The central question posed by Mashaw is, "Why are administrative procedures and structures so complex?" As he observes, "legal idealists" have provided a series of answers to this question, centering around the notion that procedures are designed to serve various normative ends, such as due process and deliberative rationality:

Administrative procedural requirements embedded in law shape administrative decision-making in accordance with our fundamental (but perhaps malleable) images of the legitimacy of state action. That is administrative procedure's purpose and its explanation. (Mashaw:$268; emphasis added)

In recent years, a series of critiques of the mainstream view have arisen, and his article explores two: that of critical legal studies, and that of positive political theory (PPT). Although there are substantial differences between these two critiques, they both postulate that administrative procedures

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serve political ends and question whether the legal idealist view is a sufficient explanation of these processes.

While Mashaw finds much of value in each of these approaches, he is clearly not persuaded by either. The critiques reveal that legal idealists have, perhaps, been “touchingly naive” about how normative ideals might be implemented through legislation by legislators and presidents, and by the decisions of agencies and courts. Nonetheless, he is not prepared to admit the irrelevancy of the central premise of the traditional literature—that procedures do serve normative ends, at least most of the time.

The Mashaw Challenge. Mashaw’s premise can be stated as a challenge to critics of the legal idealist’s view, one which we explore in terms of PPT. The latter views legislators and the President as rational actors furthering their reelection goals. With respect to administrative structures and procedures, PPT suggests that these are the means by which interest-group bargains, negotiated by politicians, are implemented and enforced by agencies (e.g., McCubbins et al., 1989; Moe 1989).

Mashaw emphasizes that while PPT might give lip service to the normative aspects of administrative law, the only procedures actually analyzed are those with political and instrumental motivations. Consequently, the findings and interpretations of legal idealists are judged to be incorrect, and the attention to normative issues by politicians and the courts is regarded as mere rhetoric. This is a narrow interpretation of PPT, although not an unjust one based on the current literature. We call this version of PPT reductionist, for it limits the potential role of procedures to those serving political ends.

The gulf between legal ideals and reductionist PPT provides the challenge for PPT: Is PPT necessarily reductionist, arguing that legal idealism is misconceived and irrelevant? If not reductionist, then how are the two to be integrated in a manner that does more than give lip service to legal idealists?

The purpose of this article is to address Mashaw’s challenge. Our answer is that the two approaches can be integrated. If legal idealism has sometimes been stretched uncomfortably far to explain the obvious anomalies of administrative structure in terms of normative principles, it may nonetheless identify a major source of procedures. Here we assume that Mashaw is correct, and that legal idealism, operating through the judiciary independent of partisan consideration, does affect administrative procedures.

There are several independent sources by which normative goals might enter the calculus of politicians, though we only explore one in detail. First, even reelection-minded politicians will pay attention to due process if their constituents do. If procedural due process is widely supported, politicians ignore it at their own risk. Second, independent of the first, politicians represent different constituencies. Because political fortunes wax and wane, politicians have a collective interest in restraining themselves, in effect
agreeing that those in power will not overstep the rights of another politician’s constituency.\(^1\) Third, as emphasized in the legal literature, the courts have long been a source of procedures, and their efforts at defining rights of due process may reflect normative values.

In our view, the first two sources of attention to normative issues by reelection-minded politicians go a long way toward explaining self-imposed procedural limits—notably, the Administrative Procedures Act of 1946 and many of the procedural constraints imposed on all administrative agencies created since that time.\(^2\) Although these provide the limits politicians might choose to impose on themselves, courts may push these limits farther. If the courts are an important source of due-process constraints, this fact cannot be ignored or dismissed by elected officials, and PPT scholars ignore it at the peril of the value of their theory. Hence, in this article, we seek to examine the interaction between courts that pursue normative goals and politicians who seek reelection. Specifically, we seek to extend PPT by examining how reelection-seeking politicians will behave given that courts are populated by legal idealists.

The context in which we develop our argument is the confrontation between environmentalists and the Atomic Energy Commission (AEC) in the late 1960s and early 1970s. During this period, the relevant congressional committee (the Joint Committee on Atomic Energy) collaborated with the AEC to promote the commercialization of nuclear power. Environmentalists opposed this goal, and regulators attempted to use procedures to limit the influence of environmentalists in regulatory proceedings. In a series of decisions, the courts forced the AEC to allow participation by environmentalists and to pay greater attention to environmental issues. As is well-known, environmentalists succeeded in halting the development of nuclear power soon thereafter. The value of the approach integrating PPT and legal idealism is that it provides a better explanation of outcomes of nuclear power than either could provide alone.

This article proceeds as follows. Section 1 develops the reductionist approach to PPT in a simplified setting and provides some illustrations. Section 2 outlines an extension of PPT yielding a nonreductionist approach and shows how PPT might be expanded to consider courts as a source of procedures that embody normative goals. Section 3, the heart of the article, develops the theme of Section 2 in the context of nuclear power.

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1. As emphasized in Cox and McCubbins, parties within legislatures exist to resolve a whole host of collective dilemmas. They suggest that a large number of norms of “fair play” might be equilibrium results of a game of interaction among legislatures.

2. We elaborated some of the political effects of administrative procedures in McCubbins et al. (1987). In our current work, we are pursuing the hypotheses just stated about the APA.
1. THE REDUCTIONIST PPT MODEL

To develop the PPT approach to administrative structure and procedures, we begin with the elected representatives, the president, and the Congress. In what follows, we presume that elected politicians have their own goals defined by their reelection prospects and, for the president, by possibly securing a place in history. Because these 536 officials have different constituencies, they also have different induced preferences over policies. These preferences are generated by the effect of constituency preferences on the adoption of an elected official's optimal election strategy. In what follows, we develop the logic of our approach in the simplest possible case, that of a president and a Congress, each viewed as a unitary actor; each elected official has distinct and well-defined preferences.

Consider a situation in which elected officials are dissatisfied with the status quo and both prefer a range of policies to the present policy. This case is illustrated in Figure 1, which depicts a continuum of potential policies (e.g., the degree of government intervention). Each elected official is characterized as follows. First, each has an “ideal” policy which is preferred to all others. In the diagram, the president’s ideal is labeled P, and Congress’s is labeled C. Second, both actors prefer policies closer to their own ideal than to those further away. Also shown on the diagram is the status quo, Q, or the policy that will remain in effect unless the two actors can agree to change it. From the construction of Figure 1, it is clear that a range of compromises between P and C are preferred by both the president and the Congress to the status quo.

For convenience, we make the following assumptions about legislation (see Calvert et al.). Because both the Congress and the president have influence over the form of legislation, and can fail to act or veto proposals that are deemed unsatisfactory, neither dominates the legislative process. In particular, we assume that both gain from legislation. This type of bargaining translates to a compromise policy somewhere between the ideal points of the two players. For example, in Figure 1, they may choose to legislate a policy such as A, which both prefer to the status quo.

In order to examine the role of structure and procedures, let us suppose that implementing this policy requires delegation of authority to a regulatory agency. As is well-known, this raises a common form of incentive problem: How can elected officials ensure that their agents, a nonelected set of government officials, will implement the desired policy?

The most natural answer is that corrective legislation is all that is required.

3. What follows is based on our own work (McCubbins et al., 1987, 1989) and that of Moe (1989, 1990).

4. The incentive problem is known in the economic literature as the “principal-agent” problem. This is reviewed in Holmstrom and Tirole.
to police a deviation by the agency. In practice, this strategy is not credible for the vast majority of deviations by the agency. The reason can be seen from the diagram. In this context, an agency has been delegated the authority to implement policy A. The agency may deviate from A by choosing some policy other than A. As long as the agency does not deviate “too far” (in a well-defined sense we will ignore here), one of the elected officials is always better off by the deviation. Because corrective legislation can only make this official worse off, the latter will veto the corrective legislation proposed by the other official.\(^5\) In Figure 2, suppose that the agency implements some policy, A', between A and C. Congress clearly prefers A' to A. Although the president might propose legislation to force the agency back to A, Congress will not pass it.

Unless an agency is wildly noncompliant, some elected officials are always better off after the agency deviates. If these officials can block corrective legislation, then such legislation is not a credible means for officials to prevent deviations. Agencies in this circumstance are free to deviate as they choose.

Nonetheless, before the deviation occurs, elected officials have several reasons to want to prevent deviations. First, politicians are risk-averse, and risk aversion implies that they will prefer a known policy agreed upon in advance to a “lottery” over policy in which there is a relatively equal chance that the agency makes them better off and worse off.\(^6\) Second, because policy outcomes can be critical to their interests, politicians do not wish to grant an agency the authority to choose which of them is favored. Such authority gives bureaucrats leverage over politicians and their fortunes.\(^7\)

\(^5\) Obviously, it is easy to modify this story to allow for a veto override by two thirds of Congress. We choose to ignore this complication. For such an analysis, see Ferejohn and Shipan.

\(^6\) See the discussion in Cohen and Noll.

\(^7\) Scalia emphasizes political aspects of decision-making by agencies and concludes that, whether appropriate or not, “it is assuredly something the agencies often do. And in the course of drafting new legislation a substantive committee of the Congress might reasonably engraft additional requirements upon informational rulemaking in order to reduce or eliminate such political decision making.” (403–4)
Thus, elected officials have an incentive to limit the ability of an agency to deviate from legislative policy agreements. Since corrective legislation is not credible, they must find other means. PPT provides a theoretical structure for alternative ways to ensure bureaucratic compliance. Elected officials hold several powerful incentive mechanisms used to influence agencies. The literature has examined several in detail, including the power of the purse and the power of termination (for the case of an executive agency) or reappointment (for an independent regulatory agency). More relevant for our purposes, PPT suggests that officials will use administrative structure and procedures in their original legislation to constrain the ability of an agency to deviate after the fact. As we have suggested elsewhere (McCubbins et al., 1987, 1989), they do so in two ways: first, by stacking the deck in favor of certain policy outcomes; and, second, by attempting to mirror the balance of constituency pressures in their own environment on the agency. Moe (1990) puts this another way. Because the elected officials who hold public authority today are not necessarily those who will hold it tomorrow, interest groups that are part of today's bargain will advocate structural and procedural safeguards that force the agency to take the interests of today's powerful interests into account tomorrow, even if the agency—or political officials—would prefer not to do so as time unfolds.

[The] strategic task [of an interest group] is not simply to get the policies and structures it wants in the current period, but also to design them in such a way that they have the capacity to survive and prosper in an uncertain political future. (Moe, 1990)

This basic thesis is not new to the legal literature. Scalia advanced a similar argument over a decade ago. He observed that Congress has been an importance source of new procedures via legislation. In this endeavor,

Procedural efficiency and fairness are a side issue. . . An interest group which cannot achieve its goals of eliminating FTC rulemaking authority may, quite rationally, settle for imposition of cumbersome procedures that at least reduce the extent to which rulemaking can occur. It is not sheer accident that the most elaborate extra-APA procedural requirements have been attached to those agencies, or those new agency powers, whose existence aroused the most political opposition. (Scalia: 402)

8. See, for example, Kiewiet and McCubbins, McCubbins and Schwartz, and Moe (1990).
9. Moe (1990) calls this "political uncertainty" and notes that it "has a profound effect on the choices of political actors when they are fortunate to be in power. In particular, they know that whatever policies and structures they put in place today may be subject to the authoritative direction of other actors tomorrow, actors with [possibly] very different interests who could undermine or destroy their hard-won achievements. If today's authoritative decisions are to have staying power, if they are to continue generating benefits for their creators into the future, they must somehow be insulated from tomorrow's exercise of authority." (7–8, emphasis added)
Moreover,

[T]his discussion of the legislative process was meant to emphasize . . . that one of the functions of procedure is to limit power—not just the power to be unfair, but the power to act in a political mode, or the power to act at all. (Scalia: 404–5)

An illustration: The case of OSHA. Numerous procedural and structural mechanisms are available to politicians to aid in assuring bureaucratic compliance with legislated policy objectives. Here we provide one illustrative example, the creation of the Occupational Safety and Health Administration (OSHA) in the early 1970s. Ostensibly, OSHA was created for the benefit of labor.\(^{10}\) The original plan devised by the Democrats in Congress heavily favored labor and sought an agency that would be housed in the Department of Labor (and, therefore, would be far more permeable to labor interests than to business interests). This design also would have left OSHA relatively unconstrained in its ability to choose priorities and implement policies. The problem was that this plan could not succeed because of the certainty of presidential veto. At the same time, President Nixon proposed a plan that heavily favored business, proposing a series of strong limits on OSHA's power. In a loose sense, the configuration of preferences in Figure 1 applied here, too. The set of feasible policies included both pro-business (and anti-labor) proposals on the left of the figure and pro-labor proposals on the right. The status quo was a relatively low level of federal protection of occupational safety and health, and is located to the extreme left. Both the president and the Congress preferred a wide range of policies to the status quo, but the Democrat-dominated Congress was distinctly more pro-labor than the president. If the position C is taken to be near labor's ideal agency, then P represents a policy that constrains the agency so it provides some level of benefits to labor over the status quo, but not as high a level as legislation that would implement C. If congressional Democrats are not strong enough to override a presidential veto, legislation acceptable to both sides is likely to emerge, resulting in a compromise policy such as A.

Business interests were able to force a series of compromises designed to limit OSHA's ability to pursue its objectives, but not to cripple it entirely. These limits were devised to prevent OSHA from being an unconstrained, powerful advocate for labor.

The main structural and procedural constraints were as follows. First, the legislation did not give OSHA complete authority to set its own priorities in the health area. Instead, it could develop a standard only if a second, newly created agency, the National Institute of Occupational Safety and Health

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10. This case draws on the material in Cornell et al., McCubbins et al. (1987), and Moe (1989).
(NIOSH), first issued a criteria document. NIOSH, in turn, was not housed in Labor, but in HEW, a department not under the jurisdiction of the same committees as OSHA and, therefore, fundamentally less subject to the pressure and priorities of Labor. Second, a complex system of enforcement was designed. One of its main features was that it allowed each state to choose whether to let OSHA enforce OSHA regulations or to do so itself. This gave those states in which business interests were dominant a way to limit enforcement. Third, in a large number of cases, OSHA was required to adopt existing “consensus” standards if they existed (Moe, 1989). Since these were generally weaker than those adopted by OSHA, they restricted its ability to write stringent rules.

OSHA is a particularly simple case. Given the decision to lodge OSHA in the Labor Department with jurisdiction held by the Labor committees in each house of Congress, the natural deviation from any compromise between P and C would be toward labor. Hence, the constraints imposed take a particularly simple form in that they were designed to hinder the ability of OSHA to pursue regulation benefiting labor at the expense of business.

The implication of PPT is that this type of behavior should be pervasive, affecting nearly all legislation administered by agencies. In fact, legislation creating new agencies often runs to the hundreds of pages, which cover procedural details, especially regulatory legislation since the mid 1960s. Politicians are hardly perfect at this, and the range of available administrative structures does not permit surgical precision in specifying exactly the set of policies that an agency can choose. Still, structure and procedures are one set among the many tools available for limiting deviations, and they are commonly used in this manner.

Before closing this discussion, it is useful to raise another issue that was implicit in the discussion of OSHA. The abstract case for the model developed around Figures 1 and 2 concerned the implementation of particular policies. In that setup, politicians knew the policies they wanted, and hence could easily recognize deviations. Most regulatory contexts, however, are characterized by sufficient uncertainty that preferences over specific policies are often very difficult to know in advance. PPT theorists have recognized this problem, and have countered with the following. While politicians may not know the specific policies they want (e.g., the particular standard for a given toxic chemical), they do know something about the balance of constituency interests that they want to establish and maintain. As illustrated by our

11. Moreover, while OSHA had identified 400 of the 42,000 chemicals used in industry as “hazards,” NIOSH’s staff and research resources were not large enough to make much headway against them. In 1972 and 1973, the NIOSH section responsible for preparing criteria documents had a total of 31 positions (including clerical). See Cornell et al. (483).

12. See, for example, our analysis of the Clean Air Amendments of 1977 (McCubbins et al., 1989).
discussion of OSHA, procedural constraints are often designed to mirror a particular balance of interest groups.

Moreover, the political knowledge necessary for politicians to recognize deviations by agencies is clearly not the same as the expertise needed by the agency to make the decision. Even if politicians are ignorant of these details, they can readily interpret their constituent's reaction. For most policies, this is all that is required to signal that an agency might deviate and, hence, to intervene to prevent it (McCubbins and Schwartz).

2. THE ROLE OF THE COURTS

The model developed in the previous section is reductionist in the sense that the only goals affecting politicians are their own narrow private ones. In evaluating their choices, politicians do not search for the "public interest" except insofar as it is manifest in their own electoral prospects. Moreover, because the model allows no other source of influence or power beyond elected officials, it views these forces as decisive for the choice of policy and procedure.

The key source of political authority ignored in this approach is the courts. While PPT scholars have begun to allow a role for courts in their models, that role is a particularly narrow one. In this section, we develop the narrow role for the court commonly depicted in the PPT literature, and then suggest how to extend it so that it looks more like the courts depicted in the legal literature. The latter allows us to show how courts might function as an independent source of administrative procedures.

PPT models begin with a straightforward, if severe, assumption about judicial decision-making. Courts are viewed as another political actor with two characteristics: (i) they have their own set of preferences over policy outcomes; and (ii) they possess a well-defined authority to act in certain circumstances. The simplest models study how adding a court of this type can alter the policy choices of politicians.14

To see how this works—and how it can be generalized—we return to the model of Section 2. While that theory holds that structure and procedure constrain an agency from deviating in either direction, this result does not apply to courts. Not only are the tools held by politicians for use against agencies rarely wielded against the courts, the latter have their own independent sources of political authority. As a consequence, the intervention of courts in a policy area can have a markedly different affect on policy than that of agencies. Consider, for example, a case that calls on the court to decide

13. This is a new and quickly growing literature. See references in Ferejohn and Shilan, and Spitzer.
14. For example, see Marks or McCubbins et al. (1989). More complex models study the equilibrium interactions between these players (e.g., Gely and Spiller or Ferejohn and Shilan).
some issue in statutory interpretation. Again, for concreteness, consider the situation in Figure 2, and suppose that the agency has been implementing policy A. A suit arises that questions this policy, arguing that the legislation really meant some alternative policy, say, A', located between A and C. Let us suppose that, for whatever reason, the court finds this argument persuasive.

The logic of Section 2 still applies: If courts interpret the statute to alter policy from A to A', politicians cannot pass corrective legislation that reinstates their previous policy, A. Courts are decisive. Moreover, as shown in Marks, this holds even if politicians originally intended to pass A.

Our earlier work argued that precisely this scenario occurred with respect to the Clean Air Act (McCubbins et al., 1989). Neither Congress nor the president wanted legislation that forced areas with air quality that was better than the minimum standards (i.e., "pristine" regions) to maintain their current air quality. Instead, the legislative compromise sought to allow these areas to undertake activities that might "degrade" their air quality (e.g., promote development) if "there [was] no available alternative," and as long as the latter remained at or above the standards. The best evidence for this is that, prior to the Sierra Club decision, when the EPA attempted to implement a nondegradation standard in pristine areas, Congress and the president were able to intervene through standard means, but without new legislation, to prevent the policy.

The courts changed this policy by reinterpreting the statute to require nondegradation (Sierra Club v. Ruckleshaus). As we show, the configuration of preferences among the House, Senate, and president was a generalization of that depicted in Figures 1 and 2. One branch (the House) was favored by this deviation and therefore blocked all attempts to reinstate the original policy, although attempts were made (McCubbins et al., 1989).

This discussion illustrates the types of conclusions that typify the PPT literature with respect to courts. It is also sufficiently transparent to reveal the strengths and weaknesses of the PPT approach. Its strength is that it allows strong predictions about the effects of judicial decisions concerning statutory interpretation, and that, as Marks emphasizes, even radical redefinitions of policy often cannot be reversed by elected officials. On the

15. Because all major legislation is the result of compromise among different politicians, and because courts use the legislative record to interpret questions about the meaning of statutes after the fact, politicians will attempt to provide support for the view that the legislation is closer to their ideal than is the actual compromise. In a sense, this provides the court with considerable flexibility ex post because there is always evidence for a reading that the statute is different than the current implementation.

16. For an elaboration of this logic and its application to the case of Grove City College, see Marks. See also the discussion of Gely and Spiller.

other hand, it underscores the weakness of the approach because the role of the court is not only unexplained, but is assumed to focus only on concerns that parallel those of politicians—namely, policy choice.

*Extending the model to include courts with due process objectives.* The general PPT approach can be extended in a natural way to encompass other assumptions about judicial behavior. Because courts have the authority to interpret the Constitution, including the meaning and requirements of due process, their constructions have a force that cannot be reversed by simple majorities. Thus, beyond policy choice and statutory interpretation, a key activity of the courts is to define and promote a complex set of principles, practices, and procedures embodied in the Constitution (or at least rationalized as such) and to impose them on elected officials and public agencies. If courts wish to alter or to reinterpret the meaning and requirements of procedures, they can clearly do so.18

Such a view of the courts can be easily incorporated into PPT models, and takes the form of a specification of the court's objectives. Because PPT scholars hold that structure and procedures affect the balance of forces on an agency and that this balance directly affects policy decisions, court-induced changes in structures and procedures will affect policy, and perhaps in ways that cause substantial deviations from legislative policy intent. What makes this extension of the model interesting is that the motive of the courts to affect procedure is no longer directly tied to the instrumental effects of those procedures, clear though the latter may be.

Suppose, therefore, that courts have a relatively sophisticated approach to procedures focusing on their role in securing the procedural rights of potential participants independent of their affect on policy. While a complete treatment of this topic is beyond the scope of the present article, several key conclusions can be sketched.

First, as the legal literature suggests, courts will perceive their role, in part, as that of imposing procedures. The specific procedures chosen in a given case will reflect the interaction of the principles used by the courts and the specifics of the case, just as traditional legal analysis has so often described. From our standpoint, this procedural effect, even if established for alternative motives and without regard to its affects on policy choice, has a direct effect on policy choice. Because it affects the balance of forces created in the legislation, it affects the outcome in predictable ways.

Second, by imposing due-process principles and specific requirements on agencies, courts will constrain the ability of politicians to manipulate pro-

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18. This is not to suggest that courts are the sole source of defining administrative procedures. We believe, for example, that the APA had considerably more input from politicians than is generally acknowledged by legal idealists. See McCubbins et al. (1987) and Shapiro (1986).
cedes in favor of their constituencies. Because PPT models view politicians as attempting to use procedures in order to achieve their goals, a set of binding procedural constraints required by due process directly limits the ability of politicians to invent a specific set of procedures tailored to the politics of each case. Furthermore, there is always a risk that any new procedure may be reinterpreted or redefined by the courts, based on their own reading of the statute and the requirements of due process.

3. PROCEDURES AND THE DECLINE OF NUCLEAR POWER

The commercial viability of nuclear power lasted barely over a decade, from the mid 1960s to the mid 1970s. Before the mid 1960s, a commercially feasible power plant had yet to be developed; afterward, the delays and demands of the regulatory approval process became so great (and were still growing) that nuclear plants were too expensive to construct. Administrative procedures derived by the courts played a central role in the transformation of a seemingly commercially viable industry in the late 1960s into an unprofitable one a decade later. To see this we first characterize the politics of the industry during its commercially viable stage and then turn to the evolving politics and its effect on nuclear power.

3.1. EARLY PHASES TO THE MID 1960S

The early phases of nuclear power development by the AEC were dominated by a pro-development mentality. There was near consensus that commercialization should be the principal goal—that is, developing a private industry that would produce and sell nuclear power plants to produce electricity. It was a time of great optimism. Not only was this program the main demonstration project of the peaceful uses of atomic energy, but many expected nuclear plants to produce electricity in such abundance that it would be "too cheap to meter."

The politics of this development were straightforward. As shown in Figure 3, the set of potential policies ranged from little or no effort at promoting nuclear commercialization to substantial effort and subsidies. During the late 1950s and early 1960s, nearly all the relevant political actors had similar preferences, shown in the figure as having the same ideal point. These were the Joint Committee on Atomic Energy (JCAE) in Congress with jurisdiction over these and related issues, the median member of both houses (M), the president (P), the AEC, the relevant interest groups (IGS) composed largely of the potential vendors (e.g., General Electric and Westinghouse), their

suppliers (e.g., the uranium industry), and their customers (electrical utilities). Public policy naturally reflected this degree of consensus, so we depict the status quo, Q, at the same location.

The promoters of nuclear power achieved their goal of commercial viability in 1963 when GE announced that it would build a nuclear power plant at Oyster Creek, New Jersey, at a cost lower than the alternative sources of power. Soon thereafter utilities ordered large numbers of reactors, and nuclear power appeared on its way to a long future.20

3.2 THE RISE OF ENVIRONMENTAL OPPOSITION

We now know that the commercial success in the mid 1960s was simply the calm before the storm. This period witnessed the growth of the environmental movement as a powerful new political force. The rise of environmentalists who opposed nuclear power—both in principle and through participation in various regulatory decision-making bodies—led to a dramatic transformation of the politics of nuclear power. Their effect was twofold.

The first and most direct effect was the collapse of consensus over nuclear power’s promotion. Indeed, by the late 1960s, environmentalists were a strong, if as yet unsuccessful, opponent. Figure 4 shows the new dispersion of interests. In the figure, the JCAE along with the various industry groups remained unconvinced that there were problems with nuclear power, and so they are depicted at the status quo unmoved from the early 1960s. In contrast, the environmentalists and their representatives in Congress were located at the opposite end of the policy spectrum. Somewhere in between

20. Seventy-one plants were ordered between 1966 and 1970. See Burness et al. for the details and analysis of the so-called “turnkey” era.
these two extremes, though probably closer to the promoters, lies the median of the two chambers, M. Until the environmentalists' legislative successes of 1969 and 1970, it was unclear whether they could command a majority of support in the two chambers on major issues.

In order to understand the second effect of the rise of environmentalists, we turn to the interaction of environmental issues and the promotion of nuclear power. One facet of the latter is the amount of subsidy for nuclear development. All else equal, greater subsidies lead to faster development and greater profits for the industry. A second dimension relevant to the promotion of nuclear power is the extent of regulation by the AEC of the environmental effects of nuclear power. Examples include regulations regarding discharges from the cooling system, which may pollute local sources of water; the safeguards associated with the structure; the adequacy of the emergency core cooling system; and waste storage and disposal (Bupp and Derian, Cohen). Along the second dimension, all else equal, the more stringent are the AEC's regulations devoted to these issues, the lower will be the rate of development and the profits of the industry.

The preceding ideas are captured in Figure 5, which shows "isoprofit" lines for the industry (i.e., combinations of subsidies and environmental regulation that yield the same industry profits). Thus, decreasing environmental concern or increasing subsidies (moving down or right in the figure, respectively) increases industry profits. Increasing attention to the environment or decreasing subsidies decreases industry profits (moving up or to the left). Finally, the figure shows one isoprofit line as thicker than the rest, representing combinations of subsidies and environmental regulation that leave the industry with zero profits. All combinations below and to the right of this line yield positive profits and a commercially viable industry. In contrast, all combinations above and to the left of the line leave the industry commercially inviable.

If the first major effect of the rise of environmentalists was a collapse of

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21. The figure depicts these lines as straight. While arbitrary—since they may in reality have some curvature—this assumption is unimportant for what follows.
the consensus over the degree of promotion of nuclear power, the second effect was to raise the issue of the environmental impact of nuclear power as a policy concern, independent of the other promotional activities. The politics among the elected officials became more complex and included a significant degree of controversy.

Figure 6 illustrates the new situation in the late 1960s. Combining the analysis of Figures 4 and 5, Figure 6 shows the two relevant dimensions of policy choice and the zero-profit line. We assume that Congress has three types of members. One, represented by the JCAE, remains highly pro-development, and its ideal reflects its preference for relatively little attention to environmental issues and a high subsidy. Congressional environmentalists (ENV) have the opposite preferences. M represents the median member of Congress who is moderate on both dimensions. We infer that the median legislator was moderate—and specifically, interested in both environmental protection and nuclear power—from the continued passage throughout the 1970s of strong environmental legislation and generous support for nuclear R&D, in particular, the breeder reactor. The status quo and the AEC remain in the lower right, where we also locate the JCAE and relevant industry interest groups.22 In comparison with the environment-

22. While these placements are somewhat arbitrary, their relative positioning is probably sound, and other possible combinations will yield the same story, as will be clear below.
talists' preferences—or for that matter with the present day Nuclear Regulatory Commission (NRC)—the AEC was more willing to allow a significant impact on the environment in return for a less expensive design. In our analysis of the politics of nuclear and environmental policy, we will ignore the role of the president, whose power to veto legislation influences the range of feasible policies. During the period in question, Presidents Johnson and Nixon both favored an expanded role for environmental regulation, and even Nixon sought to build an image as environmentally concerned (see Elliott et al.). Hence, we assume that the president is more or less represented by congressional moderates, and so will sign a bill which they support.

In order to highlight the role of the courts, we first analyze the new politics of nuclear power without them. To do so, we introduce two concepts, one focusing on majorities in Congress and one on the rules governing the legislative process. These correspond to the two primary conditions in Congress needed to pass legislation that alters the status quo. First, and most obvious, a majority is necessary. In Figure 6, the set of policies preferred to the status quo by at least two of the three types of legislators is represented by the shaded area. Because the status quo coincides with the JCAE's ideal, no other policy is preferred by this type of member to the status quo. However, as is evident, both the moderate (M) and the environmentalist
(ENV) prefer a large combination of policies to Q. The latter constitute the *majority rule winset* of the status quo, or $W(Q)$.

Majorities alone are not sufficient to pass legislation. The reason concerns the second relevant concept, the congressional rules. Both houses of Congress employ a system of specialization and division of labor surrounding committees. The latter are endowed with substantial powers, the most important for our purposes is the fact that committees hold “gatekeeping” authority (i.e., the power to prevent legislation from reaching the floor of their parent bodies).²³ Hence, a second necessary condition for the status quo to be replaced is that the relevant committee must prefer some policy to Q. If either of these fails to hold, Q is stable.²⁴

The major implication of this model for nuclear power circa 1970 is that, despite the rise of strong opponents and the appearance of a range of policies that would command a majority to the status quo, *the status quo was stable and could not be replaced*. Committee power allowed the JCAE to prevent new legislation which was preferred by a majority by keeping the gates closed.²⁵

## 3.3. The Role of the Courts and Procedural Rights

Were the story of the confrontation between environmentalists and nuclear power to end here—that is, with the choices of elected officials being decisive—the environmentalist’s influence on nuclear power might have been quite limited, at least until they gained sufficient representation in Congress to attack nuclear power directly via changes in agency structure and committee jurisdiction.²⁶ Most likely elected officials would have transformed nuclear regulatory politics during the 1970s, though in ways that are difficult to predict. But the politics of elected officials was not the only factor affecting the course of nuclear power regulation, for the AEC had to attend to the strictures of the courts.

Beginning in the mid 1960s, environmentalists began to intervene into the regulatory proceedings at the AEC.²⁷ At first, the AEC’s reaction was to

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²³ What follows is based on Weingast (1981, 1989).

²⁴ Technically, it is a *structure-induced equilibrium* or SIE (see Weingast, 1981, for its application to regulation). In this case, $W(Q)$ is the winset of the status quo and $P(Q)$ is the *preferred set* of the committee (i.e., the set of policies it prefers to Q). A policy, Q, is an SIE if and only if $W(Q) \cap P(Q) = \emptyset$.

²⁵ Technically, since $P(Q) = \emptyset$, the condition for an SIE holds [i.e., $W(Q) \cap P(Q) = \emptyset$].

²⁶ In 1974, Congress passed new legislation that split the development and promotional aspects of the AEC from its licensing and regulatory functions. It created the Nuclear Regulatory Commission (NRC) to take over the latter and the Energy Research and Development Administration (ERDA, later to be part of the Department of Energy) to take over the former.

²⁷ Other regulatory forums were also relevant, such as state and local regulatory bodies with authority over utilities and their capital decisions.
limit their participation on two grounds. First, the AEC argued that because environmentalists generally were not directly affected by a nuclear power plant, they lacked standing in AEC proceedings. For example, prior to the enactment of the National Environmental Policy Act (NEPA), environmentalists were denied standing unless they lived within a 10 kilometer radius of the proposed plant. Second, the Commission argued that it already took all relevant issues into account and made only those decisions that were in the public interest, so that environmental issues were already being addressed. Thus, the AEC and their overseers on the JCAE used procedures to bar the environmentalists, whose participation could only limit the ability of nuclear advocates to attain their goals.

Many AEC decisions were contested in the courts, and, on a substantial number of occasions, the courts sided with the environmentalists on procedural grounds. In so doing, they forced the AEC to hear, evaluate, and take into account the environmentalist’s concerns. Further, the Commission was forced to demonstrate that it had understood and truly considered these concerns.28 This series of court decisions had a dramatic impact on nuclear power regulation.

To illustrate the role of the courts in changing nuclear policy, we examine one case—NEPA and the subsequent Calvert Cliffs decision. Passed in 1969, NEPA required all federal agencies to prepare environmental impact statements (EISs) for major actions (Anderson). The environmentalists attempted to force the AEC to prepare EISs under the NEPA requirement, first by appealing directly to the Commission and then by challenging the Commission’s decisions in the courts. The Commission argued that because it already fully considered the impact of their decisions on the environment, EISs were superfluous. The environmentalists’ challenge reached the D.C. Circuit Court in 1971 as Calvert Cliffs’ Coordinating Committee v. AEC. The court sided with the environmentalists and argued that the AEC was indeed obliged to prepare EISs under NEPA.

The impact of this decision was dramatic and was felt immediately by the Commission. First, it added substantial time to the construction of virtually all plants in the regulatory pipeline. Not only did the design of specific components need to be reconsidered (e.g., nearly all cooling towers were reexamined), but new issues were raised that the AEC had previously dismissed. For example, certain types of catastrophic accidents were previously deemed so remote as to be beyond the planning requirements for a plant. After NEPA, these concerns received greatly expanded attention (Cohen). The new issues added time to complete the power plant and increased the costs of the review procedures and construction of the plant. According to

28. See Stewart (1975) and Shapiro’s (1988) excellent discussion of the role of “dialogue” and “deliberation.”
Bupp and Dorian (1978:132), “reactor licensing came to a standstill for 18 months.” Cohen (1979) estimates that plants that were early in the pipeline (e.g., having just initiated the construction permit stage) were least affected, and their costs increased by 10 percent. Plants that were late in the construction process (e.g., having attained or nearly attained their licenses) were harder hit and experienced cost increases of up to 25 percent.

*Calvert Cliffs* had a second and more subtle effect on nuclear power. The new procedural requirements gave environmentalists a *new avenue* to contest the regulatory proceedings and findings, for now they could raise a large range of concerns about the environment in the context of the EIS. Over and above the Commission's requirement to complete an EIS, contesting the EIS during the regulatory proceedings added considerable time to the regulatory proceeding. Using statistical methods that allow her to study the interaction of a large number of effects, Cohen estimated that this action alone added *six months* to any proceeding in which environmentalists raised an EIS challenge.

Paradoxically, Cohen also shows that the environmentalists *nearly always lost their contentions*. This sheds important light on the general strategy of both the environmentalists and the AEC. The former intervened using procedural rights as their tool. After hearing the environmentalists' arguments and disputing their contentions, the AEC (and after 1974, the NRC) nearly always sided against them (Cohen:Tables III and IV). By raising substantive questions, the environmentalists were able to impose substantial delay *even though they lost their contentions*. In the end, increased delay combined with increased costs to make nuclear power no longer profitable.29 While the environmentalists lost nearly every battle,30 they won the war.

The preceding circumstance is represented in Figure 7. Intervention into the regulatory proceedings, by increasing process time and cost, in effect moved the status quo upward. At some point, the status quo crossed the line of commercial viability. The benefits of nuclear plants to utilities were pushed further and further into the future, and the up-front costs were increased. By the mid 1970s, nuclear power was no longer viable. Orders fell, until by 1976 there were almost no new orders (Cohen; Quirk and Teresawa; Weingast, 1980). This is shown in Figure 7 by placing the status quo as of 1975 above the zero-profit line.

In principle, politicians might have responded to retard or even reverse the effects of intervention before the AEC. For example, legislation could

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29. See cites in note 19.

30. Cohen (Tables III and IV) shows that environmentalists lost virtually every issue that they raised in construction permit applications filed from 1966 to 1973. Of the 103 nonprocess issues raised, most were disposed under the categories: "reject," "consider and reject," "not an issue," or "resolve in a different forum." Only three were "granted—minor", seven "monitor or test," and four, "granted—major."
have repealed the applicability of NEPA to the AEC, or otherwise could have redefined the relevant procedures and the role of environmentalists that had been developed by the Court's interpretation of NEPA. However, such legislation was not politically viable. To see this, we study the interaction of the two primary conditions necessary to alter any status quo with the relevant jurisdictional arrangements in Congress.

The first condition—majority support for a change—plausibly was satisfied. From the perspective of the JCAE, any increase in attention to environment issues is against their interest. Specifically, in Figure 8, if the status quo moves upward to Q' and passes the amount of environmental regulation most preferred by the moderate, then both the moderate and the JCAE would support a decrease. In fact, both prefer any policy along the dashed line between Q' and L over Q'. Thus, for high enough Q, the first primary condition for altering Q' is satisfied.

The second condition for a change—relating to committee jurisdictional issues—was not satisfied. The JCAE did not have jurisdiction over environmental issues. Although the JCAE preferred to weaken environmental regulation of nuclear power, subject to the support of a floor majority, it did not have the authority to bring such legislation to the floor. Instead, NEPA had been introduced by other committees, giving environmental advocates in Congress gate-keeping authority. Just as the JCAE preferred only policies

31. The Committee on Interior and Insular Affairs in the Senate and the Committee on Merchant Marine and Fisheries in the House.
lower than $Q'$ along this dimension, the environmentalists and the relevant committee members for NEPA preferred only higher ones. Hence, the status quo was stable.\footnote{Only modest changes were made, still allowing the dramatic impact cited in the text.}

The preceding example illustrates the importance of the courts in altering an important area of public policy, but it does not resolve a key element of Mashaw’s challenge to PPT. The court clearly played an important role in dismantling the nuclear power industry by altering the procedures of the AEC regulating the industry and licensing its plants. By allowing environmentalists to participate in AEC processes and requiring that their concerns be addressed, the courts set in motion a process that would lead to the end of federal promotion of nuclear power and the demise of the industry. Yet the Calvert Cliffs decision was based upon congressional legislation (NEPA), which reflected a new political majority favoring more stringent environmental policy.

Because of the structure of Congress and the potential for jurisdictional disputes, NEPA could not and so did not address nuclear power regulation explicitly. The courts could have interpreted NEPA’s silence as signaling intent \textit{not} to apply EIS requirements and standing for environmentalists to AEC proceedings. Or the courts could have applied the policy outcome implied by NEPA, and insisted that the AEC actively protect the environment from nuclear plants. Instead, the courts chose to apply NEPA to the

\[ W(Q') = \]
AEC in a procedural way, by developing detailed and rigorous requirements for the agency in considering environmental issues.

Without further research, we cannot fairly determine the extent to which the courts acted independently in applying the precepts of legal idealism, and the extent to which it regarded itself as applying general legislative instructions to a recalcitrant (and, therefore, policy-deviating) agency. Nor can we determine whether a majority of the Congress preferred the new policy outcome—the death of the industry—to the status quo ante of no environmental check on the promotion of the industry. Nonetheless, the role of the court was important, whether as the independent guarantor of procedural rights or as the faithful spear-carrier of the coalition that enacted NEPA. As legal idealists imply, the courts did not explicitly pick a policy outcome, but instead imposed procedural rules. Indeed, the court may well have been blind to (or unconcerned with) the policy significance of its procedural requirements. Moreover, the policy that resulted was probably not the policy that would have emerged from a congress that was controlled by the median member.

4. CONCLUSION

The course of nuclear power regulation reveals an instance in which policy appears to be the result of a complex interaction between politicians who pursue their narrow, electoral ends and judges who apply the other normative principles. Here the judiciary played a key role in forcing the AEC to adopt procedures to take into account environmental concerns. Whereas one could plausibly argue that the president and the Congress favored these changes, they had not explicitly said so in legislation. Instead, they had enacted only a vague statute, NEPA, which made no reference to nuclear power regulation. At minimum, the courts used idealistic principles to flesh out the congressional intent. Perhaps they even acted independently of congressional intent. In any case, the role of the courts was important, and PPT models can be enriched so that the concerns of traditional legal scholars are not reduced to mere rhetoric.

We have tried to extend PPT in a manner which suggests that many, if not all, of the major concerns of legal theorists can be brought into the rubric of the theory. The point, however, is not to suggest that PPT can subsume the important parts of legal theory. Instead, we argue that the two approaches are complementary in the following sense. The case of nuclear power shows that administrative procedures under a court-driven implementation of normative principles can have a dramatic affect on policy choices and outcomes. The clear comparative advantage of PPT as a method for studying administrative procedure resides in studying the impact of these procedures on
policy and their interaction with other political forces. While PPT might take the essence of a set of principles and procedures articulated and imposed by the courts, they are brought into PPT models in very simple ways. In contrast, the comparative advantage of legal scholars lies in a thorough examination of the development of normative legal principles and the identification of the principles underlying specific decisions. Both are necessary for the further development of the understanding of the role and explanation of administrative structure and procedures.

Beyond emphasizing the complementary nature of these approaches, our analysis suggests that legal theorists and positive political theorists can profit from learning about the interaction of the normative principles embodied in procedures along with the latter's more direct political roles. Not all procedures have a normative component; not all a political one; and the great bulk probably result from the interaction of the two. As Mashaw suggests, legal theorists have focused on the first, while PPT typically addresses the second. What we have attempted to do in this article is identify the direction of the path toward understanding their interaction.

We still hold to the view that the procedures of nearly all regulatory agencies have explicit political components. However, we are not uncomfortable with the view that normative legal principles also affect these procedures. This suggests an important and unanswered question: what happens when the goals of politicians conflict with the principles and practices of legal idealists? Often politicians attempt to invent new types of structures and procedures that satisfy the normative strictures imposed by the courts, while allowing them to pursue their political aims. Perhaps, however, this is not possible, or perhaps it is possible only to a limited extent. This makes explicit the trade-off between political and normative ends. We conjecture that much of the attention in legislation during the past two decades to devising new structures and procedures is the direct result of politicians attempting to invent mechanisms to pursue their own ends without violating long-standing principles of due process.

In closing, we return to the Mashaw challenge. Our extension of PPT in this article in the context of nuclear power was a direct attempt to address some of the concerns raised by Mashaw. We believe that this effort—if not providing a complete guide—has shown one path toward integrating much of the political and legal analyses of administrative procedures. The value of this integration is that it yields a better understanding of policy outcomes. Moreover, the phenomena modeled above yield conclusions that appear remarkably close to some of the premises of the legal idealists identified by Mashaw. First, some court-imposed procedures appear to be designed to facilitate pluralist participation in administrative decision-making, as Stewart has eloquently argued:
... judges have greatly extended the machinery of the traditional model [of administrative procedure] to protect new classes of interests. In the space of a few years, the Supreme Court has largely eliminated the doctrine of standing as a barrier to challenging agency action in court, and judges have accorded a wide variety of affected interests the right not only to participate in, but to force the initiation of, formal proceedings before the agency. ... Increasingly, the function of administrative law is not the protection of private autonomy but the provision of a surrogate political process to ensure the fair representation of a wide range of affected interests in the process of administrative decision. (1670)

The participation of the environmentalists before the AEC was achieved largely by the courts acting in precisely this manner.

Second, as Sunstein has suggested, procedures can clearly limit the ability of politicians to devise programs that serve narrow interest groups, as the nuclear power case also illustrates.33 The promoters of nuclear power at both the AEC and the JCAE were prevented from using procedures to block the environmentalists' participation precisely because this use of procedures was found by the court to violate the environmentalists' procedural rights.

Even if it can be convincingly demonstrated that many procedures are designed to achieve political ends, PPT still does not imply that legal idealism is wrong. It necessarily suggests a qualification of the extension of the latter to all procedures, but this critique, as we hope we have shown, is symmetric and applies equally well to PPT. Our development has been offered in the spirit of forging the path toward a greater integration of the concerns and findings of the legal and PPT literatures.

REFERENCES


33. According to Sunstein (295), "the central effort of administrative law and of the separation of powers more generally [is] reducing the risks of self-interested representation and of factional control over governmental processes."


