. Even if independent agencies achieved this end, one might question the goal itself. Independent agencies often must make important judgments of policy and principle, and on those judgments expertise is never decisive. Consider, for example, the decisions of the National Labor Relations Board defining what constitutes an unfair labor practice; the judgment of the FCC about whether licensees are obliged to present programming on public issues, or whether diversity on the basis of race or sex counts in favor of an applicant for a license; and the safety requirements of the Nuclear Regulatory Commission. None of these policies is based solely on technocratic judgments, and so may properly belong in the political rather than the regulatory sphere.

But even if one accepts the premise that political independence is necessary, the fact is that independent agencies are not independent at all. Indeed, such agencies are highly responsive to shifts in political opinion and even to the views of the President. But the problem is even worse than that. The independent agencies have generally been highly susceptible to the political pressure

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84 I question this understanding below. See text at notes 126-35.
85 See James M. Landis, The Administrative Process (Greenwood Press, 1938). See also Geoffrey P. Miller, Independent Agencies, 1986 S Ct Rev 41 (presenting but rejecting this argument and claiming that Congress may not constitutionally deny the President the power to remove a policymaking official who has refused a presidential order).
of well-organized private groups—perhaps even more susceptible, on balance, than executive agencies. 87

Many of the most egregious illustrations of agency vulnerability to pressure groups can be found in precisely this area. Thus the Interstate Commerce Commission has created and enforced cartels in the transportation industry; the Federal Trade Commission has sometimes behaved in an anticompetitive manner, capitulating to losers in the marketplace; and the FCC has been dominated by the communications industry. 88 Far from acting as disinterested experts, independent administrators often are, in practice, subject to parochial interests. 89

Why would agencies independent of the President be susceptible to factional power? The phenomenon might be explained at least in part by the fact that executive agencies, precisely because they are subject to presidential control, are able to withstand the parochial pressures imposed on "independent" agencies that lack the buffer of presidential oversight. The absence of this presidential buffer leaves agencies vulnerable both to individual members and committees of Congress, 90 which sometimes represent narrow factions and well-organized private groups with significant stakes in the outcome of regulatory decisions. Executive agencies are at least sometimes immunized from those pressures precisely because of the protective, insulating wing of the President. 91 Ironically, independence from the President often appears to be a mechanism for increasing susceptibility to factionalism.

The susceptibility of the independent agencies to factionalism does not of course imply that executive officers are invulnerable to similar forces. The notion that independent agencies are systematically more susceptible to factions than their counterparts within


89 The Federal Reserve Board is an independent agency, but it may be an unusual case. No well-organized group is its special target; the class of people benefited and burdened by its decisions is too large and diffuse to make it susceptible to any particular group. This independent agency may in fact be independent.


the executive branch seems overly broad. But if Congress wants to ensure independence in the execution of the laws, the independent agency device appears to be a most unlikely way to achieve that goal. The creation of independent agencies is usually self-defeating.

G. Other Paradoxes, in Brief

I have described some prominent regulatory paradoxes, but there are others as well. For example, it has been argued that the pursuit of the "best interests of the child" in custody determinations in fact disserves the best interests of children, because of the enormous time spent in resolving the complicated factual question. Protectionist legislation is sometimes justified on the theory that it will help domestic industries develop into potent competitive forces, but in fact protectionism may induce flabbiness and in the end defeat the goal of promoting international competitiveness. And restrictions on the availability of abortion, defended as a means of protecting human life, appear to have resulted in the death of many women per year and at the same time not to have protected a large percentage of fetuses from the practice of abortion.

Many more paradoxes can be found. There is evidence that mandatory prescriptions for drugs have increased health risks by limiting the availability and raising the cost of prescription drugs; this in turn has decreased self-treatment and encouraged people to use possibly less effective over-the-counter drugs. Product safety

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93 It is possible that independence is not the true goal of those who create independent agencies, but instead that the actual purpose is susceptibility to Congress or private groups. See Miller, 1986 S Ct Rev at 74 (cited in note 85); see also text at note 86.
96 See Peltzman, 30 J L & Econ at 210-12 (cited in note 55). A similar study of automobile safety regulation found that such regulation had no effect or a perverse effect on safety because it increased risks to pedestrians; see Sam Peltzman, The Effects of Automobile Safety Regulation, 83 J Pol Econ 677 (1975). The study is based on highly questionable assumptions, see Mark Kelman, Symposium on the Theory of Public Choice: On Democracy-Bashing: A Skeptical Look at the Theoretical and "Empirical" Practice of the Public Choice Movement, 74 Va L Rev 199, 239-45 (1988), and it has been disproved by experience. Indeed, automobile safety regulation is an example of regulatory success. See Crandall, Regulating the Automobile (cited in note 14); Jerry L. Mashaw and David L. Harfst, The Struggle for Auto Safety (Harvard, forthcoming 1990).
regulation may have a "lulling effect" on consumers, leading them to take fewer precautions and to miscalculate risks. The government prohibition on cigarette advertising on television, designed to decrease smoking, may have increased smoking because it: (1) reduced competition among firms, thus cartelizing the industry over the advertising issue; (2) eliminated the application of the fairness doctrine to cigarettes, which would have ensured a vigorous anti-cigarette campaign; and (3) saved the industry substantial sums of money.

A final paradox can be found in the law of sex discrimination, where principles of "formal equality" have been invoked to forbid consideration of sex in custody, alimony, and divorce disputes. It is quite possible that equality principles, understood as prohibitions on any form of sex differentiation in law, have in some contexts produced less rather than more in the way of real equality between men and women. When two groups are differently situated, a legal requirement that they be treated the same seems a perverse method of promoting equality between them. There is in fact evidence that the application of these principles has further disadvantaged women. Here too, then, legal controls have been self-defeating.

III. Two Questions: What We Don't Know

A. Causation

One might react to the regulatory paradoxes by suggesting that the relevant strategies are not self-defeating at all. On the contrary, they might represent a conscious governmental choice and even, on one view, regulatory success. Public choice theory suggests that legislative outcomes are frequently a product of pressure applied by well-organized private groups. It is not difficult to find "cartels in the closet" to account for many or all of the paradoxes and to make them seem far less mysterious.

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97 Viscusi, 28 J L & Econ at 539, 544, 546 (cited in note 54).
98 See Gideon Doron, How Smoking Increased When TV Advertising of Cigarettes Was Banned, 3 Regulation 49 (March/April 1979).
100 See sources cited in note 99.
For example, the apparently perverse effects of redistributive regulation may be actively sought by the benefited groups. On this account, the purpose of minimum wage legislation might not be to help the poor, but rather to immunize union members from competition by people who are willing to work for low wages by limiting entry into the labor market. Far from being unintended consequences, the harmful effects on those at the bottom of the economic ladder may be actively sought. Looked at from this perspective, minimum wage legislation creates a cartel among those not threatened by unemployment, benefiting them at the expense of new entrants into the labor market.

So too, independent agencies might be created at the behest of groups that know they will have particularly strong influence over public officials not subject to presidential oversight; or Congress might create an independent agency not to ensure technocracy or neutrality, but to increase the power of its members and committees over agency decisions.\footnote{Compare Miller, 1986 S Ct Rev at 74 (cited in note 85).} Similarly, existing industry, in a bid to reduce competition, might acquiesce in or actively seek regulations distinguishing between old and new risks. It is hardly unusual for companies to enlist regulatory law in the service of cartelization.

The overregulation-underregulation phenomenon has a similar explanation. By adopting a draconian standard, legislators can claim to support the total elimination of workplace hazards or dirty air; but legislators and regulated industries know that administrators will shrink from enforcing the law. A “deal” in the form of a stringent, unenforceable standard benefits the politically powerful actors. Hence the political economy of overregulation is similar to that of open-ended delegations of administrative authority: in both cases, legislative incentives incline Congress toward broad and appealing statutes that will not in practice harm politically powerful groups. The public is the only real loser.

Explained in this manner, the paradoxes of the regulatory state are not mysterious at all. On the contrary, they are perfectly predictable responses to electoral self-interest and to disparities in political influence.

While explanations of this sort have power in some settings, the evidence on their behalf is often overstated. It is of course possible that the seemingly paradoxical effects of regulatory programs actually account for their enactment. But this is only a possibility.
To explain a phenomenon by reference to its consequences is bad social science, even though it is pervasive in such widely diverse disciplines as neoclassical economics, Marxism, and sociobiology. In the context of the regulatory state, whether public choice explanations are good ones rather than merely plausible stories depends not just on the consequences of regulation, but also on a careful investigation into the actual forces that lead to regulation. In the regulatory sphere, such investigations are infrequent.

The most one can say is that the regulatory paradoxes might reflect the influence of well-organized private groups, and that in some settings there is direct or indirect evidence to support that conclusion. At least thus far, any more global conclusion is simply not supported by the facts.

B. Magnitude

Whether the regulatory paradoxes should cause major concern depends on their magnitude. Here too, much of the relevant information remains to be developed. For example, a decision to focus on new sources of pollution would be understandable if that decision would have only a minor effect in perpetuating old sources. But if the effect is substantial, the regulatory policy would almost certainly be ill-considered. Similarly, the minimum wage might well be justified if its effect is the unemployment of only a few additional people. The relevant question is the elasticity of the demand for labor. Finally, even if some people are misled by compulsory disclosure of risks, perhaps there will be sufficient gains through reducing others’ ignorance to justify the regulation. And even if some producers refuse to advertise at all in the face of a substantiation requirement, perhaps the overall level of information will increase.

Critics of regulation sometimes treat the existence of unintended side effects or partly self-defeating strategies as a reason to abandon regulatory controls altogether. But in order to justify that conclusion, it is necessary to gather detailed evidence on the magnitude of the relevant effects in particular regulated markets.

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104 See text at note 74.

and overall. In some contexts, regulation having some self-defeating results will on the whole make things better rather than worse. It is simply a fact that even a regulatory state pervaded by paradoxes has had a number of substantial successes.\footnote{106}

From both theory and experience, it is possible to conclude that the regulatory paradoxes will arise frequently, and thus to prescribe efforts to avoid them. Certainly we have far too little information to say, as a general matter, that regulatory programs embodying the paradoxes are by virtue of that fact a bad idea on balance, at least when compared with the pre-regulatory status quo. Total elimination of such regulatory programs is hardly warranted. Nevertheless, a system that avoided the paradoxes would bring about major improvements.

IV. Lessons

A. Congress

The paradoxes of regulation provide a number of concrete lessons for Congress. At the most general level, they suggest that legislators should be attentive to the incentive effects of regulatory statutes and the possibility of strategic or self-interested adaptation by administrative agencies and members of regulated classes. Statutes embodying an assumption that the preregulatory world can be held constant—that existing prices, wages, choices, and so forth will endure—are particularly likely to be confounded when implemented.

More specifically, the paradoxes suggest that the legislature should generally avoid best available technology strategies; be concerned with old risks as well as new ones; not attempt to redistribute resources through regulation; be attentive to the possibility that disclosure requirements will simply confuse people or chill information in the first instance; create incentives for regulation when regulation is desired; as a rule place agencies under the control of the President; and call for some form of balancing between the costs and benefits of regulation. Ideas of this sort have direct implications for modern regulatory reform.\footnote{107}

For example, Congress is in the midst of considering amendments to the Clean Air Act. One valuable strategy would be to sub-

\footnote{106 See text at notes 10-23.}
\footnote{107 It is of course unclear that Congress will listen to such advice. Perhaps the legislators' existing incentives must be altered in order to bring about lasting reform of the sort suggested here.}
stitute an emissions trading program for the “BAT” approach. Such a program would not require specified control technology for all pollution sources, but would instead force people to pay for a license to pollute and allow them to sell that “right” to other producers. People who can reduce pollution will have a large incentive to do so, because polluters will pay substantial sums for the pollution “credits” it frees them to sell. A fundamental virtue of an emissions trading program is that it would create dynamic incentives for pollution control by making it profitable for people to develop good pollution control technology. Those who developed such devices would be able both to reduce their own pollution and to sell the technology to others. In either case, innovation would be financially rewarding. There is considerable evidence that emissions trading programs are successful.

The same rationale supports a trading system in the international arena, in which some countries would pay others to reduce emissions levels. International debt might be traded for protection of nature. This would be especially desirable in the frequent instances where the effects of pollution, or other environmental degradation, crosses national boundaries. Such a system would produce more efficient reduction techniques and would also be more equitable than an approach requiring all countries—rich and poor, new and old contributors to environmental hazards—to use the same control technology.

Congress is also in the process of selecting pollution control requirements for new automobiles. Application of such controls to old automobiles, unpleasant as it might be for present car owners, would be an effective response to the old risk-new risk paradox. Similarly, the Food and Drug Administration should be discouraged from unduly delaying the entry of new drugs onto the market. Current practices slow the marketing of beneficial products by requiring extremely elaborate testing. Easier screening strategies combined with continuing, post-marketing safety examinations would increase aggregate safety.

108 See Ackerman and Stewart, 37 Stan L Rev 1333 (cited in note 7); and Bruce Ackerman and Richard B. Stewart, Reforming Environmental Law, The Democratic Case for Market Incentives, 13 Colum J Envir L 171 (1988). Notably, the Senate version of the new Clean Air Act, which passed on April 3, 1990, contains an emissions trading program to deal with acid rain. See S 1630, 136 Cong Rec S2077-S2086 (March 5, 1990).

Congress should also amend the Delaney Clause to allow de minimis exceptions. Similarly, Congress should permit administrators to balance costs and benefits in choosing the appropriate controls for toxic substances, or Congress should itself make the regulatory decisions on the basis of some such balancing process. At the same time, Congress should take steps to ensure that regulatory statutes create strong incentives for industry to seek and administrators to promulgate regulations.110 The current system puts a premium on—and has resulted in—inaction. A system that (for example) imposes disclosure requirements or other penalties on manufacturers until regulations have established levels of relative safety would be far more productive.

B. Judges and Administrators

The regulatory paradoxes provide important lessons for judges and administrators as well as legislators. These officials are of course bound by legislative enactments, and to the extent that regulatory statutes unambiguously call for self-defeating strategies, officials have no choice but to honor them. But frequently the interpretation of a statute, or the filling of statutory gaps, is based on an understanding of the real world consequences of the alternative possibilities. Administrators exercise considerable discretion in giving content to ambiguous laws,111 and the legal judgment about whether an agency's decision is "arbitrary" within the meaning of the Administrative Procedure Act112 should be informed by an accurate understanding of the paradoxes of the regulatory state. Attention to the often unanticipated systemic effects of regulatory controls is an imperative for administrators and judges as well as for legislators. I offer three examples here of how these officials can use the knowledge of regulatory paradoxes to inform their actions.

1. The overregulation-underregulation paradox.113

In two important cases, the Supreme Court was asked to interpret the provisions of the Occupational Safety and Health Act that regulate exposure to toxic substances. The pertinent language directs the Secretary of Labor to promulgate the standard that

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110 See note 45.
111 See Chevron USA, Inc. v NRDC, 467 US 837 (1984), which gives enormous policymaking discretion to agencies engaged in statutory construction.
113 In this section I adapt the discussion in Cass R. Sunstein, Interpreting Statutes in the Regulatory State, 103 Harv L Rev 405, 489-93 (1989).
Regulatory Paradoxes

“most adequately assures, to the extent feasible . . . that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard . . . for the period of his working life.” The statute also defines “occupational safety and health standard[s]” as measures that require “conditions . . . reasonably necessary or appropriate to provide safe or healthful employment and places of employment.”

In *Industrial Union Department, AFL-CIO v American Petroleum Institute*, the Court was confronted with an OSHA regulation of benzene. Though the consequences of the regulation were sharply contested, there was reason to believe that the regulation would impose enormous costs for small or speculative gains. A plurality of the Court concluded that the Secretary of Labor must establish that a toxic substance posed a “significant risk” to health before she could regulate it. There was little direct support for the plurality’s conclusion in the language or history of the Act. Unable to point to a solid textual basis for its “significant risk” requirement, the plurality invoked a clear statement principle:

In the absence of a clear mandate in the Act, it is unreasonable to assume that Congress intended to give the Secretary the unprecedented power over American industry that would result from the Government’s view . . . . Expert testimony that a substance is probably a human carcinogen . . . would justify the conclusion that the substance poses some risk of serious harm no matter how minute the exposure and no matter how many experts testified that they regarded the risk as insignificant. That conclusion would in turn justify pervasive regulation limited only by the constraint of feasibility. . . . [T]he Government’s theory would give OSHA power to impose enormous costs that might produce little, if any, discernable benefit.

The plurality went on to suggest that the government’s interpretation would give the Secretary of Labor “open-ended” policymaking authority that might amount to an unconstitutional delegation of legislative power. In a concurring opinion advocating an interpretation of the Act that would permit cost-benefit balancing,

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114 29 USC § 655(b)(5).
115 29 USC § 652(8).
117 Id at 645.
Justice Powell suggested that "a standard-setting process that ignored economic considerations would result in a serious misallocation of resources and a lower effective level of safety than could be achieved under standards set with reference to the comparative benefits available at a lower cost." 118

The "significant risk" requirement cannot be found explicitly in the statute; indeed, the text of the relevant provisions suggests that no such requirement was imposed on the Secretary of Labor. But the plurality's conclusion was nonetheless sound. Realistically speaking, the language of the statute need not be considered dispositive. It is simply a myth to suggest that the Congress that enacted OSHA even considered the propriety of regulation requiring enormous expenditures to redress minimal risks. Despite the broad language of the toxic substances provision, Congress never focused on that problem.

In the context of American Petroleum, the plurality was therefore correct in considering itself free to read an implicit "significant risk" requirement into the statute. In light of the over-regulation-underregulation paradox, it would make little sense to interpret the statute so as to allow—indeed, require—the Secretary to regulate to the point of "feasibility" merely because one or a few employees might suffer "material health impairment" as a result of a lifetime of exposure. Such an interpretation would make the Department of Labor reluctant to embark on a course of regulation at all, and as we have seen, would result in less, not more, protection of workers. It would ensure that there would be less regulation of carcinogens or less enforcement of those regulations that were promulgated—or, most likely, both.

In American Textile Manufacturers Institute v Donovan, 119 the Supreme Court decided a question left open in American Petroleum: whether the Occupational Health and Safety Act required cost-benefit analysis. In arguing that it did, the industry contended that the word "feasible" meant that the Secretary must show not only a significant risk, but also that the benefits of regulation justified the costs. "Feasibility," in the industry's view, contemplated a balancing of costs and benefits. The government contended that once OSHA had shown a significant risk, it could regulate to the point where the survival of the regulated industry would be endangered by additional controls. For the government, the term "feasi-

118 Id at 670 (Powell concurring).
bility” connoted not cost-benefit balancing, but instead regulation to the maximum extent “possible.”

In accepting the government’s argument, the Court relied on the dictionary definition of “feasible,” concluding that the term meant “capable of being done, executed, or effected,” rather than justified after balancing costs and benefits. This approach to statutory interpretation was not entirely unreasonable. But the same principles that support the plurality view in American Petroleum cast doubt on American Textile Manufacturers.

First, notwithstanding the statute’s language, it is probably unrealistic to believe that Congress actually focused on, and resolved, the question whether the government’s approach was to be favored over some kind of balancing of costs and benefits. That question never arose during the debates. Second, a system requiring the Secretary to identify a significant risk, but prohibiting her from undertaking cost-benefit analysis, seems utterly irrational. Whether a risk is “significant” depends in large part on the costs of eliminating it. A risk that is relatively small might call for regulation if the costs are also small, while a large risk might well be best left unregulated if the costs of regulation are enormous. A rational system of regulation looks not at the magnitude of the risk alone, but assesses the risk in comparison to the costs. Finally, a law requiring the Secretary to regulate all significant risks to the point of endangering the industry would be a recipe for both over-regulation and underregulation.

These considerations could not have controlled the Court’s decision if the statute dictated a contrary result, but the word “feasible” was probably capacious enough to accommodate a kind of proportionality requirement. To be sure, the case was a difficult one. But by its reading of the statute, the Supreme Court has contributed to the irrationality of the Occupational Safety and Health Act—irrationality that has harmed workers, employers, consumers, and the public at large. An understanding of the overregulation-underregulation paradox might well have prevented this result.

2. The old risk-new risk paradox.

A number of judicial decisions might have been different if courts had been attuned to the old risk-new risk paradox. Con-
sider, for example, one district court’s creation, in the face of an ambiguous text, of the “prevention of significant deterioration” (PSD) program in *Sierra Club v Ruckelshaus.*\textsuperscript{122} In that case, the court ruled that state implementation plans under the Clean Air Act must include provisions not merely complying with national air quality standards, but also designed to prevent the degradation of air currently cleaner than those standards require. The consequence of the PSD program is to ensure that especially clean areas remain especially clean. They are not permitted to become dirtier even if they would continue to provide a safe and healthful environment.

One of the court’s goals was to ensure that federal environmental policy protected beauty and visibility in currently pristine areas.\textsuperscript{123} While the PSD program has to some degree promoted that goal, it has also had perverse side effects. For example, it has delayed the salutary substitution of clean, low-sulphur Western coal for dirty, high-sulfur Eastern coal; at the same time, it has protected dirty existing plants in the East against replacement with cleaner new ones in the West.\textsuperscript{124} To protect the atmosphere in Aspen from degradation is, almost inevitably, to perpetuate the existence of old, particularly dirty producers in New York. The foreclosure of new risks has thus increased the magnitude of old ones. It is far from clear that the environment is better off as a whole.

Indeed, it should come as no surprise that the PSD program has become a primary means of protecting eastern industry and eastern states against western interests. States in the West seeking to attract industry have found, perversely, that an environmental program can be used to create a cartel against new entry.\textsuperscript{125} A PSD program based on an understanding of the adverse effects of that cartel for the prevention of environmental degradation would take a quite different form.

The court that decided the *Sierra Club* case was unaware of these effects. Because the statutory basis for the decision was quite thin, an understanding of the environmental and nonenvironmental costs associated with the PSD program might well have led to a contrary result.

\textsuperscript{122} 344 F Supp 253 (D DC 1972).

\textsuperscript{123} See the discussion in R. Shep Melnick, *Regulation and the Courts: The Case of the Clean Air Act* (Brookings, 1983).

\textsuperscript{124} Id at 80-83.

3. The independent agency problem.

The precise constitutional status of the independent agency remains an uncertain question. In *Humphrey's Executor v United States*, the Supreme Court, affirming the constitutional validity of the independent agency, held that Congress could constitutionally prevent the President from removing a member of the Federal Trade Commission simply because it pleased him to do so. Recent decisions have reaffirmed the authority of *Humphrey's Executor* insofar as it recognizes that some degree of independence from the President is permissible. But suppose that members of the Nuclear Regulatory Commission or the Federal Trade Commission act in ways that consistently reject the President's views about public policy. May the President discharge the relevant commissioners? It is frequently assumed that he may not. But neither *Humphrey's Executor* nor any other case explains what "independence" precisely means, or whether it extends to such situations.

The problem might be solved through statutory interpretation that takes account of the independent agency paradox. The relevant provisions allow the President to discharge a commissioner "for cause," defined as "inefficiency, neglect of duty, or malfeasance in office." Although ambiguous, these words do not entirely immunize commissioners from the control of the President; instead they allow him to remove the officials under certain circumstances. For those attuned to the independent agency paradox, it might seem that the words are best read to grant the President something in the way of supervisory and removal power—allowing him, for example, to discharge as inefficient or neglectful of duty those commissioners who have frequently or on important occasions acted in ways inconsistent with his wishes.

This result might seem counterintuitive in light of the frequent understanding that independent agencies are to be immunized from presidential policymaking. But there is a plausible precedent for precisely this conclusion in a recent Supreme Court...
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decision, Bowsher v Synar. In that case, the Court held that Congress could not delegate power to administer the Gramm-Rudman statute to the Comptroller General, because the Comptroller was subject to congressional will. In the Court's view, those who execute the law must not be subject to the policymaking authority of the Congress except insofar as legislative instructions are embodied in substantive law. The relevant statute allowed Congress to discharge the Comptroller for "inefficiency, . . . neglect of duty, . . . [or] malfeasance." The Court said that these words conferred on Congress "very broad" removal power and would authorize Congress to remove the Comptroller for "any number of actual or perceived transgressions of the legislative will."

The words governing congressional power over the Comptroller General and presidential power over independent agencies are essentially identical. If those words have the same meaning in these admittedly different contexts, the President has "very broad" removal power over the commissioners of the independent agencies, with correlative powers of supervision and guidance. It would follow that the independent agencies are in fact subject to a considerable degree of presidential control. They are not, as a matter of statutory law, "independent" of him at all.

It would of course be plausible to suggest that the different contexts require the same words to have different meanings. Perhaps a statute restricting congressional power over the Comptroller General should be understood to impose thinner limitations than does a statute controlling presidential power over independent commissioners; such a reading would hardly be an implausible reconstruction of legislative goals in light of the context and background of the relevant statutes. In view of the independent agency paradox, however, courts would do well to invoke a clear statement principle that grants the President broad supervisory power over independent agencies, unless Congress has expressly stated its will to the contrary. Such an approach would minimize the risks inherent in the independent agency form, and promote coordination and accountability in government. It would require Congress to speak unambiguously if it wants to compromise those goals.

132 Id at 726-27.
133 Id at 728; 31 USC § 703(e)(2) (1982).
134 478 US at 729.
V. CONCLUSION

There are multiple breakdowns in private markets, and government controls often successfully counteract them. The administrative state has not been a universal failure. But regulatory programs have not always succeeded, and the paradoxes of the regulatory state have been a pervasive source of its problems. Self-defeating regulatory strategies take many forms. I have discussed six such paradoxes and referred to several others; still others undoubtedly exist.

In proposing reforms for the regulatory state, little can be gained from generalities that point to the frequent problems created by either government regulation or private markets. These problems are too particular and too dependent on the context to allow for global prescriptions. It is far more helpful to rely on particularized understandings of how both markets and regulation tend to break down—to learn, in short, from the past. The experience of the regulatory state includes many self-defeating regulatory strategies. Enough information is in place to help legislators, administrators, and judges to minimize their adverse effects, and perhaps to prevent their occurrence. The result would be a small but firm step in the direction of an American-style perestroika—a system that is entirely unembarrassed by the use of government to reflect democratic aspirations, to promote economic welfare, and to foster distributional equity, while at the same time insisting on strategies that embody the flexibility, adaptability, productive potential, and decentralization characteristic of private markets.

\[136\] At least this is so for systems that, on the one hand, respect private property and freedom of contract while, on the other hand, imposing regulatory controls on the most harmful consequences of unregulated markets. General prescriptions would of course have considerable weight in collectivist systems or systems of “laissez faire.”