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The Evolution of the Legal Process School's "Institutional Competence" Theme: Unintended Consequences for Environmental Law

By Jeffrey Rudd

The legal process school's "institutional competence" idea produced administrative standards of technical expertise and political independence that evolved to undermine Environmental Era visions of a fundamental normative shift in the exercise of political authority over public policy. Supreme Court decisions in Overton Park, Vermont Yankee and Baltimore Gas expanded agencies' authority over the role of science in environmental law to the detriment of normative concerns. The Chadha-Chevron duo produced a substantial, unintended shift in the institutional competence theme's development in law by insulating agencies' legislative power from meaningful deliberative adjustment. Legal process themes of efficiency and rational order combined with agencies' broad authority to support the integration of economics into the environmental regulatory system's institutional structure. The institutional competence theme's substantive and structural foundations—efficiency, expertise, and independence—evolved to support the institutional conversion of environmental law into a regulatory architecture dominated by economic discourse.
The Environmental Era endorsed a radical public policy departure from decision-making paradigms that had prioritized economic efficiency. During the 1960s and 1970s, environmental law energized a shifting social order that was fundamentally at odds with the commodification of natural resources. Revitalized New Deal institutions challenged private
industries’ exploitation of natural resources for pecuniary gain. Social and political forces of change materialized in the law’s protection of collective interests and the interests of “future generations” in the outcome of contemporary environmental decisions. Environmental law promised a durable institutional shift in public policy that prioritized collective social concerns and environmental protections over industrial favoritism.

Since the 1980s, however, environmental law and its regulatory agencies have undergone a gradual “institutional conversion.” Economic discourse emerging from the law and economics movement has displaced environmental law’s normative purposes. Environmental law has evolved from a set of comprehensive legislation that embodied democratic concepts of deliberation and the public good to an

enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” Id. § 7401(b)(1).


The conservation movement was an effort on the part of leaders in science, technology, and government to bring about more efficient development of physical resources. The environmental movement, on the other hand, was far more widespread and popular, involving public values that stressed the quality of human experience and hence of the human environment. Conservation was an aspect of the history of production that stressed efficiency, whereas environment was a part of the history of consumption that stressed new aspects of the American standard of living.

Id. at 2.


It is . . . the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.

Id. § 1271. The Wilderness Act of 1964, id. §§ 1131–1136, expresses similar interests:

In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness.

Id. § 1131(a).


the notion of institutional conversion . . . provides an analytic starting point of departure for understanding how institutions created for one set of purposes can come, in time, to be turned to new ends. In this sense, the idea provides a framework for a tractable approach to the issue of “unintended consequences.”

Id. at 234.

5. See infra Part IV.
institutional superstructure driven by economic analysis. The implementation of political agendas through Executive Orders and judicial redistributions of legal authority help explain environmental law's shift toward economic discourse. The combination of Supreme Court decisions strengthening agency autonomy and the Reagan administration's deregulatory agenda mandating cost-benefit analysis in agencies' rulemaking decisions contributed to significant institutional change in the 1980s.

A more discerning explanation for environmental law's institutional conversion, however, rests on an understanding of the structural and substantive supports derived from the legal process school's institutional competence idea. Legal process theorists construed the New Deal's administrative successes to posit two essential conditions characterizing institutional competence in the administrative process. First, administrative agencies should be legislatively designed to apply their expertise to particular social and economic dilemmas. Agencies needed broad discretion over technical and scientific decisions to execute their responsibility efficiently. Second, in order for agency experts to analyze problems and produce practical solutions, their work required a heightened degree of political independence from the constitutional branches of government. The courts and Congress lacked the technical competence necessary to assess the legitimacy of agency decisions; thus, the Framers' constitutional boundaries were dissolved in order to enhance government administration.

The institutional competence theme's novel distribution of American government's epistemic and political responsibilities unintentionally contributed to the late twentieth century sacrifice of environmental law's broad social purposes. During the 1960s and 1970s, Congress "layered..."
environmental law onto a regulatory structure that largely retained the process school's institutional competence theme. Environmental law emerged through a deliberative process that produced normative principles intended to resolve fundamental disagreements over the relationship between humans and the environment. Legal process scholars emphasized the institutional significance of legislative purpose, but New Deal era conceptions of regulatory agencies' "political independence" and "technical expertise" surfaced in the context of environmental law to insulate and reproduce a regulatory architecture dominated by economic discourse. Environmental law's transformation from a normative to an economic, calculus-based system distorts non-economic values, restricts the issues available for discussion, and reduces the range of persons capable of discussing the fair resolution of natural resource conflicts.

Environmental regulatory agencies' contemporary "legislative power" defines and perpetuates an institutional matrix that stifles the

14. See infra Part I.
15. See generally HAYS, supra note 2, at 52-70, 458-90.
16. See William N. Eskridge & Philip P. Frickey, An Historical and Critical Introduction to The Legal Process, in HENRY M. HART, JR. & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW, lxvii (William Eskridge, Jr. & Phillip P. Frickey eds., 1994) (noting that "in the statutory interpretation literature, the contention that statutes should be interpreted equitably and purposively achieved near unanimous acceptance in the law review literature written between 1938 and 1941").
17. For a discussion of process school conceptions of political independence and regulatory expertise, see infra Part I.
18. See infra Part IV.
19. As Justice Stevens described in Whitman v. American Trucking Ass'n:

The Court has two choices. We could choose to articulate our ultimate disposition of this issue by frankly acknowledging that the power delegated to the EPA is "legislative" but nevertheless conclude that the delegation is constitutional because adequately limited by the terms of the authorizing statute. Alternatively, we could pretend, as the Court does, that the authority delegated to the EPA is somehow not "legislative power." Despite the fact that there is language in our opinions that supports the Court's articulation of our holding, I am persuaded that it would be both wiser and more faithful to what we have actually done in delegation cases to admit that agency rulemaking authority is "legislative power."

531 U.S. 457, 488 (2001) (Stevens, J., concurring) (citations omitted). In the mid-1920s, Felix Frankfurter recognized that administrative agencies functioned as "legislative" bodies: "The widening area of what in effect is law-making authority, exercised by officials whose actions are not subject to ordinary court review, constitutes perhaps the most striking tendency of the Anglo-American legal order." Frankfurter, The Task of Administrative Law, 75 U. P.A. L. REV. 614, 614 (1926-1927). As Frankfurter noted:

Hardly a measure passes Congress the effective execution of which is not conditioned upon rules and regulations emanating from the enforcing authorities. These administrative complements are euphemistically called "filling in the details" of a policy set forth in statutes. But the "details" are of the essence; they give meaning and content to vague contours.

Id.
democratic principles necessary to establish law’s legitimacy. In contrast to the authoritative approach institutionalized in the current environmental regulatory structure, democracy’s “reason-giving,” or reciprocity requirement, views individuals as autonomous agents participating in governance directly or through representatives. Democratic deliberation seeks tentative solutions to moral disagreements caused by resource scarcity, humans’ limited generosity, incompatible values, and incomplete understanding. Deliberation clarifies incompatible values by separating self-interested and public-spirited claims for free discussion and evaluation, and by promoting the reconsideration of decisions that result from incomplete understanding. In short, deliberative democracies require the justification of political decisions by citizens and their representatives in a political atmosphere based upon conditions of reciprocity, publicity, and accountability.

The institutional competence idea’s complementary constructs—expertise and political independence—have evolved to preclude democratic deliberation over epistemic and normative issues central to the process school’s “reasoned elaboration” of environmental law. This Article argues that legal process standards of administrative expertise and independence unpredictably undermined Congress’ vision of a fundamental institutional shift in the exercise of political authority over economic and social decisions affecting the environment. Part I traces the history of the process school’s “institutional competence” theme and its relation to technical expertise and political independence.

20. AMY GUTMANN & DENNIS THOMPSON, DEMOCRACY AND DISAGREEMENT 52 (1996); see Cass Sunstein, Beyond Republicanism, 97 YALE L.J. 1539, 1544 (1988) (“Under republican approaches to politics, laws must be supported by argument and reasons; they cannot simply be fought for or be the product of self-interested ‘deals.’ Private-regarding reasons are an insufficient basis for legislation. Political actors must justify their choices by appealing to a broader public good.”).

21. See GUTMANN & THOMPSON, supra note 20, at 53.

22. See id. at 43-44; Sunstein, Beyond Republicanism, supra note 20, at 1545 (“The central idea here is that politics has a deliberative or transformative dimension. Its function is to select values, to implement ‘preferences about preferences,’ or to provide opportunities for preference formation rather than simply to implement existing desires.”).

23. See GUTMANN & THOMPSON, supra note 20, at 200–01. “The constitution of deliberative democracy consists of these conditions of deliberation, taken together with the principles of liberty and opportunity, which inform the content of deliberation, all appropriately ordered and interpreted over time by the people bound by these principles.” Id. Reciprocity regulates the terms of deliberation to achieve a fair, mutually justifiable, and binding exchange of reasons. Id. at 53–55. Publicity motivates public officials to act responsibly, educate those affected by policy decisions, and learn from and about public opinion. Id. at 97. Public justifications also produce legitimacy by securing tacit or explicit consent, encouraging mutual respect, and enhancing the potential for participants to change their positions during deliberations. Accountability, closely allied with publicity, holds individuals responsible for moral and political claims made during deliberative processes. See generally id. at 128–64.


25. See infra Parts II and III.
Part II argues that legal process principles protecting agency expertise supported Supreme Court decisions that both enhanced agency authority over science and precluded the democratic deliberation necessary to fairly implement environmental law. Part III contends that process scholars' faith in the political independence of administrative experts laid the institutional foundation for judicial rulings that shielded experts' normative choices during the rulemaking process from public accountability. Part IV argues that legal process themes of efficiency and optimization unintentionally provided an institutional foundation for the transition from environmental law as a normative "force" to an instrumental form of law supported by the law and economics movement. The institutional competence theme's structural and substantive foundations—political independence, technical expertise, and a quest for efficiency—evolved to support the domination of economic discourse over environmental law and policy.

I. THE INSTITUTIONAL COMPETENCE IDEA: IDOLIZING EXPERTISE AND INDEPENDENCE

Environmental legislation serves two fundamental purposes: "biodiversity conservation and the protection of public health from risks associated with pollution." These overlapping legal categories share procedural mechanisms governing environmental law's implementation through the combination of agencies' authority over technical knowledge (i.e., expertise) and agencies' rulemaking authority to decipher and marry statutory objectives to relevant knowledge claims (i.e., political independence). The legal process school's institutional competence idea presupposed that expertise and political independence were necessary conditions for the efficient administration of social and economic programs. Based on the New Deal's regulatory success stories, James Landis and other legal process scholars theorized that administrative agencies' independent exercise of technical expertise would produce...
social and economic stability. Administrative agencies' extensive discretionary authority was justified by the perception that agencies were "politically insulated, self-starting, and technically sophisticated."30

A. Legal Process Theory Institutionalized Agency "Expertise"

The process school's New Deal era themes continue to influence modern American law.31 In the 1950s, Henry Hart Jr. and Albert Sacks together produced teaching materials entitled The Legal Process: Basic Problems in the Making and Application of Law32 that synthesized several theories of law into a comprehensive account of process-based scholarship. Early twentieth century and New Deal era scholars developed theories of "law as policy, law as institutional relationships, and law as normative reason"33 in reaction to the socially destructive effects of formalism. Hart and Sacks strengthened the attacks on formalism, arguing that law "is or ought to be" rationally directed toward the achievement of particular social goals, yet sufficiently fluid to adapt to social and economic demands caused by the advent of new technologies.34 The scholars theorized an institutional system that would produce just results through the "reasoned elaboration" of law's purposes: "Law is a doing of something, a purposive activity, a continuous striving to solve the basic problems of social living ...."35

29. See generally JAMES LANDIS, THE ADMINISTRATIVE PROCESS (1938).
31. Eskridge and Frickey contend that legal process "has renewed appeal" because of its emphasis on statutory interpretation, administrative state institutions and processes, and "because the mediation between personal liberty and collective utility remains a central inquiry in American public life." Eskridge & Frickey, supra note 16, at liv.
32. Id. at li.
33. Id. at xci.
34. Id. at lii.
35. Id. at xci–ii (quoting the 1958 draft of HENRY M. HART JR. & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 166 [hereinafter 1958 LEGAL PROCESS DRAFT]). Lon Fuller also articulated a "purposivist" position, observing that "Every proposition of positive law, whether contained in a statute or a judicial precedent, is to be reasonably interpreted, in light of its evident purpose. This is a truth so evident that it is hardly necessary to expatiate on it." See, e.g., Lon L. Fuller, The Case of the Speluncean Explorers, 62 HARV. L. REV. 616, 624 (1949). In an earlier article, Professor Fuller noted:

The mere fact that people habitually act in certain ways in certain situations is not itself a criterion on the basis of which lawsuits may be decided. If a folk-way is relevant to decisions, it must be because is has a "normative" aspect. ... We have to discover whether this practice is ... a sentiment of "ought," which can serve as a norm of decision.

Lon L. Fuller, American Legal Realism, 82 U. PA. L. REV. 429, 457 (1934) (footnote omitted). Fuller elaborated: "The law has always to weigh against the advantages of conforming to life, the advantages of reshaping and clarifying life, bearing always in mind that its attempts to reshape
Hart and Sacks posited that duly established procedures for addressing particular questions add a normative dimension to law; process transforms law as fact to law as a legitimate normative statement. They advanced three related justifications for placing a heightened burden on the role of procedure to accomplish theoretical objectives. First, sound institutional decisions are contingent upon a rational relationship between institutional power and decision-making procedures; procedure should be reasonably adapted to the type of power exercised. Second, procedure defines institutions' purposes and duties, describes the power sharing arrangements of interconnected institutions, controls discretion, and provides for self-correction. Finally, procedure is critical to the stability and legitimacy of law.

The "procedure-based positivism" developed by Hart and Sacks rests in part on the "process of institutional settlement." Legal processes evolve gradually from uncivilized conditions to a state in which conflicts are more frequently resolved by accepted procedures without resorting to violence. Democratic societies create the institutional conditions necessary for people to enter agreements and, when necessary, to resolve conflicts. Hart and Sacks describe the principle of institutional settlement as "the judgment that decisions which are the duly arrived at result of duly established procedures [for making decisions] . . . ought to be accepted as binding upon the whole society" until they are officially changed. The principle may, however, produce a circuitous standard of law's official and normative legitimacy. The assumption that duly
established processes are necessary foundations for the legitimate application of law may inadvertently limit debate about the procedural and substantive issues necessary to change law.

The institutional competence theme is the cornerstone of legal process theory's response to the shortcomings of procedure-based positivism. The concept illustrates process theorists' view that the normative application of law through institutional policy would achieve a desirable social order: "In a government seeking to advance the public interest, each organ has a special competence or expertise, and the key to good government is not just figuring out what is the best policy, but figuring out which institutions should be making which decisions and how all the institutions should interrelate." In theory, particular institutions (e.g., Congress) were imbued with specialized knowledge and investigative powers to guide changes in law or policy necessary to adapt social currents to changing social conditions. The competence theme hinges on several interrelated concepts developed in response to institutional failings during the Great Depression: institutional expertise, administrative agencies' political and epistemic independence, and experts' capacity to use law to optimize citizens' well-being.

Thus, institutional competence is premised on several assumptions about law and society. First, society is capable of functioning rationally when properly guided by law. Government should match society's increasing complexity with competent institutions possessing the expertise necessary to efficiently manage changing social conditions. Second, the reasoned elaboration of law's purposes presupposes an institution competent to distinguish fairly among competing characteristics of law's social, political, and ideological purposes. Institutional expertise includes the ability to separate fact from norm when interpreting and applying law, and demands political insulation from less competent institutions. Third, America's tripartite model of constitutional government had failed to provide the adaptive capacity necessary to guide social and technological change in positive directions. In contrast, the New Deal's administrative successes promised a new constitutional structure that relied on experts to fill bureaucratic gaps and produce an efficient society.

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46. Id. at lx.
47. Id.; see also infra Part I.B.
48. This idea reflects the influence of the "organic rationalists." See id. at lxv, lxii–lxv.
49. See generally LANDIS, supra note 29.
B. Applying Institutional Competence to the Administrative Process

The Great Depression sparked the institutional competence idea as part of a broader theoretical movement to constrain industrial monopolists from disrupting social order and threatening democratic principles of self-governance. James Willard Hurst and Lloyd Garrison are credited with being the first to detail the institutional competence theme, but Roscoe Pound's earlier work challenged law's institutional tradition of limiting judicial discretion over legislative interpretation. Pound confronted customary practices that encouraged judges to seek legal dispositions grounded in syllogisms rather than in the social causes and effects of legislation. This "ultra-mechanical" formalist approach to law sacrificed judicial discretion. Pound argued that the judicial institution's expertise should include the discretion to interpret and apply statutes as evolving principles that order social interactions.

Garrison and Hurst incorporated Pound's sociological view into a broader institutional approach to law. They argued that law should be understood as extending well beyond substantive rules that apportion private rights to include law's impact on group conflicts and the evolution of social interests. Law is fundamentally institutional, dynamically

50. Eskridge praises Garrison's and Hurst's Law in Society materials as the earliest teaching materials (I have seen) to explore the theme of institutional competence. The first part of the materials carefully laid out the institutional rules and structure of legislation and its elaboration, which part two built upon and deepened. The authors argued that law is more than just substantive rules directed at the citizenry; it is also procedural and constitutional rules to order state organs. The entire project was one of institutional structure, procedure, relationship, and, most of all, institutional competence. Although the authors did not use the term 'institutional competence,' the idea originated by Louis Brandeis and Felix Frankfurter and made famous by Henry Hart and Lon Fuller was first fully elaborated by Willard Hurst and Lloyd Garrison.


51. Roscoe Pound, Common Law and Legislation, 21 HARV. L. REV. 384, 406 (1908). Pound examined changing views about the merits of common law and legislation. Formerly it was argued that common law was superior to legislation because it was customary and rested upon the consent of the governed. Today we recognize that the so-called custom is a custom of judicial decision, not a custom of popular action. We recognize that legislation is the more truly democratic form of lawmaking. We see in legislation the more direct and accurate expression of the general will. Id. (citation omitted).

52. Roscoe Pound, Law in Books and Law in Action, 35 44 AM. L. REV. 12, 20 (1910) ("In theory our judges are tied down by hard and fast rules. Discretion is reduced to a strictly defined and narrowly limited minimum.").

53. See Eskridge, supra note 50, at 1184 ("Law is not just the resolution of conflicts that arise in the private sphere (a traditional view), but is an important arena in which group conflicts play themselves out . . . ") (citing LLOYD K. GARRISON & WILLARD HURST, LAW IN SOCIETY: A COURSE DESIGNED FOR UNDERGRADUATES AND BEGINNING LAW STUDENTS 200-08 ("The
reflecting, responding to, and guiding human interactions. Law creates social order through complex relationships among legal procedures and rules, social customs, organizational structures, and individuals’ interactions.\(^5\) Law’s “force” is also constrained by social structures and the unexpected practices that evolve through private citizens and institutions.\(^5\) Law’s efficiency as an organ of public policy is contingent on the nature of the institutions charged with accomplishing particular social objectives.\(^5\)

The legal process school’s institutional competence theme absorbed Garrison’s and Hurst’s attention to efficiency and institutional duty. The Great Depression represented a breakdown in the capability of government institutions to identify and manage changing social conditions. These institutional breakdowns led Felix Frankfurter and James Landis to justify the central feature of the modern regulatory state—the institutional “expertise” necessary for the legitimate implementation of congressional policies.\(^5\) In 1930, Frankfurter argued that society’s rapid technological and economic growth had surpassed the adaptive capability of contemporary political theory.\(^5\) Theorists’ traditional tendency to separate law and society into separate spheres failed to recognize that “theory and practice interact.”\(^5\) Frankfurter suggested that political thinkers engage in the articulation of theories designed to address social unrest and citizens’ alienation from government.\(^5\) Scholarly work did not require—indeed, should not require—a complete detachment and disinterestedness from the crippling problems inherent in government’s “interplay with economic enterprise.”\(^6\)

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Meaning of ‘Law’), 223–27 (“The Function and Dynamics of Law”) (rev. ed. 1940 & 1941) (3 volumes)).

54. See generally JAMES WILLARD HURST, LAW AND THE CONDITIONS OF FREEDOM IN THE NINETEENTH CENTURY UNITED STATES (1956); JAMES WILLARD HURST, LAW AND SOCIAL ORDER IN THE UNITED STATES (1977).


56. See, e.g., HURST, LAW AND SOCIAL ORDER, supra note 54.

57. See LANDIS, supra note 29; FELIX FRANKFURTER, THE PUBLIC AND ITS GOVERNMENT (1930); JAMES O. FREEDMAN, CRISIS AND LEGITIMACY: THE ADMINISTRATIVE PROCESS AND AMERICAN GOVERNMENT (1978). The Public and Its Government includes a comprehensive discussion of public utilities, which Frankfurter taught at Harvard from 1920 to 1939. Eskridge & Frickey, supra note 16, at ix. He once taught in partnership with Landis, and “the seminar was a mini-course in administrative process and regulatory theory.” Id.

58. See FRANKFURTER, THE PUBLIC AND ITS GOVERNMENT, supra note 57.

59. Id. at 7–8.

60. Id. at 5. Frankfurter, later a policy advisor to President Franklin Delano Roosevelt and eventually a Supreme Court Justice, noted that the “dominant feeling about government today is mistrust. The tone . . . implies that ineptitude and inadequacy are the chief characteristics of government.” Id. at 3.

61. Id. at 2.
Frankfurter argued that restrained public policies protecting individuals' economic freedom overlooked government's critical responsibility to maintain the institutional conditions necessary for social and economic stability. The "old slogan of individualism" was plagued by contradiction and blind to the demands an increasingly complex society placed on government. Frankfurter's pragmatic bent guided his application of the institutional competence idea to improve government's ability to manage new technical and economic challenges. His work reflects a shift from laissez-faire economics to the centralized administration of economic programs and policies. In *The Public and Its Government*, he detailed the growth of the public utility industry to demonstrate the importance of administrative agencies as investigators necessary to acquire and interpret information relevant to public policy formation.

Experience demonstrates that the demands of law upon economic enterprise, like the modern utilities, cannot be realized through the occasional explosion of a lawsuit, but call for the continuity of study, the slow building up of knowledge, the stimulation of experiments, the initiative and enforcement that can be secured only through a permanent, professional administrative agency.

In *The Administrative Process*, a series of classic lectures delivered in 1938 while Dean of the Harvard Law School, James Landis echoed Frankfurter's substantive and structural themes in a more detailed application of the institutional competence idea. Landis optimistically envisioned administrative agencies distinguished by expertise functioning efficiently to solve social problems. Like Frankfurter, he was heavily influenced by Pound's view that law should solve problems by moving away from "formal over-refinement." The administration of justice demanded the application of specialized knowledge necessary to identify and solve social problems caused by government's failure to manage "economic forces." In an important sense, Landis simply replaced formalist notions of law as a logical system of deduction with a form of scientific reductionism; he argued that administrative experts possessed the aptitude and tools necessary to control social phenomena, promoting efficiency and stability. Centralized government provided the means

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62. *Id.* at 7.
63. *Id.* at 6–7.
64. *See generally id.* at 80–122.
65. *Id.* at 72–73.
66. *See LANDIS, supra* note 29.
69. *Id.* at 15–16. Government's responsibility was "not merely to maintain ethical levels in the economic relations of the members of society, but to provide for the efficient functioning of the economic processes of the state." *Id.*
necessary to ensure experts' political independence and to implement fairly regulations reflecting experts' understanding.

Landis argued the judicial process was ill-equipped to respond to societal change due to institutional limitations inherent in the tripartite system of government. Administrative agencies' technical knowledge and skill were essential to correct "the inadequacy of the judicial and legislative processes." Judges lacked the knowledge and resources necessary to understand and resolve fairly social and economic problems. The common law also moved too slowly to produce rules that encouraged potentially productive economic shifts in social order. Consequently, Landis argued, the administrative process should have the legal authority necessary "to plan, to promote, and to police... an assemblage of rights normally exercisable by government as a whole."

Landis designed administrative agencies that combined the constitutional functions of the executive, legislative, and judicial branches. He conceived the expert model of administration as a sophisticated, apolitical management technique that accomplished legislative goals through the application of knowledge acquired from specialized experience—i.e., "expertise." The new constitutional order precluded the need for elected officials in Congress or state governments to deliberate about the many complicated regulatory issues presented by changes in social, economic, and technological conditions. The new army of experts would identify relevant phenomena, study their impact on society, and craft regulatory plans to maintain stability and enhance efficiency. The new administrative order reduced public participation by narrowing the field of qualified opinions to those held by "experts"; the administrative expert's "black box" would solve social problems.

Frankfurter was less optimistic than Landis about the merits of a government heavily dependent upon administrative experts. He...
cautioned that the administrative power necessary to acquire and apply specialized knowledge to solve (and prevent) social problems was "prone to abuse." Frankfurter argued that expert administrators' bureaucratic value as investigators and analysts should not overshadow the need for the public's elected representatives to frame and ultimately resolve public policy debates. Democratic principles required the ongoing supervision of agency decisions in light of new social and economic conditions to ensure expert administrators did not step outside the bounds of their technical expertise. Frankfurter anticipated changes in the regulatory framework that would ultimately occur in the 1960s and 1970s when he recommended "easy access to public scrutiny and a constant play of alert public criticism" to deter the abuse of administrative power.

II. SACRIFICING DELIBERATION TO ILLUSIONS OF EXPERTISE

Frankfurter's cautionary remarks faded with time as administrative agencies acquired more power to make value-based decisions in environmental law. Institutional competence themes unintentionally supported the erosion of democratic deliberation in the administrative state in general and in environmental law in particular. During the 1980s, the Supreme Court strengthened the legal process school's construction of "expertise" to extend well beyond technical decisions into the political realm. The Court's interpretation of the Administrative Procedure Act of 1946 (APA) and the National Environmental Policy Act of 1969 (NEPA) amplified administrative agency "competence" to legislate while simultaneously constraining the judiciary's reasoned elaboration of which there is as yet no voice of science. The very notion of democracy implies the right of the public to decide these matters on its own choice." Id.

77. Id. at 158.
78. See id. at 159–60 ("Moreover, while expert administrators may sift out issues, elucidate them, bring the light of fact and experience to bear upon them, the final determinations of large policy must be made by the direct representatives of the public and not by the experts.").
79. Id.
80. Id.
81. See id. at 129. Frankfurter envisioned a role for experts within a broader, pragmatic approach to government's responsibility to respond through law to changing social and economic conditions.

If we focus attention on the human origin of all government, we shall have a more scientific temper for dealing with its frailties. We shall equally avoid blind attachment and romantic impatience only if we recognize the essentially provisional nature of all political arrangements. Such an attitude will treat government not only as a mechanism for day-to-day adjustments but also as a hypothesis in action, to be modified by the experience which it induces.

Id.

82. See 5 U.S.C. § 706(2)(A), (E) (2006) (requiring that courts limit substantive review of agency action to determining whether the agency's decision was "arbitrary [or] capricious" or "unsupported by substantial evidence").
environmental law. The Court’s decisions insulated agencies’ legislative interpretations from challenge and produced a form of procedural positivism in environmental law that conflicted with substantive deliberation of agencies’ epistemic and normative claims.

The APA incorporated the “expert model” of administration and required that institutions competent to make complicated regulatory decisions should be relatively free from interference by courts and the public. In 1971, the Supreme Court decision in *Citizens to Preserve Overton Park, Inc. v. Volpe* strengthened the APA principle insulating agency decisions from traditional standards of judicial review. *Overton Park* held against the Secretary of Transportation for failing “to make formal findings and state his reason for allowing” highway construction through a park. The Court stressed the “plain language” of applicable law that demonstrated Congress’ intent to protect urban parkland from highway routes. However, the Court also articulated a narrow standard of judicial review for administrative agency cases:

[The Administrative Procedure Act] requires a finding that the actual choice made was not “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” To make this finding the court must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment. Although this inquiry into the facts is to be searching and careful, the ultimate standard of review is a narrow one. The court is not empowered to substitute its judgment for that of the agency. The final inquiry is whether the Secretary’s action followed the necessary procedural requirements.

*Overton Park* amounted to a hollow victory for environmentalism. The Court’s decision left intact the institutional competence notion that agencies *qua* experts possess a black box that rarely emits unsound knowledge claims and transcends the capabilities of generalist judges. Lower courts have interpreted *Overton Park* to require institutional deference to agency decisions unless they are “irrational.” *Overton Park* raised the bar against democratic attempts by aggrieved parties to debate

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86. *Id.* at 417.

87. *Id.* at 412–13.

88. *Id.* at 416–17.

89. *See, e.g.*, Sierra Club *v. Marita*, 46 F.3d 606, 621 (7th Cir. 1995).
the substantive reasons bearing upon policy decisions. During the 1980s, *Overton Park's* narrow standard of judicial review merged with society's increasing complexity and changing institutional dynamics produced through other Court decisions to justify an expansive view of administrative agency "competence."  

A. Vermont Yankee: *Institutional Competence Narrows Environmental Law*

The Supreme Court further developed the destructive synergy of agency expertise and limited judicial review in *Vermont Yankee Nuclear Power v. Natural Resources Defense Council, Inc.* The *Vermont Yankee* Court chastised the D.C. Circuit Court of Appeals for striking down the Nuclear Power Commission's rule permitting a power plant's construction "because of the perceived inadequacies of the procedures employed in the rulemaking proceedings." Specifically, the lower court held that the Commission should have allowed discovery and cross-examination to improve the regulatory proceeding's legitimacy. The Supreme Court reversed, holding that the APA makes agencies, not courts, institutionally responsible for devising adjudicative procedures ensuring fair evaluation of regulatory proceedings' evidence. The Court highlighted the lower court's fundamental confusion about the law governing judicial review of agency rulemaking procedures, and re-emphasized agencies are in fact free to design their own rules of procedure and methods of inquiry. Permitting reviewing courts more than minimal interference in agency decision-making processes would produce unreasonable and unpredictable results—only agencies have the firsthand knowledge necessary to design fair procedures.

The *Vermont Yankee* decision subverted NEPA's primary purpose by eroding its democratic requirements that federal agencies construct and publicize interdisciplinary environmental impact statements, engage the public's views through interactive deliberative processes, and select the least harmful federal action by evaluating alternatives' non-

90. Baltimore Gas & Elec. v. Natural Res. Def. Council, Inc., 462 U.S. 87, 97–98 (1983) ("The role of the courts is simply to ensure that the agency has adequately considered and disclosed the environmental impact of its actions and that its decision is not arbitrary or capricious.") (citing Citizens to Pres. Overton Park, Inc. v. Volpe, 401 U.S. 402, 415–17 (1971)).

91. See infra Parts II.A–III.


93. Id. at 541.

94. Id.

95. Id. at 545–49. The Court concluded: "In short, all of this leaves little doubt that Congress intended that the discretion of the agencies and not that of the courts be exercised in determining when extra procedural devices should be employed." Id. at 546.

96. Id. at 547, 544.

97. Id. at 546–47.
quantifiable and quantifiable values. In view of NEPA’s broad purposes, the lower court accepted the Natural Resource Defense Council’s (NRDC) contention that courts may require agencies to “develop new procedures to accomplish the innovative task of implementing NEPA through rulemaking.” The Supreme Court summarily rejected the lower court’s reasoning and the environmentalists’ position. The Court held that NEPA’s purposes and goals do not require an agency to move beyond the APA’s mandate, reiterating the position expressed in Kleppe v. Sierra Club that “the only procedural requirements imposed by NEPA are those stated in the plain language of the Act.” Regulatory institutions possessed the legal authority, technical competence, and decision-making discretion to implement NEPA’s substantive purposes with narrowly circumscribed public or judicial interference.

The Vermont Yankee Court’s emphasis on institutional competence principles also changed agencies’ obligation to consider the public’s substantive ideas during rulemaking deliberations. The decision reduced agencies’ burden under NEPA to evaluate the environmental impacts of alternatives proposed by non-agency participants. The lower court rejected the Commission’s decision to approve the power plant’s construction because the Commission had not considered whether petitioners’ energy conservation measures constituted a reasonable alternative to the plant’s construction. The Supreme Court’s expansive interpretation of agency authority and its narrow construction of petitioners’ technical, conservation alternative rescued the agency by holding that agency responsibilities did not include clarifying the meaning of affected parties’ suggested alternatives. The Court concluded “energy conservation” was too ill-defined and irrelevant to justify its evaluation as an alternative under NEPA. The decision augmented institutional competence principles, providing expert administrators with the power to determine the legitimacy of a regulatory strategy.

Vermont Yankee solidified environmental agencies’ institutional competence to control the legitimate implementation of NEPA and other environmental statutes. Several factors support this understanding of the decision’s institutional impact. First, agency expertise justified the Court’s decision to reinforce agency discretion over procedural and

98. Id. at 548 (citing Natural Res. Def. Council, Inc. v. United States, 547 F.2d 633, 653 (1976)).
99. Id.
methodological issues of statutory implementation. Second, the decision enlarged the sphere of agency competence to determine the terms and opportunities for constructive public debate about epistemic and normative policy decisions. Third, the Court’s reiteration that NEPA should be construed narrowly as a “procedural” rather than a substantive statute is consistent with legal process theory’s conception of regulatory agency competence to manage technical matters with social consequences. Finally, Vermont Yankee’s discussion of the meaning of “alternatives” in NEPA narrowed the democratic process available to affected parties and expanded agency discretion to limit the policy choices requiring environmental impact assessment.

**B. Baltimore Gas: Expanding Agency Authority Over Science**

In 1983, the Court continued its expansion of environmental regulatory agencies’ authority by narrowing the terms of democratic debate about the legitimacy of agencies’ scientific claims. *Baltimore Gas & Elec. v. NRDC*\(^{103}\) reversed the lower court’s holding that Nuclear Regulatory Commission (NRC) rules for evaluating the environmental effects of nuclear power plants’ fuel cycle were arbitrary and capricious and violated NEPA.\(^{104}\) The D.C. Circuit Court of Appeals reasoned that the Commission’s rules precluded legitimate consideration of uncertainty in power plant licensing decisions.\(^{105}\) The primary source of contention was “Table S-3, a numerical compilation of the estimated resources used and effluents released by fuel cycle activities supporting a year’s operation of a typical light-water reactor.”\(^{106}\) Table S-3 was based upon the “zero-release assumption” that nuclear waste would not escape from a sealed repository and harm the environment.\(^{107}\) The zero-release assumption did not incorporate the risk associated with the “remote

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104. Id. at 95–96.
105. Id. The court of appeals analyzed the Commission’s decision as an example of an overly broad, general rule that would eliminate consideration of scientific uncertainty in particular licensing decisions. See Natural Res. Def. Council, Inc. v. U.S. Nuclear Reg. Comm’n, 685 F.2d 459, 483–84 (D.C. Cir. 1982) The D.C. Circuit found that the Commission’s risk assessment would control future decision-making processes and concentrate legal authority in the Commission’s general rule, rather than allowing the uncertainty about nuclear waste to be addressed on a case-by-case basis. See id. at 481–84. The court of appeals concluded that the zero-release assumption violated NEPA by preventing significant uncertainties from affecting any individual licensing decisions. See id. at 483–84. In reversing the D.C. Circuit, the Court held that “[t]he key requirement of NEPA, however, is that the agency consider and disclose the actual environmental effects in a manner that will ensure that the overall process . . . brings those effects to bear on decisions to take particular actions that significantly affect the environment.” *Baltimore Gas & Elec.*, 462 U.S. at 96.
107. Id. at 93–94.
possibility that water might enter the repository, dissolve the radioactive materials, and transport them to the biosphere."\textsuperscript{108}

The Supreme Court upheld the agency's discretion to make this assumption. Its decision emphasized the importance of evaluating agencies' discretionary decision-making processes in context.\textsuperscript{109} Justice O'Connor's majority opinion reasoned that NRC made the zero-release assumption for a limited purpose, in a broad context characterized by risk aversion strategies, and that preparation of Table S-3 was a technical matter within the agency's area of expertise.\textsuperscript{110} The Court downplayed the normative aspect of the agency's technical decision, describing the zero-release assumption as a "policy judgment concerning one line in a conservative Table designed for the limited purpose of individual licensing decisions."\textsuperscript{111} The Court concluded that the agency's expert analysis justified the institution's decision-making process and thereby satisfied the APA's reasoned decision-making standard.\textsuperscript{112} However, the Court also expanded the protective bubble around agency decisions characterized as "technical" or "scientific," admonishing reviewing courts to "remember that the Commission is making predictions, within its area of special expertise, at the frontiers of science. When examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential."\textsuperscript{113}

\textit{Baltimore Gas} fortified \textit{Vermont Yankee}'s institutional matrix by expanding environmental regulatory agencies' authority to choose epistemic methods of inquiry and determine the relevance of scientific claims and theories necessary to implement applicable law. The "frontiers of science" phrase, essential to the \textit{Baltimore Gas} Court's position, vanishes from subsequent lower court cases applying the "substantial deference" standard. Lower courts rely upon \textit{Baltimore Gas} to grant agencies' scientific and technical decisions substantial deference \textit{even if} the decisions are clearly not located at the "frontiers of science."\textsuperscript{114}

\begin{footnotes}
\item[108] \textit{Id.} at 94.
\item[109] \textit{Id.} at 101.
\item[110] \textit{Id.} at 101--04.
\item[111] \textit{Id.} at 105.
\item[112] \textit{Id.} at 104.
\item[113] \textit{Id.} at 103.
\item[114] \textit{See, e.g.,} Sierra Club v. Marita, 46 F.3d 606 (7th Cir. 1995). The \textit{Marita} court approved the Forest Service decision to disregard accepted principles of conservation biology in spite of the broader scientific community's view (supported by the Society for Conservation Biology and the American Institute of Biological Sciences) that the agency position disregarded the best available science. \textit{Id.} The agency's authority to resolve issues of scientific uncertainty supported deference to "the agency’s method of measuring and maintaining diversity." \textit{Id.} at 623; \textit{see also} Westlands Water Dist. v. U.S. Dep’t of Interior, 376 F.3d 853, 871 (9th Cir. 2004) ("Deference to an agency’s technical expertise and experience is particularly warranted with respect to questions involving . . . scientific matters . . . .") (quoting United States v. Alpine Land & Reservoir Co., 887 F.2d 207, 213 (9th Cir. 1989)); Nuclear Energy Inst., Inc. v. Envtl. Prot.
Courts' reluctance to inspect carefully agency decision-making processes has "[elevated] agency work that is often orchestrated and substandard while discounting the value of science that is well accepted outside the agency."\textsuperscript{115} The broad protection of agency "expertise" insulates agencies' scientific choices from public criticism and fortifies their application in environmental law.

\textbf{C. Long-Term Influence of Vermont Yankee and Baltimore Gas}

Both the \textit{Vermont Yankee} and \textit{Baltimore Gas} decisions unreasonably privilege environmental regulatory agencies' process-based justifications for substantive epistemic and normative claims. The current structure provides agencies with a virtual monopoly over the power to design institutions that acquire information bearing upon administrative decisions. Agencies also exercise their epistemic authority to construct the normative and technical categories that determine the kind of information that should count as knowledge.\textsuperscript{116} Agency administrators decide which knowledge claims or theories apply in a given situation, and which methodologies or claims may be devalued through the rulemaking and implementation process. The crucial point is that the institutional competence theme empowers environmental agencies to deny democratic debate about the epistemic claims and normative assumptions that reshape environmental law.\textsuperscript{117}

\begin{quote}
Agency, 373 F.3d 1251 (D.C. Cir. 2004) (court of appeals is extremely deferential to federal agency evaluating scientific data within its technical expertise.); Nat'l Comm. for the New River v. Fed. Energy Regulatory Comm'n, 373 F.3d 1323, 1327 (D.C. Cir. 2004) ("Court grants extreme degree of deference when reviewing agency's evaluation of scientific data within its technical expertise."); Inland Empire Pub. Lands Council v. U.S. Forest Serv., 88 F.3d 754, 760 (9th Cir. 1996) ("In deference to an agency's expertise, we review its interpretation of its own regulations solely to see whether that interpretation is arbitrary and capricious. . . . This is especially true when questions of scientific methodology are involved.") (footnotes omitted).
\end{quote}


\textsuperscript{117} Stewart, supra note 74, at 1684. Stewart notes:

Once the function of agencies is conceptualized as adjusting competing private interests in light of their configuration in a given factual situation and the policies reflected in relevant statutes, it is not possible to legitimate agency action by either the "transmission belt" theory of the traditional model, or the "expertise" model of the New Deal period.

\textit{Id.}
The conflict between agency authority and democratic principles of deliberation (i.e., reciprocity, publicity, and accountability) stems from the unreasonably sharp divisions of epistemic and political labor posited by the institutional competence theme. Environmental law's implementation through rulemaking is a value-laden mixture of knowledge claims and social norms, each dependent on the other for practical application. Institutional competence presupposes the legitimacy of administrators' authority to decide normative and technical issues based on the application of "expertise," but this authority over science conflicts with the deliberative condition of reciprocity. Reciprocity requires agencies to support their technical decisions with reasons that should reflect public debate over scientific assumptions and claims, as well as their normative implications for environmental regulation. Vermont Yankee and Baltimore Gas, however, amplified administrative agencies' control over the decision-making agenda and their capacity to shape deliberative debate through procedures with relatively little credibility.\textsuperscript{118} The Court protected agency discretion to define and decide scientific issues by highlighting institutional expertise over technical issues and overlooking their essentially normative character.

Vermont Yankee and Baltimore Gas enlarged the sphere of agency expertise and precluded the adoption of epistemic and normative claims that challenge the status quo. The decisions conflict with process scholars' "reasoned elaboration" of law by undermining the application of environmental law's substantive provisions to interdisciplinary issues typical of biodiversity conservation and pollution control disputes. The Supreme Court's reification of institutional expertise combined with its narrowing of environmental law to shift political authority over environmental decisions from the public to administrative experts. Vermont Yankee's interpretation and application of NEPA demonstrates the limitations of procedural positivism to ensure that substantive public debate informs the development of the law.\textsuperscript{119} Former Justice Frankfurter was rightfully concerned by the risk that the institutional competence idea would expand experts' authority and enforce a procedural law at odds with deliberative democracy.\textsuperscript{120}

\textsuperscript{118} Id. at 1780 ("The prognosis that procedural requirements may be largely ineffective in controlling agency tendencies to favor organized interests where the record does not focus decision, and where the weighting of key variables is left unresolved, is confirmed . . . by experience under the National Environmental Policy Act.").

\textsuperscript{119} Id.

\textsuperscript{120} See supra notes 77–81 and accompanying text.
III. CONSTITUTIONAL REPERCUSSIONS OF INSTITUTIONAL INDEPENDENCE

Reagan era Supreme Court decisions also enhanced agencies' institutional independence, complementing the normative and epistemic expansion of agency expertise. In *Chevron*, agency authority to interpret congressional legislation supplanted traditional theories of judicial review dating to Chief Justice Marshall's proclamation in *Marbury v. Madison* that courts should determine "what the law is."\(^\text{121}\) The Court also delivered an institutional shock to Congress by declaring congressional vetoes unconstitutional in *Chadha*.\(^\text{122}\) The *Chadha* and *Chevron* decisions produced an institutional shift in the Constitution's "zone of twilight"\(^\text{123}\) that expanded the power of administrative agencies and the Executive. *Chadha* and *Chevron* redistributed tripartite government's legislative powers while turning a blind eye to the Court's expansion of agency independence and concurrent reduction in accountability.

A. Chadha-Chevron Expansion of Agencies' Constitutional Independence

The Supreme Court's decision in *Immigration and Naturalization Service v. Chadha*\(^\text{124}\) highlights the formalist threat that procedural positivism poses to institutional customs evolving from general rules. The Court declared Congress' legislative veto over administrative decisions an unconstitutional exercise of legislative power; the institutional change was illegitimate in the absence of formally authorized procedures (e.g., a constitutional amendment).\(^\text{125}\) The legislative veto had evolved as an important constitutional response to administrative agencies' burgeoning authority over social issues.\(^\text{126}\) In a practical, well-reasoned dissent, Justice White emphasized the legislative veto's critical function as a constraint on the authority of regulatory agencies and the executive branch.\(^\text{127}\) The legislative veto was "a central means by which Congress secures the accountability of executive and independent agencies."\(^\text{128}\) Between the

\(^{121}\) Marbury v. Madison, 5 U.S. 137, 177 (1803).


\(^{123}\) Youngstown Sheet & Tube Co. v. Sawyer, 343 U.S. 579, 637 (1952) (Jackson, J., concurring).

\(^{124}\) *Chadha*, 462 U.S. 919.

\(^{125}\) See id. at 951.

\(^{126}\) See id. at 1002 (White, J., dissenting) ("Today's decision strikes down in one fell swoop provisions in more laws enacted by Congress than the Court has cumulatively invalidated in its history.").

\(^{127}\) See id. at 967–1013.

\(^{128}\) Id. at 967–68. Justice White also observed:

[T]he legislative veto device here—and in many other settings—is far from an instance of legislative tyranny over the Executive. It is a necessary check on the unavoidably expanding power of the agencies, both Executive and independent, as they engage in exercising authority delegated by Congress.
New Deal and the Chadha decision, Congress frequently relied on the legislative veto to assure the constitutional accountability of administrative institutions exercising lawmaking power.29

Chadha fundamentally altered the evolutionary trend that produced Congress' legislative veto power, an institutional adaptation to the need for broader delegation that had promoted institutional settlement among the constitutional branches and administrative agencies. The Court's majority opinion wraps Chadha's institutional, political, and legal complexity in a formal bundle that conceals the decision's deeper, more problematic repercussions. The deceptive power of Chadha's formalism appears in the Court's holding, crisp and rule-bound, flowing logically from an application of the Constitution's explicit provisions to the legislative veto of the agency decision that suspended Chadha's deportation.

Since it is clear that the action by the House was not within any of the express constitutional exceptions authorizing one House to act alone, and equally clear that it was an exercise of legislative power, that action was subject to the standards prescribed in Art. I. The bicameral requirement, the Presentment Clauses, the President's veto, and Congress' power to override a veto were intended to erect enduring checks on each Branch and to protect the people from the improvident exercise of power by mandating certain prescribed steps. To preserve those checks, and maintain the separation of powers, the carefully defined limits on the power of each Branch must not be eroded. To accomplish what has been attempted by one House of Congress in this case requires action in conformity with the express procedures of the Constitution's prescription for legislative action: passage by a majority of both Houses and presentment to the President.30

Chadha's formal analysis buries the forces of social and technological change compelling modifications in the rules which guide institutional relations among government's three branches. The majority's reasoning paints a static and ahistorical picture of the Constitution's institutional evolution. The Court's reasoning appears well-supported by the Constitution's text, but as Justice White noted sharply, the majority overlooked the pragmatic reality that "legislative authority is routinely delegated to the Executive Branch, to the independent regulatory agencies, and to private individuals and groups."31 The Court's formal analysis also produced a decision with far-

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129. Before Chadha, Congress used the legislative veto in over 200 instances to limit the expansion of agencies' lawmaking authority. Id. at 968.
131. Id. at 984 (White, J., dissenting).
reaching institutional impacts, bypassing an approach that would show Congress the "respect due its judgment as a coordinate branch of Government" and lead to a ruling "no more extensive than necessary." Instead, Chadha restructured the constitutional relations of authority among the three branches of government, altering the meaning and significance of Congress' delegation of legislative power to environmental regulatory agencies. Chadha's sweeping opinion immediately enhanced administrative agencies' political independence and disrupted entrenched procedures that governed the resolution of disputes during the lawmaking process.

The Court's procedural positivism also denied the essential democratic links between lawmaking and public participation. Justice White alarmingly noted that the Court's formalist approach threatened to make it more difficult to "[insure] that the fundamental policy decisions in our society will be made not by an appointed official but by the body immediately responsible to the people." The Court's generous expansion of agencies' legislative authority has combined with presidential appointment power to constitute one of the gravest threats to the legitimacy of environmental law. Chadha loosened Congress' institutional reins on regulatory agencies and enhanced the executive's power to legislate through backdoor agency rulemaking. Environmental regulatory agencies' rulemaking and regulatory implementation decisions are subject to notice and comment requirements, but these procedural devices function as poor substitutes for deliberative democratic mechanisms that ensure agency accountability. Chadha's sacrifice of the

132. Id. at 960 (Powell, J., concurring).
133. Id. at 1002-03 (White, J., dissenting) (quoting Arizona v. California, 373 U.S. 546, 626 (1963) (Harlan, J., dissenting in part) (modification in original). Justice White's comment is strikingly similar to Frankfurter's cautions fifty years earlier. See supra notes 75-79 and accompanying text.
134. See Cynthia Farina, Statutory Interpretation and the Balance of Power in the Administrative State, 89 COLUM. L. REV. 452, 503-04 (1989) (arguing that the President's broad appointment power is a primary factor contributing to "the emergence of the President as the dominant force in regulatory policy making").
135. NEPA's detailed procedural requirements provide one example of an environmental law that has failed to produce constructive deliberations during the policymaking process. Stewart, The Reformation of Administrative Law, supra note 74, at 1701 ("Experience under [NEPA] suggests, for example, that the beneficial impact on agency policy of procedural adjustments may be quite marginal."). In a more fundamental sense, the involvement offered to parties through notice and comment rulemaking is an inadequate substitute for the representation provided by democratic politics, because the process "requires [parties] to plead for the favor of decision-makers who are vested with superior authority and assumed to have superior qualities of wisdom and impartiality." Joseph Cooper & William F. West, Presidential Power and Republican Government: The Theory and Practice of OMB Review of Agency Rules, 50 J. POLITICS 864, 890 (1988) ("It is a form of representation which is adequate for the needs of political control only when no problems in terms of political control exist."). I thank Casey Roberts of Ecology Law Quarterly for bringing this quote to my attention.
legislative veto enhanced agencies' constitutional independence and undermined Congress' ability to ensure agencies' regulatory decisions reflect congressional intent.

In *Chevron, U.S.A., Inc. v. NRDC*,[136] the Court further reduced agencies' accountability to Congress and the public while enhancing their legislative power. The Court significantly expanded the institutional meaning of agency "competence" by amplifying reviewing courts' deference to agency interpretation of statutory purpose. The Court articulated a two-part test that governed the legitimacy of an agency's interpretation of legislation. First, the reviewing court must determine whether "Congress has directly spoken to the precise question at issue."[137] Clear congressional intent should lead to a straightforward analysis of agency decisions. The second part of the test expands agency competence to include the normative and legal functions of statutory interpretation. In the absence of clear congressional intent—"if the statute is silent or ambiguous with respect to the specific issue"[138]—the court must determine whether the agency's decision is a reasonable interpretation of congressional intent.[139]

The Supreme Court's decision in *United States v. Mead*[^140] clarified the legitimate range of agencies' lawmaking authority under *Chevron*,[141] but left intact regulatory agencies' expansive "competence" to interpret and implement legislation. Thus the *Chevron-Chadha* legacy remains: agencies are institutionally competent to control the substantive political agendas, epistemic methods, and participatory processes necessary to create law and policy. Environmental regulatory agencies exercise broad discretion in the absence of meaningful accountability to create law bound only by vague statutory principles and an equally ambiguous overall statutory scheme. The Court's broad interpretation of agencies' legislative authority undermines the judiciary's capacity to "check" agency decision making. Moreover, Congress lacks formal mechanisms to easily identify, track and correct environmental agencies' numerous administrative implementation of a particular statutory provision qualifies for *Chevron* deference when it appears that Congress delegated authority to the agency generally to make rules carrying the force of law, and that the agency interpretation claiming deference was promulgated in the exercise of that authority. Delegation of such authority may be shown in a variety of ways, as by an agency's power to engage in adjudication or notice-and-comment rulemaking, or by some other indication of a comparable congressional intent.

[^137]: *Id.* at 842-43.
[^138]: *Id.* at 843.
[^139]: *Id.* at 845.
[^141]: In *Mead*, the Court articulated a second test to clarify the meaning of *Chevron*, holding that:
rulemaking strategies that implement legislation and may deviate from broad statutory purposes. Agencies' broad authority over rulemaking denies affected persons access to the policy process and stifles significant democratic debate about agencies' lawmaking decisions.

B. Democratic Repercussions of Agencies' Legislative Power

Environmental regulatory agencies' epistemic and normative authority over the policy agenda permits administrators to exploit scientific uncertainty when identifying policy problems and developing alternative solutions. Recent regulatory decisions by the U.S. Forest Service and the U.S. Environmental Protection Agency (EPA) illustrate administrators' relatively unconstrained legislative power over regulatory issues. The Forest Service's Rule 219 emerged through a process illustrating agency exploitation of scientific uncertainty as an "excuse for myopia." The 2005 Rule 219 represents the culmination of Forest Service efforts to bypass population ecology methods necessary to establish the ecological and social value of fish and wildlife populations protected by the National Forest Management Act (NFMA). NFMA requires that forest plans "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives." The diversity provision was intended to value fish, wildlife, recreation and other natural forest resources on par with the timber resource, and to limit logging practices to instances benefiting non-timber resources.

Beginning in the early 1990s, the Forest Service argued that NFMA's diversity provision should be satisfied by "habitat analysis" functioning as a surrogate for population viability analysis of "management indicator species." Population viability analysis (PVA) developed to meet society's interest in protecting threatened and endangered species; it is a

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143. GUTMANN & THOMPSON, supra note 20, at 158.
145. According to Wilkinson and Anderson, the diversity provision has three complimentary meanings in the context of timber planning. First, it is a general mandate to bring timber production into balance with wildlife and ecological values. Second, it limits the use of forest conversions to cases where the conversion can be justified by its benefit to nontimber resources. Third, it prohibits monoculture.

“methodology born of a public-policy need.”147 PVA refers to both a process and a set of tools used to assess whether species populations located within particular geographic regions are increasing or decreasing.148 Wildlife biologists analyze data using computer models to produce a range of probabilities that a population will persist for specified times into the future, and to give insights into the demographic and environmental factors that constitute the most significant threats.149 The Committee of Scientists appointed in 1999 to advise the Forest Service about the scientific issues affecting its rulemaking responsibility argued that habitat analysis alone does not supply information sufficient to assess population trends for threatened or endangered species or “species-of-interest.”150 Scientists generally concur that conservation planners should use habitat analysis and PVA in tandem to satisfy NFMA’s diversity requirements.151

After the Forest Service failed to generate lasting legal authority152 or scientific support153 for the habitat analysis position it changed its interpretation of NFMA in the 2005 rule. The agency claimed that scientific uncertainty and cost justified the exercise of its legislative authority to devalue population ecology methods (e.g., PVA) relative to


148. See STEVEN R. BEISSINGER, Population Viability Analysis: Past, Present and Future, in POPULATION VIABILITY ANALYSIS, supra note 147, at 5; J. Michael Reed et al., Emerging Issues in Population Viability Analysis, 16 CONSERVATION BIOLOGY 7, 8 (2002) (“One of the most powerful and pervasive tools in conservation biology is population viability analysis (PVA). There is no consensus on the definition of a PVA . . . . What all uses of PVA have in common, however, is an assessment of the risk of reaching some threshold, such as extinction, or the projected growth for a population, either under current conditions or those projected for proposed management.”).


150. 36 C.F.R. § 219.16 (2006) (“Species-of-interest” includes species requiring agency action “to achieve ecological or other multiple use objectives.”).

151. See Barry R. Noon et al., Conservation Planning for US National Forests: Conducting Comprehensive Biodiversity Assessments, 53 BIOSCIENCE 1217, 1218–19 (2003). Noon et al. argue that coarse-filter (e.g., ecosystem-level analysis) and fine-filter (e.g., species level) analysis are both necessary to “meet NFMA requirements to provide for the diversity and viability of plant and animal communities.” Id.

152. The court of appeals in Inland Empire upheld the Forest Service’s decision to use “habitat viability analysis” to calculate population trend data required by regulations interpreting the National Forest Management Act’s “diversity” provision. See Inland Empire Pub. Lands Council v. U.S. Forest Serv., 88 F.3d 754, 759 (9th Cir. 1996). However, in Utah Environmental Congress v. Bosworth, 372 F.3d 1219, 1223 (2004), the Tenth Circuit Court of Appeals rejected the agency’s reliance upon habitat analysis, finding that the agency should have conducted quantitative population analysis to determine species abundance and population trends. Id. at 1229–30.

153. See Noon et. al., supra note 151, at 1218–19.
previous regulatory frameworks. The agency exercised its authority under Chevron to relax the scientific legitimacy of its interpretation of NFMA and to augment the legal status of unreliable, stand-alone habitat analysis as a proxy-on-proxy method for assessing species diversity. The Forest Service's reinterpretation of NFMA made other substantive changes in the agency's responsibilities that eroded NFMA's statutory protections for fish and wildlife populations. As one group of scientists noted, "the new regulations eliminate as a goal the obligatory protection of biological diversity, eliminate the requirement to prepare environmental impact statements pursuant to [NEPA], and reduce the role and influence of science in the development and implementation of forest plans."

The EPA's Clean Air Mercury Rule (CAMR) provides a second illustration of agencies' authority to achieve legislative aims through the rulemaking process with minimal public involvement. In 2004, senators from the Senate Environment and Public Works Committee directed the EPA's Office of Inspector General (OIG) to review the "process used to develop the [EPA's] January 2004 proposed rule for regulating mercury emissions from coal-fired, steam generating electric utility units." The OIG report reveals EPA senior staff rigidly controlled the analysis performed pursuant to the Clean Air Act, inhibited intra-agency and public deliberation, and limited dissent in order to attain its desired goal—backdoor enactment of the Clear Skies legislation that had failed

155. Id. at 1052, 1060.
158. See Jeffrey D. Rudd, Restructuring America's Government to Create Sustainable Development, 30 WM. & MARY ENVTL. L. & POL'y REV. 371, 442-52 (arguing that the rulemaking history of the Environmental Protection Agency's 2005 Clean Air Mercury rule violated democratic principles of republican government).
159. See EPA, OFFICE OF THE INSPECTOR GENERAL, ADDITIONAL ANALYSES OF MERCURY EMISSIONS NEEDED BEFORE EPA FINALIZES RULES FOR COAL-FIRED ELECTRIC UTILITIES (2005) [hereinafter OIG Evaluation Report], available at www.epa.gov/oig/eroom.htm#05. The Office of the Inspector General (OIG) interviewed "staff for EPA offices and outside organizations to gain an understanding of the rule as a developed, other options considered, and the rule development process." Id. at 8. The report also "reviewed data and analysis developed in support of the rule ... and related information provided by both EPA and non-EPA officials." Id. at 8-9. OIG requested but did not receive "several important documents" from the agency. Id. at 9.
160. Id. at 13-16.
to pass congressional inspection and analysis. EPA exercised its lawmaking power to circumvent democratic constraints designed to ensure that administrative regulations result from public deliberation and reasonably implement legislation.

Environmental agencies' institutional independence functions in concert with expertise to subvert democratic principles of accountability, publicity, and reciprocity. Institutional independence fortifies agencies' ability to control the rulemaking and regulatory implementation of agendas in non-public settings that are relatively insulated from affected parties' "reason-giving" objections. Reagan era Supreme Court decisions grounded in institutional competence themes broadened agencies' legislative power relative to the courts and Congress and expanded executive authority over lawmaking. Agencies' political and scientific independence encourages institutional decisions characterized by secrecy, disregard for future generations' interests, and exploitation of "uncertainty" to achieve political goals. Environmental agencies' selective attention to democratic deliberation has transformed environmental law's normative force into the static language of efficiency and optimization endorsed by the legal process school.

History unraveled the legal process school's safeguards against procedural injustice. Institutional competence themes of expertise and independence gradually eroded democratic processes governing environmental law's substantive and procedural constraints. *Overton Park, Vermont Yankee,* and *Baltimore Gas* expanded agencies' epistemic authority over policy to the detriment of normative concerns. The *Chadha-Chevron* duo produced a substantial, unintended shift in the institutional competence themes' development in law by insulating agencies' legislative power from meaningful democratic adjustment. Finally, the legal process theory's overall emphasis on efficiency evolved to promote dependence on expert elites rather than democratic deliberation to resolve methodological and substantive issues affecting environmental law. Environmental regulatory agencies' presumed

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161. *Id.* at 15 ("EPA has stated its intent to implement its multi-pollutant (mercury, [sulfur dioxide], and [nitrous oxide]) cap-and-trade programs, originally included in stalled Clear Skies legislation, through the proposed CAIR and mercury regulations."). The OIG report determined that

> When the Clear Skies legislation stalled, EPA decided to address the Clear Skies program in a regulatory manner instead. This led to EPA including a mercury cap-and-trade option, similar to Clear Skies, in its proposed mercury rule. As focus on the cap-and-trade approach increased, EPA began to de-emphasize the mercury MACT development process.

*Id.* at 27.

competence to resolve moral conflicts efficiently provided a natural foundation for the law and economics movement in environmental law.

IV. LEGAL PROCESS: EFFICIENCY SPAWNS LAW AND ECONOMICS

Legal process themes of efficiency and rational order unexpectedly combined with agencies' broad authority to create favorable conditions for the integration of economics into the environmental regulatory system's institutional structure. The law and economics movement developed as a form of "economic analysis of laws that regulated nonmarket behavior—accidents, crimes, marriage, pollution, and the legal and political processes themselves." President Reagan's 1981 Executive Order institutionalized the power of law and economics by mandating that all major regulatory agencies employ cost-benefit analysis to guide the construction of rulemaking agendas and proposed regulations. Beginning in the 1980s and accelerating through the 1990s,

163. See LANDIS, supra note 29, at 23-24. As Landis notes

With the rise of regulation, the need for expertness became dominant; for the art of regulating an industry requires knowledge of the details of its operation, ability to shift requirements as the condition of the industry may dictate, the pursuit of energetic measures upon the appearance of an emergency, and the power through enforcement to realize conclusions as to policy . . . . Efficiency in the processes of government is best served by the creation of more rather than less agencies. And it is efficiency that is the desperate need.

Id.

164. See Richard A. Posner, Some Uses and Abuses of Economics in Law, 46 U. CHI. L. REV. 281, 282 (1976). Positive economic analysis of law aims "to explain what is or has been or to predict what will be." Id. at 285. Posner emphasizes that "[t]he distinction between positive and normative, between explaining the world as it is and trying to change it to make it better, is basic to understanding the law-and-economics movement." Id. Contemporary law and economics appears in a variety of forms, but most rely upon variations of utilitarian methods developed by Jeremy Bentham. See id. at 284. Utilitarianism's primary elements are "utility" consequentialism, and the maximization of utility to produce particular "ends." See GUTMANN & THOMPSON, supra note 20, at 169-72. Utility is an all-inclusive end roughly understood as an indicator for "well-being." Law and economics scholars claim that individuals' preference satisfaction provides measurable, commensurable criteria for determining utility. See Posner, supra, at 285. The combination of utility as an inclusive end and the methodological focus on consequences leads to a calculus-based method for determining utility maximization—the best outcome given a range of utility inputs. See GUTMANN & THOMPSON, supra note 20, at 169-72.


By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to reduce the burdens of existing and future regulations, increase agency accountability for regulatory actions, provide for presidential oversight of the regulatory process, minimize duplication and conflict of regulations, and insure well-reasoned regulations, it is hereby ordered as follows:

...
environmental regulatory agencies relied on economic methods of cost-benefit analysis to assist policy formulation, aid conflict resolution, and promote the deregulation agenda. Over time, regulatory agencies' political independence and technical expertise provided institutional protection for the transformation of environmental law and policy into a regulatory enterprise dominated by utilitarian discourse and an instrumentalist conception of law.

The process school's principles of optimization and distribution of authority provided a natural segue for regulatory agency experts to reconceive environmental law through an economic lens. Legal process theory envisioned the state as an organic entity responsible for creating and monitoring social conditions that optimized individuals' self-

(a) Administrative decisions shall be based on adequate information concerning the need for and consequences of proposed government action;

(b) Regulatory action shall not be undertaken unless the potential benefits to society for the regulation outweigh the potential costs to society;

(c) Regulatory objectives shall be chosen to maximize the net benefits to society;

(d) Among alternative approaches to any given regulatory objective, the alternative involving the least net cost to society shall be chosen; and

(e) Agencies shall set regulatory priorities with the aim of maximizing the aggregate net benefits to society, taking into account the condition of the particular industries affected by regulations, the condition of the national economy, and other regulatory actions contemplated for the future.


166. See Cass Sunstein, Risk and Reason: Safety, Law, and the Environment 19–22 (2002). See generally Douglas A. Kysar, Climate Change, Cultural Transformation, and Comprehensive Rationality, 31 B.C. ENVTL. AFF. L. REV. 555 (2004); Frank Ackerman & Lisa Heinzerling, Priceless: On Knowing the Price of Everything and the Value of Nothing (2004). Cf. Richard Lazarus, The Greening of American and the Graying of United States’ Environmental Law, supra note 30, at 85–86. Lazarus argues that the Reagan administration's attacks on regulatory interference with industrial property rights and free market economics were overly aggressive, sparking a backlash of public resistance to deregulation. Id. Lazarus suggests that only after the Republicans regained control of Congress in 1994 and launched their “Contract with America” platform were environmental law's normative foundations at risk. Id. at 92–93 (“In their place would be environmental standards based on cost-benefit analyses, comparative risk assessment, and other economic efficiency criteria.”) Although the Republican agenda was not codified by statute, environmental regulatory agencies have increasingly endorsed an approach driven by cost-benefit analysis and utilitarianism. See, e.g., Gutmann & Thompson, supra note 20, at 167–96 (discussing former EPA administrator William Ruckelshaus' reliance upon utilitarianism (and its failings) to address the debate over the “margin of safety . . . for a hazardous substance such as organic arsenic”); see also Lisa Heinzerling, Reductionist Regulatory Reform, 8 FORDHAM ENVTL. L.J. 459, 461 (1997).
development and harmonious existence. According to this view, law provides the institutional framework necessary to guide individuals' interactions toward results benefiting society as a whole. Private institutions produce the most efficient social adjustment to changing social and economic conditions, but competent public institutions are necessary to break logjams, resolve conflict, and steer the private ordering process toward social goals. Agencies' technical analysis of law and policy aims to "maximize the total satisfaction of human wants" and ensure the fair allocation of social and economic resources. The theorized state is premised on experts' capacity to identify social goals and design integrated public-private strategies to realize satisfaction of these goals.

The law and economics movement preserved and strengthened the process school's conception of regulatory authority, eventually altering the fundamental character of environmental legislation. Legal process and law and economics each posit fairly sharp divisions between facts and norms, and rely upon apolitical experts to identify and describe the salient features of the social-legal system. Economic analysis of law aims to produce general rules about the causes of social interactions and the relations between law and social behavior. Both schools generally strive

167. See Eskridge & Frickey, supra note 16, at xci. Hart and Sacks argued that the state is primarily responsible and uniquely empowered for "establishing, maintaining and perfecting the conditions necessary for community life to perform its role in the complete development of man." Id. (citing HART & SACKS, 1958 LEGAL PROCESS DRAFT 110, quoting Joseph M. Snee, Leviathan at the Bar of Justice, in GOVERNMENT UNDER LAW 91, 96 (Conference at Harvard Law School, Sept. 22-24, 1955) (Arthur Sutherland ed., 1968)).

168. See id. at xciii ("Because of the 'boundless and unpredictable variety' of our dynamic society [Hart and Sacks] assert that 'private ordering is the primary process of social adjustment.'") (quoting HART & SACKS, 1958 LEGAL PROCESS DRAFT 183).

169. See id. at xci (quoting HART & SACKS, 1958 LEGAL PROCESS DRAFT 113). Eskridge and Frickey note that the state exists 'to avoid the disintegration of the social order and the consequent destruction of the existing benefits of group living' and 'to maximize the total satisfaction of human wants . . . by making a steadily more effective use of the resources of group living' and to assure 'a currently fair division' of society's bounty.

170. See LANDIS, supra note 29, at 25-26; supra note 61 and accompanying text.

171. Environmental legislation enacted in the 1960s and 1970s reflected the public's interest in an improved quality of life. HAYS, supra note 2, at 5. The legislative changes associated with this environmental movement may be conceived in terms of three overlapping "phases." Id. at 54-57. The initial phase of social and legislative change emphasized Americans' "natural-environment values in outdoor recreation, wildlands, and open space." Id. at 54. The second phase marked a rise in Americans' concern "about the adverse impact of industrial development, with a special focus on air and water pollution." Id. at 54. The third phase, which spanned the 1970s, was characterized by public reaction to industrial discharge of toxic chemicals threatening human health. Id. at 55-56.

for utility maximization and rational order through the efficient distribution of resources, but law and economics provides sophisticated methods of quantitative analysis that promise to overcome the process school's technological limitations. Law and economics aims to improve law's social goals by measuring its performance in terms of costs and benefits to society. This prioritization of efficiency reduces environmental law to economic categories of cost-benefit analysis.  

Cost-benefit analysis has transformed environmental law, formerly understood as publicly-expressed normative principles—a normative "force" of law—into an instrument of economic discourse. In contrast to the process school's ideal of attending to legislative purpose, yet consistent with administrative process' emphasis on efficiency, cost-benefit analysis re-conceives legislation through a worldview framed by "cost" and "benefit" categories. Cost-benefit analysis constitutes a form of authority that seeks to "derive conclusions from the application of formal logical rules." President Reagan's Executive Order mandating cost-benefit analysis institutionalized a set of ideas—a discipline—that further empowered an environmental regulatory structure founded on concepts of political independence and expertise. Economic instrumentalism dominates environmental regulatory agencies' legislative power in spite of the serious conceptual and practical shortcomings of cost-benefit analysis.

173. See Kysar, Climate Change, supra note 166, at 562 ("The normative premise of [cost-benefit analysis] is that its use will lead society to maximize the efficiency with which it devotes resources to policy goals."). Political science scholar John Kingdon notes that the increased devotion to the principle of efficiency "probably reflects a long-range trend toward more economists (and people receptive to their thinking) in government. Economists' language is everywhere: references to cost-effectiveness, tradeoffs, efficiency, cost allocation, and cross subsidy." John Kingdon, Agendas, Alternatives, and Public Policies 137 (2d ed. 1995).

174. The author attributes the idea of law as a "force" to Arthur McEvoy, J. Willard Hurst Professor of Law, University of Wisconsin-Madison. Yaron Ezrahi provides a succinct discussion of law and economics as a form of instrumentalism, observing:

Economic analysis of actions has apparently provided one of the most attractive ways to get around legal principles or sacred rules without arbitrary judgments. It has provided a powerful tool for the legal instrumentalist objective of commensurating, and then comparing the relative costs and benefits of alternative rules. As a generalized science of human interaction, economics has appeared to promise a fusion of the commitment of the idea that the free individual is the ultimate unit of action and the need to find empirically determinate, and hence public, criteria for judging and evaluating actions without relying on subjective evaluations or on authorities outside the context of social interactions.


175. Kysar, Climate Change, supra note 166, at 563.

176. See id. at 558-59. Kysar emphasizes that his criticisms of cost-benefit analysis echo positions advanced by many respected scholars that have fallen on deaf ears.

[M]ost of the critiques levied in this Essay are not original. Rather, they come from careful thinkers who have examined and challenged the use of CBA in environmental,
The cost-benefit methodology suffers from three assumptions that critically undermine its credibility as regulatory agencies' primary technology for developing and evaluating rulemaking decisions. First, cost-benefit analysis is plagued by the uncertainty produced by its categorical structure. The technology's use presupposes the availability of reliable data and a comprehensive understanding of the physical, economic, and social effects of prospective agency rules and regulatory implementation decisions. Cost-benefit analysis assumes "comprehensive rationality," which eliminates uncertainties or reduces them to harmless levels to produce seemingly credible, analytical results. Cornell University's Douglas Kysar notes that by "providing a semblance of order and exactitude where none exist... the results of [cost-benefit analysis] implicitly obscure the severity of climate change uncertainties."

The second problematic assumption of cost-benefit analysis is the practice of "discounting" the interests of future generations, which conceals important normative decisions. This discounting reflects the opportunity costs of the resources directed towards future generations that could have been invested in present opportunities. The strongest justification for discounting the value of future lives is that future health, and safety decision-making more generally... Their points are worth restating, however, for at least two reasons: first, because they apply with particular force in the climate change context and, second, because no matter how thoughtful and well-reasoned the critiques may have been when first offered, they seem not to have slowed the drive toward a "cost-benefit state."


177. See Kysar, Climate Change, supra note 166, at 558, 563–89.
178. Id. at 563–70.
179. See id. at 563. According to Kysar:

The CBA methodology presumes by its very nature the availability of good data and understanding regarding the magnitude of physical and economic effects of various climate change scenarios, as well as the probability that those scenarios will occur. Yet uncertainty pervades, we might even say defines, the climate change problem.

Id. (footnote omitted).

180. Id.; see also id. at 564 ("The uncertainties of climate change, moreover, go to our very ability to identify and understand categories of costs and benefits, not just our ability to measure them and to predict their likelihood.").
181. Id. at 564.
182. See id. at 578–85; GUTMANN & THOMPSON, supra note 20, at 156.
generations are actually better off if we account for the opportunity costs and “leave them with a resource base that has taken advantage of the best available investment opportunities.” The compensation for tomorrow’s postulated benefit and today’s lost opportunity is paid in future individuals’ lives, health and safety. The discounting process assumes equivalent social and environmental conditions (or their reliable prediction) between now and some time in the future, and it reduces human lives to a commensurable value, usually dollars. The fundamental limitation of the process, however, transcends questionable assumptions of static environmental, social, and technological conditions. The policy choice to sacrifice future lives is a normative decision and cost-benefit analysis cannot provide the philosophical, ethical, or political foundation to justify the choice.

The third critical limitation of cost-benefit analysis also emanates from its valuation methods. Cost-benefit analysis makes valuation assumptions that diminish the opportunity for deliberative debate about normative judgments that affect the identification of policy problems, and the postulation and selection of alternative solutions. The typical

183. Kysar, Climate Change, supra note 166, at 579. Gutmann and Thompson describe the reasons for discounting as follows:

Resources allocated to public policies that benefit future generations, such as pollution controls on carbon dioxide, must be diverted from other uses. To favor the future, we must forego present opportunities; the cost of doing so is measured by the rate of return that these resources would otherwise have earned.

GUTMANN & THOMPSON, supra note 20, at 157.

184. Kysar, Climate Change, supra note 166, at 580. The assumption justifies the discounted value of future lives by postulating the sacrifice of some future individuals to make the “investments that are supposed to inure to their benefit.” Id.

185. The process also assumes that those future generations will prefer cost-benefit analysis as the method of valuation for the problem-at-hand; i.e., those whose future lives are at risk, or their representative “experts,” would agree with the methodology selected to determine values.

186. See Richard Rorty, Philosophy and the Mirror of Nature 315 (1979). Regulatory agencies’ reliance upon cost-benefit analysis leans toward a form of “epistemological foundationalism” that wrestles with the classic philosophical problem “of how to reduce norms, rules and justifications to facts, generalizations, and explanations.” Id. at 180; see also Paul Feyerabend, Against Method 14-19 (1975) (arguing that Parmenides’ theory of the homogenous and unchanging One “illustrates a desire that has propelled Western sciences from their inception up to the present time—the desire to find a unity behind the many events that surround us. Today the unity sought is a theory rich enough to produce all the accepted facts and laws.”); Nancy Cartwright, The Dappled World: A Study of the Boundaries of Science 34 (1999) (describing “fundamentalists” as those who “want laws; they want true laws; but most of all, they want their favourite laws to be in place everywhere”). For a critique of J. B. Ruhl’s use of complexity theory to improve the socio-legal system as an example of a mistaken quest for a “uniﬁying theory” of law, see Jeffrey D. Rudd, J.B. Ruhl’s “Law and Society System” – Burying Norms and Democracy Under Complexity Theory’s Foundation, 29 WM. & MARY ENVTL. L. & POL’Y REV. 551 (2005).

187. Kysar, Climate Change, supra note 166, at 570-78. Discussing valuation in the context of climate change, Kysar notes that:
valuation approach identifies the efficient solution in terms of an individual's (or a firm's) willingness and ability to pay.\(^{188}\) The regulation of pollution is reconceived in terms of an individual's economic "right" to be free from pollution's harmful effects.\(^{189}\) Protection from pollution is contingent upon an individual's willingness and ability to pay for the right in a competitive market in which rights become goods.\(^{190}\)

Democratic forms of government challenge the willingness and ability to pay assumption by ensuring debate about the nature of the problem prior to evaluating alternatives or selecting the appropriate evaluative methodology.\(^{191}\) The politically privileged position of the economic efficiency paradigm excludes alternatives to the willingness to pay formulation of a problem's identification and analysis. The valuation methodology reconstructs the world from its metaphysical roots,

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CBA seeks to do more than simply generate a systematic list of the pros and cons of climate change or of efforts to mitigate or adapt to climate change. In addition, CBA seeks to provide a common metric for them, such that policymakers need only run a spreadsheet in order to determine the optimal policy intervention into the carbon economy. Obviously, then, the policymaker and her constituent public must have a great deal of faith in the valuation methodologies used in order for CBA to generate democratically acceptable results. For good reason, however, CBA practitioners have been unable to come up with widely agreeable methods for determining the monetary value of non-marketed goods such as the Great Barrier Reef, a child's life, or an endangered species.

Id. at 570–71; see also Douglas A. Kysar, Law, Environment, and Vision, 97 NW. U.L. REV. 675, 703 (2003) (arguing that environmental statutes “and their judicial interpretations, may be seen as reflecting a concern that ecological values do not receive due consideration under a strict cost-benefit analysis. To combat such potential shortchanging, legislators seek to remove certain environmental goods from utilitarian balancing altogether.”).

188. See Donohue, Law and Economics, supra note 172, at 906–08. Similarly, Kyser observes that cost-benefit analysis

assumes that the proper measure of a good's worth is the amount that individuals would be willing to pay in order to preserve the good in a well-functioning market. A different approach altogether would be to assume that valuations are more reliably captured through society's willingness to act collectively in order to preserve the threatened good, including, for instance, through protective legislation.

Kysar, Climate Change, supra note 166, at 577.

189. See Donohue, Law and Economics, supra note 172, at 907–08.

190. See id. at 907.

191. Cass Sunstein observes:

Under republican approaches to politics, laws must be supported by argument and reasons; they cannot simply be fought for or be the product of self-interested 'deals.' Private-regarding reasons are an insufficient basis for legislation. Political actors must justify their choices by appealing to a broader public good. This requirement has a disciplining effect on the sorts of measures that can be proposed and enacted. The requirement of appeal to public-regarding reasons may make it more likely that public-regarding legislation will actually be enacted. . . . The central idea here is that politics has a deliberative or transformative dimension. Its function is to select values, to implement 'preferences about preferences,' or to provide opportunities for preference formation rather than simply to implement existing desires.

demanding "cost" and "benefit" quantification as a condition of entry into the deliberative "game"; it screens from debate alternative ways of conceiving solutions to the problem of pollution. In contrast, political conditions favoring deliberation promote debate about law's social goals, subject the legitimacy of "efficiency" as a social goal to critical inquiry, and discuss whether cost-benefit analysis is the best (or only) method for attaining the deliberatively produced goal. In the deliberative scenario, cost-benefit valuation becomes a contingent effect of the policy choice process.

Environmental regulatory agencies' cost-benefit analysis mandate buries the uniquely human features that enable us and may even cause us to discuss with one another complicated social and political issues.

Discursive interactions should have the potential to shape and reshape our ideas, interests, and goals about the environment, and alter institutions in response to technological and political change. Cost-benefit analysis elides change by slicing time to create a static list of preferences amenable to calculation and analysis through categories favoring the status quo. The continuity of time and human ideas are lost to a process-based, quantitative methodology that denies democratic deliberation about government's responsibilities, alternative information acquisition and evaluation methods, and the relation between policy substance and institutional choice. The normative language of

192. For example, government may accept responsibility for discussing with the public various regulatory methods for evaluating and controlling risks associated with the third-party harms (externalities) Milton Friedman designated "neighborhood effects." See MILTON FRIEDMAN, CAPITALISM AND FREEDOM (1962).

193. See Sunstein, Beyond the Republican Revival, supra note 191, at 1544-45. Similarly, Kysar notes that

Each of the valuation approaches considered . . . assumes that the proper measure of a good's worth is the amount that individuals would be willing to pay in order to preserve the good in a well-functioning market. A different approach altogether would be to assume that valuations are more reliably captured through society's willingness to act collectively in order to preserve the threatened good, including, for instance, through protective legislation.

Kysar, Climate Change, supra note 166, at 577.

194. Kysar, Climate Change, supra note 166, at 585-89. As Kysar observes:

The deeper problem is that the neoclassical economic project, as exemplified by CBA, excludes from consideration the very feature that many philosophers identify as uniquely constitutive of humanity. That is, what distinguishes us from other animals and makes us distinctly human is not the ability to satisfy our goals, but the ability to reason and deliberate about the content of those goals. Indeed, the very project of life might be said to consist of shaping, revising, and reflecting on one's goals or, put differently, on what one wants to want. A final concern with CBA, then, is that the methodology seems ill-suited to grapple with this central project of life.

Id. at 586-87 (footnote omitted).

195. See id. at 587.

196. Gutmann and Thompson argue that utilitarianism's elements create problems for deliberative conditions of reciprocity, publicity, and accountability:
environmental law fades in the "scientific" light of economic discourse, a disciplinary power that was initially insulated and nurtured by the evolved process theory concepts of expertise and political independence.\footnote{In spite of scholars' forceful conceptual and practical criticisms of cost-benefit analysis,\footnotemark[21] two decades of rulemaking have strengthened and expanded the institutional architecture authorized by President Reagan's Executive Order. Agencies have turned increasingly to cost-benefit analysis and utility maximization to justify the exercise of their legislative power.\footnote{Gutmann} In this context, cost and benefit categories and their derivatives are superimposed upon cultures and geographies to map certain features of the environmental realm.\footnote{The ontological screen that filters and}

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\textit{First, the democratic promise of utilitarianism may encourage officials to take seriously the informed preferences of all citizens, but it offers a constricted view of accountability. Utilitarians must assume that citizens prefer only utilitarian methods for resolving moral conflicts within the democratic process—an assumption that they cannot consistently maintain. Second, the consequentialism that utilitarians urge broadens the perspective of citizens and officials, but at the same time distorts the meaning of some claims that citizens legitimately make, inducing utilitarians to retreat from the demands of the principles of publicity. Finally, utilitarianism promises to overcome incompatible ends, but its methods reintroduces moral conflicts as great as those it claims to resolve. To the extent that it does resolve conflicts, it is at the expense of the fundamental values of liberty and opportunity, which any reciprocal perspective must recognize.}

\textit{Gutmann} & \textit{Thompson, supra note 20, at 173.}


\textit{Modern society, then, from the nineteenth century up to our own day, has been characterized on the one hand, by a legislation, a discourse, an organization based on public right, whose principle of articulation is the social body and the delegative status of each citizen; and, on the other hand, by a closely linked grid of disciplinary coercions whose purpose is in fact to assure the cohesion of this same social body. Though a theory of right is a necessary companion to this grid, it cannot in any event provide the terms of its endorsement. Hence these two limits, a right of sovereignty and a mechanism of discipline, which define, I believe, the arena in which power is exercised.}

\textit{Id. at 106–07.}

\textit{198. See Kysar, supra note 166.}

\textit{199. See Shi Ling-Hsu, Fairness Versus Efficiency in Environment Law, 31 Ecology L.Q. 304, 309–10 (2004) (noting that efficiency, understood in terms of cost-benefit analysis, has become "an important driver" in environmental law and policy).}

\textit{200. Nation-states depend on various technologies and scientific methodologies to organize and control their human subjects. See James Scott, Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed (1998). Scott argues that nation-states engage in forms of simplification and manipulation of knowledge to control non-elites, because:}

\textit{Certain forms of knowledge and control require a narrowing of vision. The great advantage of such tunnel vision is that it brings into sharp focus certain limited aspects of an otherwise far more complex and unwieldy reality. This very simplification, in turn, makes the phenomena at the center of the field of vision more legible and hence}
interprets information for regulatory consumption reconstructs humans in terms of aggregated preferences, and constructs power relations among narrowly conceived economic actors as a function of property rights.\textsuperscript{201} Individual autonomy and identity are converted to an abstraction of \textit{homo economicus}; cultures and their histories disappear. Economic discourse disciplines the exercise of agencies’ rulemaking power by ignoring dynamic relations among human aesthetic, cultural, and historical experiences, and “bracketing”\textsuperscript{202} environmental issues to exclude valuations that reflect individual identities.

Thus, the privileged status of economic discourse constrains environmental regulatory agencies’ epistemic inquiries and evaluations. Agencies’ exercise of legislative power requires an analytic framework and associated criteria to determine the identification and classification of “knowledge” for rulemaking purposes; cost-benefit analysis satisfies this requirement through a process of translation and reconstruction. Cost-benefit analysis mechanically produces a network of apparent rational order that constructs and connects research methods, technologies and criteria for classifying information, and procedures for judging the goals and standards of investigation and research.\textsuperscript{203} Regulators’ reliance upon economic translation and reconstruction of ecological science for policymaking purposes may mark the evolutionary demise of environmental law’s scientific and normative force.\textsuperscript{204}

Economic discourse does have a place in environmental law, but it has transcended the democratic conditions designed to ensure the legitimacy of regulatory agencies’ reconstruction of environmental law through rulemaking. The ongoing debate among scholars about the political legitimacy and scientific credibility of cost-benefit analysis points more susceptible to careful measurement and calculation. Combined with similar observation, an overall, aggregate, synoptic view of a selective reality is achieved, making possible a high degree of schematic knowledge, control and manipulation.

\textit{Id.} at 11; see also BENEDICT ANDERSON, \textit{IMPLIED COMMUNITIES: REFLECTIONS ON THE ORIGIN AND SPREAD OF NATIONALISM} 163–64 (1990) (examining how “institutions of power . . . the census, the map and the museum together . . . profoundly shaped the way in which the colonial state imagined its dominion [over indigenous African cultures]—the nature of the human beings it ruled, the geography of its domain, and the legitimacy of its ancestry.”).

201. For a discussion of the ontological and practical implications of “naming” and classification, see \textit{IAN HACKING, HISTORICAL ONTOLOGY} 106 (2002) (arguing that the “claim of dynamic nominalism . . . [is] that a kind of person came into being at the same time as the kind itself was being invented [by bureaucrats]. In some cases, that is, our classifications and our classes conspire to emerge hand-in-hand, each egging the other on.”).


203. See FOUCAULT, \textit{supra} note 197, at 102.

204. For a comprehensive attempt to link ecology and economics through “ecosystem goods and services,” see Stephen Farber et al., \textit{Linking Ecology and Economics for Ecosystem Management}, \textit{56 BIOSCIENCE} 121 (2006).
to a deeper conflict centered on "truth."\textsuperscript{205} The separation of information streams and their content with economic methods ascribes "truth," understood in terms of power,\textsuperscript{206} to these kinds of knowledge production procedures and their classification of "costs" and "benefits." The subservience of environmental regulatory agencies to economic discourse creates a self-reproducing and self-reinforcing apparatus of truth.\textsuperscript{207} Truth is no longer a function of democratic debate about environmental issues; it is the institutionally insulated product of the process school's quest for efficiency.\textsuperscript{208}

CONCLUSION

The legal process school aimed to produce an institutional structure of law that reflected democratic principles of social justice and collective well-being. Administrative agencies were designed with the power to identify, analyze, and solve social problems that impeded cultural evolution and economic stability. James Landis sketched a stratified social world susceptible to careful intervention by apolitical experts who had the rare ability to perceive the proper relationship between general laws and their just execution. Legal process scholars championed the New Deal's proliferation of administrative agencies which combined the constitutional functions of the executive, legislative, and judicial branches of government. The institutional competence theme produced the central structural and substantive features of the New Deal's administrative agencies—political independence, technical expertise, and a quest for efficiency in government.

Environmental legislation born in the 1960s and 1970s authorized institutional change that empowered evolving social norms. Environmental degradation and threats to human health were at the heart of public criticism of unfettered economic growth and calls for legislative reform. Environmental law renegotiated the process school's substantive concern with efficiency to produce institutional shifts in authority designed to protect biodiversity, curtail pollution, and provide democratic conditions for law's implementation. Environmental regulatory agencies, however, retained the power infused into the twin pillars of institutional competence, and Supreme Court decisions invoked process school conceptions of expertise and independence to enhance

\textsuperscript{205} "Truth’ is to be understood as a system of ordered procedures for the production, regulation, distribution, circulation and operation of statements.” \textit{FOUCAULT, supra} note 197, at 133.

\textsuperscript{206} \textit{See id.}

\textsuperscript{207} \textit{Id.} ("Truth is linked in a circular relation with systems of power which produce and sustain it, and to effects of power which it induces and which extend it. A 'regime' of truth.")

\textsuperscript{208} \textit{See id.} ("The problem is not changing people's consciousness—or what's in their heads—but the political, economic, institutional regime of the production of truth.").
agencies' legislative authority over environmental law. The Reagan administration renewed the quest for regulatory efficiency through institutional changes driven by cost-benefit analysis, invigorating the law and economics movement and challenging the normative force of environmental law.

Environmental regulatory agencies have retreated from the normative standards codified by environmental legislation to the "scientific" regulatory turf of economic efficiency. The institutional competence theme's substantive and structural foundations evolved to enable expansive regulatory agency power that eventually supported the economic domination of environmental law. Environmental law could be near the end of a complete institutional transformation into an instrumental, economic enterprise. The resurgence of environmental law's normative mandates requires a fundamental shift in the institutional authority that protects agencies' regulatory decisions from significant democratic challenge. A renaissance in environmental law hinges on finishing the job the courts and Congress began in the 1960s by rejuvenating the democratic features of classical republican government.

In the 1960s and 1970s, Congress intervened in the market order with legislation that enabled individuals to act collectively on environmental issues affecting society's future. Environmental law supported the resurgence of a broader democratic power to express political dissent through civic associations. Innovative civil actions aimed to curtail ecological destruction caused by the exploitation of natural resources. Congress should reorganize the contemporary institutional

209. Administrative agencies' accretion of legislative power has caused the deterioration of classical republican conditions supporting deliberation about the public good. The opportunity to deliberate about political affairs presupposes government's commitment to a legal and political order that favors other features of classical republicanism: civic virtue, equality, and the belief that free discussion of political issues will produce "substantively right answers." Sunstein, Beyond Republicanism, supra note 20, at 1555. Individuals' "civic virtue" is characterized by their devotion to the public good through political participation grounded in relations of equality. See J.G.A. Pocock, Virtue, Commerce, and History: Essays on Political Thought and History, Chiefly in the Eighteenth Century 48 (1985) (describing the rise of eighteenth century commercialism and a countervailing social resurgence in the "ideal of the citizen, virtuous in his devotion to the public good and his engagement in relations of equality and ruling-and-being-ruled"). Civic virtue also appears in individuals' strong suspicion about distributions of power enabling corruption in the political process. Id. The restoration of democracy in the environmental regulatory process requires that Congress reduce agencies' legislative power and increase the oversight of their rulemaking decisions.

210. Samuel Hays argues that in the Environmental Era's early years, most courts accepted the notion that environmental affairs involved "some new infringement of personal liberties" justifying restraints on entities harming the environment. See Hays, supra note 2, at 479.

211. See id. at 479-80 ("New circumstances, new social values, led to the infusion of traditional doctrines with new substance."). It may not be possible at this point in environmental history "to pinpoint the process by which such disputes and judicial responses worked their way
landscape to rein in environmental agencies' legislative power. The new political order should revitalize environmental law's ethical foundations, and enhance its long-term political status, by invigorating the freedom to participate in the interpretation, implementation and reconsideration of environmental policy.\textsuperscript{212}

Congress should reverse the \textit{Chadha-Chevron} expansion of agency authority by passing environmental legislation that constrains agency autonomy. Congress may restrict agencies' power on a statute-by-statute basis or with legislation that broadly targets agencies' rulemaking authority. In addition to explicit reductions in agencies' lawmaking capacity, Congress should investigate the executive's environmental policy agenda by questioning agency assumptions about the need for new rules and investigating agency plans to engage scientific experts during the rulemaking process.\textsuperscript{213} Enhanced congressional oversight will create an important constitutional check on the executive's capacity to legislate through the back door and curry favor to special interests in only nominally public forums.\textsuperscript{214} Democratic reforms should improve Congress' access to information about environmental regulation and raise public awareness of agency functions and decisions.\textsuperscript{215}

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\textsuperscript{212} Individual freedom is a socially constructed, moral category of experience contingent on the distribution of political power, the availability of information, and the opportunity to associate with others and engage in debate about the merits of policy proposals. See Frank Knight, \textit{Freedom as Fact and Freedom as Criterion}, 39 INT'L J. ETHICS 129–47 (1929), reprinted in FRANK KNIGHT, FREEDOM AND REFORM: ESSAYS IN ECONOMICS AND SOCIAL PHILOSOPHY 3, 19 (1982). Political conditions favoring the "free discussion" of environmental policy aim to produce the consent and agreement necessary for legitimate environmental regulations. See Frank Knight, \textit{The Meaning of Democracy: Its Politico-Economic Structure and Ideals}, 10 J. NEGRO EDUC. 331–32 (1941), reprinted in KNIGHT, FREEDOM AND REFORM, supra, at 219, 229.

\textsuperscript{213} In many instances, such congressional oversight will require only cursory review by congressional subcommittees of agencies' rulemaking proposals.

\textsuperscript{214} See Rudd, \textit{Restructuring America's Government}, supra note 158, at 464–65 (arguing that Congress should comprehensively investigate environmental rulemaking to determine whether the EPA's mercury emissions rulemaking process was an isolated incident of corruption). Rudd also argues that Congress should increase the range and severity of criminal penalties associated with unethical rulemaking practices. \textit{Id}.

\textsuperscript{215} The author acknowledges that other changes in Congress are necessary to restore conditions of deliberative democracy. For example, Congress should act to restrain the "earmarking" and other congressional budgetary processes that threaten the democratic foundation of environmental law and policy (and the Republic). Richard Lazarus persuasively argues that Congress should limit the use of environmental riders in appropriations legislation, eliminate the discrepancy between authorization and appropriations committees in their hearings on proposed legislation, and limit the enactment of omnibus legislation absent an opportunity for its members to discover and understand a bill's complete contents. See Richard Lazarus, \textit{Congressional Descent: The Demise of Deliberative Democracy in Environmental Law}, 94 GEO. L.J. 619, 678–79 (2006). The prospects for a reasonably efficient and reliable administrative framework vanish through Congress's unpredictable budgetary changes to agencies' natural resource management plans. The agencies' reasonable implementation of environmental law also requires Congress to eliminate direct and indirect subsidies to timber
Congress should also enhance agency and non-agency experts’ participation in the environmental lawmaking process. Deliberative debate in complex societies necessarily entails a conditional commitment to rely upon experts for technical information. The political commitment to a “division of epistemic labor”\textsuperscript{216} is contingent upon processes that solve translation problems among experts and non-experts, establish experts’ credibility, and permit debate to define what counts as knowledge.\textsuperscript{217} The satisfaction of democratic principles of accountability, reciprocity, and publicity require an open forum in which experts’ and policymakers’ views may be transformed through constructive criticism.\textsuperscript{218} Agency administrators’ claims of technical expertise to bolster their policy positions preclude accountability by limiting the introduction of values and perspectives from outside the insulated political order. The restructuring process should promote the visible, public involvement of agency scientists in the rulemaking process and encourage collaboration with non-agency experts in the public and private sectors.\textsuperscript{219}

and mining companies, and other resources extractors operating on public lands. In America’s liberal democracy, political and economic redistributions should be justified by long-term social concerns unaccounted for by market principles, not public land subsidies that support non-competitive enterprises.


\textsuperscript{217} See id. at 598–602.

\textsuperscript{218} According to Amy Gutmann and Dennis Thompson,

\begin{quote} [c]itizens are justified in relying on experts if they describe the basis for their conclusions in ways that citizens can understand; and if the citizens have some independent basis for believing the experts to be trustworthy (such as a past record of reliable judgments, or a decision-making structure that contains checks and balances by experts who have reason to exercise critical scrutiny over one another).\end{quote}

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\textsuperscript{219} Policymakers’ acceptance of the need to address scientific and other “uncertainties” head-on through investigation, explanation, and clarification is far more democratic than the insular exploitation of uncertainty to achieve political ends. Policymakers should encourage rather than sequester the participation of scientific communities in the political deliberations. Scientific communities aim to produce reliable knowledge through a deliberative process ideally reflecting conditions of reciprocity, publicity, and accountability. Paul Stern observes that:

\begin{quote} [S]cience makes progress by deliberating about the strength of evidence supporting theoretical claims, the quality of reasoning and methodological adequacy of methods represented in scientific manuscript, the importance and conclusiveness of findings, the likelihood of advancing knowledge by conducting one or another line of research, the implications of new findings for the strength of support for a theory, and many other matters. It is deliberation among the members of scientific communities that ultimately determines their basic choices—about how best to build knowledge, how to interpret models of empirical results, and which knowledge claims to confirm.\end{quote}

\textit{See} Paul C. Stern, Deliberative Methods for Understanding Environmental Systems, 55 BIOSCIENCE 976, 979 (2005). Knowledge production is a communal process contingent upon institutions that structure scientists’ interactions. \textit{See id.} The process depends upon the discussion, critical examination, and evaluation of scientists’ assumptions, data and claims. See Doremus, \textit{Why Better Science Isn’t Always Better Policy, supra} note 116, at 1062. The legitimacy of the evaluative process is contingent upon (1) public access to the articulated
Although changes in congressional oversight will help limit agencies' legislative power, the restoration of the judiciary's constitutional authority over the rulemaking process is essential to create democratic conditions for public debate about environmental policy. Congress should create specially designated environmental district courts with original jurisdiction to review agencies' rulemaking decisions. Environmental courts will help circumscribe administrators' authority to make and interpret rules by requiring agencies to demonstrate publicly the reasonableness of their discretionary proposals. The designation of environmental courts will enhance the legal, political, and social stature of environmental law, and produce a body of common law that reflects and responds to regional issues. Over time, the strengthened adjudicative process should foster collaborations that reduce public and private costs of information and influence the political process by supplying administrators with constructive policy innovations. The specially designated courts will serve as a locus for the exchange of information and ideas critical for the reasonable adaptation of environmental law and policy.

background assumptions and other material supporting the knowledge claims and (2) the social process of criticism and revision necessary to address community concerns. HELEN E. LONGINO, SCIENCE AS SOCIAL KNOWLEDGE: VALUES AND OBJECTIVITY IN SCIENTIFIC INQUIRY 72-80 (1990). According to Longino, "[w]hile the possibility of criticism does not totally eliminate subjective preference either from an individual's or from a community's practice of science, it does provide a means for checking its influence in the formation of 'scientific knowledge.'" Id. at 73.

220. The courts should be located regionally to complement existing judicial arrangements, and the regional divisions in environmental agencies such as the EPA, the Forest Service, and the Bureau of Land Management. The courts should also preside over the prosecution of environmental crimes.

221. A new judicial review process will generate a more visible comparison of the law-science-policy issues that characterize particular regions, and courts' dissatisfaction with agency reasoning will justify congressional authorization of funds to study scientific issues critical to the resolution of environmental policy conflicts. Regulatory agencies struggle to develop and evaluate scientific information critical for regulatory decisions, compromising democratic discussion of environmental regulation; agencies should be adequately equipped to study environmental phenomena that drive their regulatory decisions. Congress should authorize a centralized research and development organization patterned after the Defense Advanced Research Projects Agency (DARPA) to develop, integrate, and disseminate scientific information critical for environmental regulatory decisions. The democratic capacity of the legislative and regulatory process suffers from a lack of timely, comprehensive information, and requires an institutional mechanism enabling administrators to adapt to changing conditions by assuring ongoing research into ecological phenomena and innovative technologies.

222. In this context, "locus" should be understood literally and figuratively. An "environmental court" will be a vibrant place where judges, lawyers, court clerks, law enforcement officials, agency representatives, and citizens "cross paths" on a daily basis. The community that springs up around courthouses includes pockets of activity that extend substantive discussions of courthouse issues. The locus will also function as nexus for the remote exchange of general and technical information related to environmental issues and the evolution of environmental law and policy.
Environmental agencies’ broad legislative power has undermined the democratic reforms emerging through environmental legislation during the 1960s and 1970s. Process scholars’ idealistic vision for administrative agencies, grounded in New Deal era conceptions of expertise, political independence, and efficiency, unexpectedly conflicted with environmental law’s restraints on agency authority. Congressional expansion of the constitutional forums for the political debate of environmental issues and the adjudicative resolution of conflicts reduces agency authority by increasing transparency and accountability. Legislative and judicial reforms should improve agencies’ credible assessment of scientific issues, broaden access to the political and adjudicative processes, and promote the public expression of policy dissent within agencies. The impact of the institutional competence theme on the evolution of environmental law should remind us, however, that social policies and the institutions designed to achieve policy objectives should be revisited periodically to assess the evolving distribution of institutional authority.