A PLACE FOR AGENCY EXPERTISE: RECONCILING AGENCY EXPERTISE WITH PRESIDENTIAL POWER

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This Essay uses Peter Strauss's work as a springboard to explore the particularly precarious position of the agencies charged with promulgating science-intensive rules ("expert agencies") with respect to presidential oversight. Over the last three decades, agencies promulgating science-intensive rules have worked to enhance the accountability and scientific credibility of their rules by developing elaborate procedures for ensuring both vigorous scientific input and public oversight. They have accomplished this by deploying multiple rounds of public comment on their science-policy choices, soliciting rigorous scientific peer review, inviting dissent, and explaining methods and choices. Yet, at the same time that these expert agencies work to establish more rigorous decision processes grounded in both science and public review, the White House, primarily through its Office of Information and Regulatory Affairs (OIRA), appears to be undermining the agencies' efforts through its largely nontransparent oversight process. In a number of rule settings, OIRA suggests dozens of intricate changes outside of the agencies' rigorous deliberative processes that, while presumably intended to advance larger policy preferences, also involve changes to the agencies' supporting, technical explanations. Even more problematic, most and sometimes all of these changes are made invisibly, often without leaving fingerprints and almost always without providing any supporting explanation or evidence.

While in theory the expert agency and White House review should make a mutually beneficial team—each bringing important, but differing, perspectives to bear on science-intensive rules—in practice the White House's secretive interventions threaten to undermine the legitimacy of both institutional processes simultaneously. The end result is both a weakened expert agency model and a more institutionally

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tenuous presidential review.	The Essay	concludes	with a	a proposal	for
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INTRODUCTION

In a series of articles that are stunningly prescient, Peter Strauss underscores the challenges involved in locating the place of agencies in our separation of powers system of government.¹ His work illuminates the importance of treating agencies as separate from the constitutional branches, while ensuring that they are still subject to meaningful mechanisms of control. In this way, administrative agencies operate as the "Fourth Branch," providing important, deliberatively-based policies that stand out from the work of the political branches, yet remaining inferior to them.

Professor Strauss continues this institutional mapping in his more recent work, paying particular attention to two growing trends in the administrative state that complicate the placement of agencies in our separation of powers government. The first is the accelerating number of technical and scientifically complex social problems that necessitate significant expertise and technical analysis from agencies.² The second is the growing power of the White House, and particularly the Office of Information and Regulatory Affairs (OIRA), to oversee the work of the agencies.³ Each trend presents its own challenges, but when joined together they pose formidable barriers to institutional design, as each tends to undermine the legitimacy of the other. In Professor Strauss's words, "[t]he development of aggressively centralized presidential over-

^{1.} See, e.g., Peter L. Strauss, On Capturing the Possible Significance of Institutional Design and Ethos, Admin. L. Rev. (Special Editio) 259, 268–69 (2009) [hereinafter Strauss, Institutional Design and Ethos] ("Judicial review of administrative action is front and center; how a given agency is integrated into government as a whole—and what constraints or controls might emerge from those relationships—is much less central a concern."); Peter L. Strauss, The Place of Agencies in Government: Separation of Powers and the Fourth Branch, 84 Colum. L. Rev. 573, 578–80 (1984) [hereinafter Strauss, The Place of Agencies] (noting incongruity of administrative agency function and "rigid separation-of-powers compartmentalization of governmental functions").

^{2.} See, e.g., Peter L. Strauss, From Expertise to Politics: The Transformation of American Rulemaking, 31 Wake Forest L. Rev. 745, 773–74 (1996) [hereinafter Strauss, From Expertise to Politics] (distinguishing highly technical and science-intensive rules from more common-sense rules regulating "berry baskets"); Peter L. Strauss, Possible Controls over the Bending of Regulatory Science, *in* Values in Global Administrative Law 125, 126–27 (Gordon Anthony et al. eds., 2011) [hereinafter Strauss, Possible Controls] (describing contexts in which agency regulation depends on "sound science").

^{3.} See, e.g., Peter L. Strauss, The Administrative Conference and the Political Thumb, 83 Geo. Wash. L. Rev. (forthcoming 2015) (manuscript at 8–9) (on file with the *Columbia Law Review*) (criticizing Administrative Conference for focusing its research largely at agency level and not at level of Presidential oversight, which may be much more important influence on agency action); see also Peter L. Strauss, Foreword: Overseer, or "The Decider"? The President in Administrative Law, 75 Geo. Wash. L. Rev. 696, 719 (2007) [hereinafter Strauss, Overseer or Decider] (describing "increasing reach" of various assertions of presidential control, including OIRA review); Peter L. Strauss, Presidential Rulemaking, 72 Chi.-Kent L. Rev. 965, 967–69 (1997) [hereinafter Strauss, Presidential Rulemaking] (noting recent Presidents' increasing interest in particular outcomes of agency rulemaking).

sight, even control, of executive agency rulemaking has given... new prominence" to the clash between "technocratic and political views of agency action."⁴

This Essay builds on Professor Strauss's work at the intersection of agency expertise and political oversight. Foremost among the many unresolved institutional puzzles is ensuring the scientific competence of agencies while at the same time setting up mechanisms to provide for important sources of political input.⁵ Since scientific rules are particularly susceptible to providing cover for backroom deals that can be hidden in technical terminology,⁶ establishing processes that protect the agencies' scientifically based analyses from ends-oriented, political manipulations is vital to preserve the integrity and value of agency expertise.

Yet despite the critical importance of ensuring the legitimacy of agency expertise, a growing body of evidence reveals that the White House may regularly (and surreptitiously) suggest changes to the technical details of agency analyses.⁷ This practice of unrestricted and often unrecorded interventions into the technical minutia of agency rules by the White House leads to an institutional fork in the road.⁸ How should one think about agency expertise if an agency's intricate science-policy analysis can be altered in secret by the Chief Executive? Indeed, what is the role of expert science advisory boards if changes can be made after their review, at the last minute, by political staff without explanation?⁹ Either all features of agency decisions, including the underlying scientific analyses, will be up for grabs in backroom political deliberations, or we

^{4.} Peter L. Strauss, Legislation that Isn't—Attending to Rulemaking's "Democracy Deficit," 98 Calif. L. Rev. 1351, 1359 (2010).

^{5.} See, e.g., Strauss, From Expertise to Politics, supra note 2, at 774–75 (arguing "simple notice and comment rulemaking is not adequate" for science-based rules with large-scale consequences).

^{6.} See, e.g., Wendy E. Wagner, The Science Charade in Toxic Risk Regulation, 95 Colum. L. Rev. 1613, 1650–51 (1995) [hereinafter Wagner, Science Charade] (arguing agencies have "multiple political, legal, and institutional incentives to cloak policy judgments in the garb of science").

^{7.} See infra section II.B (recounting diverse evidence of OIRA's engagement in technical details of agency science-intensive rules).

^{8.} See generally Daniel A. Farber & Anne Joseph O'Connell, The Lost World of Administrative Law, 92 Tex. L. Rev. 1137, 1140–41 (2014) (arguing administrative practice today departs significantly from view of administrative process embodied in APA and suggesting reforms are needed to bring two together); Nina A. Mendelson, Disclosing "Political" Oversight of Agency Decision Making, 108 Mich. L. Rev. 1127, 1157 (2010) (making this argument and finding little transparency in OIRA's suggested policy changes to agency rules).

^{9.} Even when OIRA's changes simply reflect the unidentified views of other agency-experts, as Professor Sunstein maintains, see Cass R. Sunstein, The Office of Information and Regulatory Affairs: Myths and Realities, 126 Harv. L. Rev. 1838, 1840 (2013) [hereinafter Sunstein, Myths and Realities], the collision is still problematic since this interagency—White House involvement occurs outside of an agency's science-intensive process.

must find a new institutional equilibrium that ensures a place for agency experts while forcing agencies to reckon with the larger policy implications of their rules, including presidential preferences.

With Professor Strauss's work as a guide, this Essay explores the current political pressures on agency expertise, with a particular focus on one of the best-studied agencies, the Environmental Protection Agency (EPA), and offers a preliminary reformed institutional design that finds a distinct place for agency expertise within the larger political system. Part I of the Essay details the history of agency-expert decisionmaking. Over the last thirty years, EPA and a number of other agencies tasked with science-intensive mandates have become increasingly innovative in developing rigorous decision processes that make use of the best available scientific research. Part II provides a similar historical account, this time of the very different track taken by the President in overseeing executive agencies, such as EPA, that promulgate science-intensive rules. In this oversight role, some Presidents regularly tinker with the technical details of the agencies' rules. Instead of becoming increasingly formal and transparent like the agency processes, however, this presidential influence remains informal and invisible. Part III discusses a series of scientific, legal, and political problems associated with the current institutional arrangement. In Part IV, Professor Strauss's work is used to guide the redesign of the administrative decisionmaking process in ways that not only preserve a role for expertise in the Fourth Branch, but lead to even more vigorous public and expert deliberations over science-intensive regulations. EPA again offers a model, this time through its novel decision process that manages to insulate the scientific staff at discrete points in the process, while offering more meaningful opportunities for political and policy engagement at other stages.

I. THE AGENCY-AS-EXPERT

Although the hypertechnicality of agency rules is a more recent phenomenon,¹⁰ the basic concept that the agencies should preside over specialized information is hard-wired into the design of the administrative state.¹¹ This Part considers the agency-as-expert model as it has evolved over the last hundred years. Section I.A describes the initial model from the early 1990s, which operated like a type of insulated "geek squad." Section I.B then discusses the current formulation, in which the agency expert is generally held accountable through a highly proced-

^{10.} See, e.g., Thomas O. McGarity, Some Thoughts on "Deossifying" the Rulemaking Process, 41 Duke L.J. 1385, 1387 (1992) (noticing upward trajectory in complexity and technical detail in Federal Register preambles).

^{11.} See, e.g., Mark Seidenfeld, The Role of Politics in a Deliberative Model of the Administrative State, 81 Geo. Wash. L. Rev. 1397, 1406 (2013) (recounting scholarly consensus that "technical knowledge and experience were relevant to identifying and understanding the consequences of agency policymaking," although expertise is not sole ingredient to agency rulemaking).

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uralized decisionmaking process that includes public and peer review of the underlying scientific and policy judgments. Part I closes by exploring ways that this increasingly rigorous approach may become less accessible to the public and other nonscientists precisely because of its staged, expert-based decision process.

The types of rules considered here—technical and science-intensive rules—are effectively interchangeable. For the purposes of this Essay, technical rules are informed by computational models and/or engineering expertise from the natural and engineering sciences, while science-intensive rules are grounded in part on scientific testing and research. Both types of rules involve significant policy choices at the framing, analysis, and modeling alternatives stages, but their scientific-technical details can obscure these choices—by accident and by intention. ¹²

A. A Historical Perspective on the Agency-as-Expert in the United States

The conception of the agency-as-expert is one of the cornerstones of the U.S. administrative process, but as Professor Strauss notes in his writings, what that role actually consists of has changed and evolved over time.¹³ In the early part of the last century, agencies in the United States were generally viewed as neutral experts who would resolve the nation's complex socio-political challenges.¹⁴ This important role of agency-as-expert coincided with the inherently optimistic belief that there were "objectively correct solution[s] to the country's problems."¹⁵ Experts would come from top universities and other prominent institutions to serve their country in the quest for empirically verifiable answers.

By the mid-1940s, the culture of deference to agencies began to change. The publicized inefficiency and incompetence of various New Deal agencies caused the public and Congress to become increasingly disenchanted with the "geek squad" model of agency-as-expert, a disillusionment that catalyzed the passage of the Administrative Procedure Act

^{12.} See, e.g., Wagner, Science Charade, supra note 6, at 1618–28 (describing mix of science and policy in science-intensive rules).

^{13.} See generally Strauss, From Expertise to Politics, supra note 2, at 750–72 (tracing changes in political and judicial oversight of agencies over time from 1946 to mid-1990s).

^{14.} Cf. Jerry L. Mashaw, Creating the Administrative Constitution: The Lost One Hundred Years of American Administrative Law 195–96 (2012) (describing expert agency overseeing steamboat safety in 1952). See generally Reuel E. Schiller, The Era of Deference: Courts, Expertise, and the Emergence of New Deal Administrative Law, 106 Mich. L. Rev. 399, 413–18 (2007) [hereinafter Schiller, Era of Deference] (describing perception of agencies as neutral experts and recounting influential views of Frankfurter and Landis in believing "government without expertise was a recipe for demagoguery").

^{15.} Schiller, Era of Deference, supra note 14, at 417; see also H. George Frederickson et al., The Public Administration Theory Primer 44–45 (2d ed. 2012) (describing commitment to efficiency and scientific approaches in these early conceptions of administrative governance).

(APA). ¹⁶ In fact, in the APA, not only did Congress mandate notice and comment of agency rules, it also employed the courts to provide a greater oversight role in policing the outer bounds of agency discretion. ¹⁷

Skepticism about the agency-as-expert only grew more intense with the rise of social regulation in the 1960s and 1970s. ¹⁸ During that time, Congress found itself dependent on the agencies to set standards and make hundreds of micro, technical decisions implementing the new wave of social legislation. Unfortunately, this increased responsibility coincided with worries that, in their exercise of technical discretion, some agencies had been "captured" by the parties that they regulated, raising the possibility that Congress's commands were not being carried out to fruition. ¹⁹

By the end of the twentieth century, the New Deal view of the agency-as-expert—providing neutral, sociotechnical expertise to resolve society's problems—was all but dead, and the agencies' authoritative role was in a state of crisis. Two added developments expedited the final demise of the New Deal agency-as-expert.

First, it became increasingly apparent—through a variety of sources—that the science-intensive problems faced by federal agencies were even more policy-laden than initially believed and that, consequently, the agencies enjoyed substantial policymaking power in selecting the best alternative from among a wide range of choices.²⁰ In the case of health protection, this discretionary space was especially significant due to the large gaps in the relevant scientific literature. As one set of risk analysts put it, the uncertainties remaining in scientifically determining the precise level at which exposed humans will experience a one-in-one-million risk of cancer from drinking Trichloroethylene (TCE)-contaminated tap water equate to the difference between knowing whether you have enough

^{16.} See, e.g., Reuel E. Schiller, Reining in the Administrative State: World War II and the Decline of Expert Administration, *in* Total War and the Law: The American Home Front in World War II, at 185, 191 (Daniel R. Ernst & Victor Jew eds., 2002) (describing this development).

^{17.} See 5 U.S.C. §§ 553(c), 706(2)(a) (2012) (requiring notice and comment on informal rulemakings and providing opportunity for judicial review of final agency action).

^{18.} See, e.g., Marc Allen Eisner et al., Contemporary Regulatory Policy 37 (2d ed. 2006) (describing "rapid introduction of social regulation" and "creation of new agencies" in 1960s and 1970s); Strauss, From Expertise to Politics, supra note 2, at 755–56 (noting "general social trend that came to view agencies less as apolitical 'experts' administering a strictly rational process, and more as political bodies making choices among alternatives in response to social needs and political inputs").

^{19.} See, e.g., Ernesto Dal Bó, Regulatory Capture: A Review, 22 Oxford Rev. Econ. Pol'y 203, 203–04 (2006) (summarizing literature on regulatory capture).

^{20.} See, e.g., Comm. on Risk Assessment of Hazardous Air Pollutants, Nat'l Research Council, Science and Judgment in Risk Assessment 86 (1994) [hereinafter NRC, Science and Judgment] (explaining uncertainties result from inability to test key inputs to scientific models and from gaps in knowledge that make it impossible to know which of several competing models is correct).

money to buy a cup of coffee or pay off the national debt;²¹ consistent with the wide range of scientific outcomes, the economic implications of alternative, plausible drinking water standards are also bound to vary dramatically.

Second and relatedly, the agencies came under fierce attack, particularly by regulated parties who faced expensive health and environmental regulation as the agencies' policymaking discretion became evident. Among the tactics of the industry's opposition were the allegations that these runaway agencies were using bad science and were anything but competent experts.²² Indeed, the fuzzy line between science and policy made it even easier to allege agency misconduct. Those opposing a regulation merely had to point out ways in which an agency's decision deviated from some other scientifically respectable outcome without acknowledging that the difference between the two results was based on different policy assumptions and not on differences in scientific judgment.²³

B. The Agency-as-Expert Revisited

In response to the growing democratic challenges afflicting the administrative state, agencies found themselves on the defensive with their authoritative role as experts hanging in the balance. Rather than surrender, the agencies—with reinforcement from Congress, the courts, and the President—developed a new image that retained their primacy as the nation's experts. The model that emerged from this effort is explored in the following subsection.

1. The Twenty-First Century Model of the Agency-as-Expert. — The twenty-first century agency-as-expert abandons any pretense of the New Dealer's insulated, neutral expert, and instead it is distinguished by a highly proceduralized approach to decisionmaking, reinforced by a professionalized civil service.²⁴ In this way, multiple, overlapping public and

^{21.} See C. Richard Cothern et al., Estimating Risk to Human Health, 20 Envtl. Sci. & Tech. 111, 115 (1986) (providing examples of significant uncertainties embedded in typical risk assessments of toxic substances).

^{22.} See, e.g., David Michaels & Celeste Monforton, Manufacturing Uncertainty: Contested Science and the Protection of the Public's Health and Environment, 95 Am. J. Pub. Health S39, S41–43 (2005) (providing examples of industry's strategy of contesting quality of agency science to undermine and delay agency protective regulations); Chris Mooney, Beware 'Sound Science.' It's Doublespeak for Trouble, Wash. Post (Feb. 29, 2004), http://www.washingtonpost.com/archive/opinions/2004/02/29/beware-sound-science-its-doublespeak-for-trouble/8e4aaeed-f918-4cc1-8508-3e38b3cfb613/ [http://perma.cc/NR5M-7V6T] (same).

^{23.} See, e.g., Alan Charles Raul & Julie Zampa Dwyer, "Regulatory *Daubert*": A Proposal to Enhance Judicial Review of Agency Science by Incorporating *Daubert* Principles into Administrative Law, Law and Contemp. Probs., Autumn 2003, at 7, 9–13, 19–20 (attempting to pinpoint problems with quality of agency science by providing scattered examples that tend to fall squarely on science-policy line).

^{24.} See, e.g., Rena Steinzor & Sidney Shapiro, The People's Agents and the Battle to Protect the American Public: Special Interests, Government, and Threats to Health, Safety, and the Environment 197–99 (2010) (emphasizing importance of staffing competent agencies with

scientific processes constrain the agencies' discretion and improve the rigor and transparency of their decisions and underlying analyses. The heightened transparency of this process also enhances agency accountability and legitimacy. In fact, this deliberative approach to agency expertise finds roots in the philosophy of science, where a founding precept is that all science should be subject to rigorous questioning and constant, skeptical double-checking.²⁵

There are several procedural innovations in particular that characterize the contemporary model of the agency-as-expert in the United States. First and foremost, many agencies have instituted formal and often extensive expert peer review processes to solicit feedback on their science-intensive analyses.²⁶ Sometimes coaxed by the White House²⁷ or

professionals dedicated to public service and arguing "professional credentials" of agency political appointees have "steadily improved"); Sidney Shapiro, Elizabeth Fisher & Wendy Wagner, The Enlightenment of Administrative Law: Looking Inside the Agency for Legitimacy, 47 Wake Forest L. Rev. 463, 489–91 (2012) (describing combined discursive and expert features of administrative expertise as fitting within larger, "inside-out" model of professional administration). The procedures used in science-intensive rules are itemized in a recent ACUS report on agency integration of science. See Wendy Wagner, Science in Regulation: A Study of Agency Decisionmaking Approaches 29–75 (2013), https://www.acus.gov/sites/default/files/documents/Science%20in%20Regulation_Final%20Report_2_18_13_0.pdf [http://perma.cc/79KH-K5Z3] [hereinafter Wagner, ACUS Report] (examining EPA, Fish and Wildlife Service (FWS), and Nuclear Regulatory Commission's integration of science in several distinct regulatory programs).

25. See, e.g., Helen E. Longino, Science as Social Knowledge: Values and Objectivity in Scientific Inquiry 80 (1990) (underscoring role of critical and diverse scrutiny in science).

26. See, e.g., Wagner, ACUS Report, supra note 24, at 113–15 (discussing prevalence of peer review in multiple agency processes while acknowledging some imperfections in agency records with respect to making use of expert peer review). The important role of peer review in agencies' science-intensive rules has been a continuing theme in the reform literature. See, e.g., Bipartisan Policy Ctr., Improving the Use of Science in Regulatory Policy 17 (2009), http://bipartisanpolicy.org/wp-content/uploads/sites/default/files/BPC%20Science%20 Report%20fnl.pdf [http://perma.cc/V8P7-B3L6] (recommending peer review be performed "to the maximum extent possible"). See generally J.B. Ruhl & James Salzman, In Defense of Regulatory Peer Review, 84 Wash. U. L. Rev. 1, 10 (2006) (arguing regulatory peer review is important to show "where an agency's use of science in support of a proposed decision ends and where its use of professional judgment and normative policy choices begins").

27. See Presidential Memorandum on Scientific Integrity, 74 Fed. Reg. 10,671, 10,671 (Mar. 11, 2009) (directing agencies to employ high scientific standard in their work); Memorandum from Joshua B. Bolten, Dir., Office of Mgmt. & Budget, on Issuance of OMB's "Final Information Quality Bulletin for Peer Review" to Heads of Dep'ts & Agencies 2–3 (Dec. 16, 2004), https://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05 03.pdf [http://perma.cc/2J5S-L8JG] (requiring peer review for agencies' significant scientific analyses); Memorandum from John P. Holdren, Dir., Office of Sci. & Tech. Policy, on Scientific Integrity, to Heads of Exec. Dep'ts & Agencies 1–2 (Dec. 17, 2010), http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf [http://perma.cc/B 6T9-HCEU] [hereinafter Holdren Memorandum] (requiring agencies to develop policies to ensure "data and research used to support policy decisions undergo independent peer review by qualified experts, where feasible and appropriate, and consistent with law").

Congress²⁸ and sometimes of their own volition,²⁹ the last four decades have seen agencies subject their decisions not only to formal layers of internal staff peer review, but to external-peer review as well.

Second, in this newly proceduralized agency-as-expert model, judicial review has emerged as an important disciplining force. Courts require agencies to provide clear and well-supported explanations for their intertwined scientific and policy choices.³⁰ Thus, much like expert peer review, the courts scrutinize agency decisions—both technical and political—and demand that agencies explain their analysis at each step along the process.³¹

Third and most recently, at least a few agencies have developed highly structured analytical processes designed to ensure that both the final decisions, and each stage in the process that leads up to them, are transparent and subject to expert and public scrutiny.³² While none of these analytical steps typically involve *only* science or *only* policy, by explaining the choices at each step in the process—how the agency articulated the problem, evaluated the literature, applied the literature to the problem at hand with models, and identified the range of options—the messy merging of science and policy has become more transparent and more accessible.³³

2. Institutional Recognition of the Twenty-First Century Model of the Agency-as-Expert. — Just as science is defined by virtue of its process, expert regulation is now characterized by its adherence to a decisionmaking process that seeks both the best science and the best policy through multiple explication and oversight requirements. Transparency, peer and

^{28.} See, e.g., 42 U.S.C. § 7409(d)(2) (2012) (requiring peer review of EPA's NAAQS reviews under Clean Air Act).

^{29.} The FWS, for example, voluntarily solicits individual peer review of its proposed listing of endangered and threatened species. See, e.g., Joy Nicholopoulos, The Endangered Species Listing Program, 24 Endangered Species Bull. 6 (1999), reprinted in Endangered Species Update, July/Aug. 2000, at S6, S9 (describing process FWS uses to solicit and engage external peer review of its listing rules).

^{30.} See generally infra notes 183–187 and accompanying text (discussing this approach to judicial review). See also Jody Freeman & Adrian Vermeule, *Massachusetts v EPA*: From Politics to Expertise, 2007 Sup. Ct. Rev. 51, 54, 63–64 (observing role of courts when politics interfere with decisions requiring agency scientific expertise); Emily Hammond Meazell, Super Deference, the Science Obsession, and Judicial Review as Translation of Agency Science, 109 Mich. L. Rev. 733, 738, 778–79 (2011) (extolling benefits of judiciary's insistence on reason-giving as applied to agencies' science-intensive rules).

^{31.} See infra notes 183–184 and accompanying text (discussing courts' approaches to reviewing scientific challenges to agency rules).

^{32.} The National Academies endorse this approach. See NRC, Science and Judgment, supra note 20, at 144, 186–87, 254–55, 257–58 (emphasizing need for structured steps in other types of science-intensive assessments conducted by EPA and providing series of steps roughly paralleling NAAQS steps).

^{33.} See, e.g., Wagner, ACUS Report, supra note 24, at 119–24 (describing EPA's four analytical stages in its decision process for setting ambient air quality standards and referencing other, implicit and explicit, agency and institutional endorsements of these steps).

public scrutiny, and more structured analysis processes are the hallmarks of the agency-as-expert in the United States today and appear to have helped agencies retain their authoritative role as the nation's experts.

At least in the abstract, each branch of government recognizes and reinforces this revitalized model of the agency-as-expert. The courts, for example, defer to the agency-as-expert, particularly when the agency explains its underlying methods and assumptions.³⁴ Congress similarly conditions its recognition of the agency-as-expert on the agencies' fidelity to a proceduralized and transparent decisionmaking process. Indeed, over the last few decades, Congress has imposed increasingly elaborate requirements on agencies in a number of areas.³⁵

Of all the branches of government, however, the President and the offices in the White House have been the most forthright in endorsing this agency-as-expert model, including the heightened transparency and rigorous deliberation and peer scrutiny that it entails. The most recent invocation came from President Barack Obama in his scientific integrity initiative issued early in his first term. ³⁶ In the President's own words, "To the extent permitted by law, there should be transparency in the preparation, identification, and use of scientific and technological information in policymaking." Other reinforcing executive directives came from OIRA in the form of peer-review, cost-benefit, and risk-assessment guidelines, each of which seek to improve the quality of the agencies' expertise. ³⁸

But it is not only the positive endorsements of the revitalized agency-as-expert model that underscore its central role in the administrative state; negative events also shape the way the public and the government view the agency in its role as expert. For example, there is outrage—and a rash of bipartisan approbation—when it is leaked that the White House is editing documents summarizing the science of climate change.³⁹ When

^{34.} See generally infra notes 183–187 and accompanying text (recounting courts' approaches to reviewing agency science-intensive rules).

^{35.} See infra notes 169–171 and accompanying text (describing increased requirements for data quality, transparency, and peer review).

^{36.} See Presidential Memorandum on Scientific Integrity, 74 Fed. Reg. 10,671, 10,671 (Mar. 11, 2009) (calling for procedures and methods to enhance integrity of agency science-intensive policies); see also Holdren Memorandum, supra note 27, at 1 (setting forth more specific procedures to enhance scientific integrity of agency rules following President's memo).

^{37.} Presidential Memorandum on Scientific Integrity, 74 Fed. Reg. at10,67. Shortly after taking office, President Barack Obama observed, "we have watched as scientific integrity has been undermined and scientific research politicized in an effort to advance predetermined ideological agendas." President Barack Obama, Remarks at the National Academy of Sciences (Apr. 27, 2009), http://news.sciencemag.org/2009/04/obama-academy-iv-speech-text [http://perma.cc/S95F-NKKF].

^{38.} See infra section II.B.1 (discussing these guidelines).

^{39.} See, e.g., Andrew C. Revkin, Bush Aide Softened Greenhouse Gas Links to Global Warming, N.Y. Times (June 8, 2005), http://www.nytimes.com/2005/06/08/politics

political appointees direct scientific staff on what they "should" find in their analysis of the survival needs of endangered species, the roof blows off the agency and there are full-scale internal and congressional investigations. 40 Generally, the "stacking" of scientific advisory boards by political appointees is considered an illegitimate tactic and is so harshly sanctioned by the media that it occurs only a few times every decade.⁴¹ When agency experts are hushed, gagged, or not allowed to publish their work, there is an uproar that leads to systemic changes in agency processes. 42 In a number of oversight hearings and requests for review by the National Academy of Sciences, agency administrators have been questioned on their analysis of the scientific evidence.⁴³ And through these grueling hearings, the important role that the agency-as-expert plays in guarding health, the environment, and other areas of government oversight remains unmistakable. As one House Chairman complained in his introductory remarks, "[c]learly, the EPA is too busy expanding its own powers to slow down long enough to listen to its own scientists."44

3. The Place for Politics in Science-Intensive Rules. — The rigorous analytical process developed by the agencies as a result of these political pressures improves the scientific competence of agency decisions, but it also presents the countervailing risk that that the larger policy implications of the agencies' decisions may become overshadowed by tech-

/bush-aide-softened-greenhouse-gas-links-to-global-warming.html?_r=0 (on file with the Columbia Law Review) (describing critical reactions of climate experts after White House official, Phil Cooney, edited climate change report summarizing science).

^{40.} See, e.g., Office of Inspector Gen., U.S. Dep't of Interior, Investigative Report: The Endangered Species Act and the Conflict between Science and Policy 1-8 (2008) [hereinafter Report, Endangered Species Act] (discussing Julie MacDonald scandal).

^{41.} See, e.g., Robert Steinbrook, Science, Politics, and the Federal Advisory Committees, 350 New Eng. J. Med. 1454, 1456 (2004) (criticizing Bush II Administration for stacking science advisory committees and suggesting strategy is uncommon historically because of its political unpopularity).

^{42.} See, e.g., Holly Doremus, Scientific and Political Integrity in Environmental Policy, 86 Tex. L. Rev. 1601, 1603-17 (2008) [hereinafter Doremus, Scientific and Political Integrity] (detailing news events involving manipulation of science in agencies by Bush II Administration).

^{43.} See, e.g., Examining the Science of EPA Overreach: A Case Study in Texas: Hearing Before the H. Comm. on Sci., Space, and Tech., 113th Cong. 7, 109 (2014) [hereinafter Hearing, Science of EPA Overreach] (hearing several state regulators charge EPA with overregulation in Texas based on limited to no scientific evidence); EPA's IRIS Program: Evaluating the Science and Process Behind Chemical Risk Assessment: Hearing Before the Subcomm. on Investigations & Oversight of the H. Comm. on Sci., Space, & Tech., 112th Cong. 59-60 (2011) (criticizing EPA for not moving quickly to adopt NAS recommendations to improve scientific integrity of chemical assessments); Committee Investigation into EPA's Secret Science, House Comm. on Sci., Space & Tech., https://science.house.gov/issues/committee-investigation-epassecret-science [https://perma.cc/PS2D-YM4V] (last visited Aug. 9, 2015) (charging EPA with failure to make data underlying clean air rules accessible to members of Congress and public).

^{44.} Hearing, Science of EPA Overreach, supra note 43, at 7 (statement of Rep. Smith, Chairman, H. Comm. on Sci., Space, and Tech.).

nical minutia. Indeed, some agency analyses may become so compartmentalized and complicated that it is difficult to extract or articulate the underlying choices that form the basis for the analyses.⁴⁵ The resulting complication can impede participation by many important affected parties, including the President.

Even if the agency highlights some of the policy implications of alternative scenarios at the end of the process, decisions made early in the process about how to construct the problem or the policy goals can be just as consequential, but remain obscure. For example, the initial framing of the project, such as the selection of what constitutes a susceptible individual or what particular harms will be evaluated, can be buried in tedious and often lengthy discussions of the agency's consideration of competing quantitative models that take these key choices for granted. Indeed, the National Academies berated the agencies, particularly EPA, for precisely this shortcoming in a series of reports, with the most recent published in 2011.

As agencies become more hostile to executive oversight, the risk that underlying policy choices will be lost in a mountain of analytical detail appears still more inevitable. Jennifer Nou identifies a range of techniques that enable agencies to increase the costs to OIRA of reviewing agency rules in cases when the agency perceives risks (e.g., reversal) from presidential review.⁴⁸ She hypothesizes that "the more an agency invests in . . . research, the more costly it becomes for the President to contest the agency's decision. Competing expertise from experts within the executive branch would now be necessary in order to engage the agency on its terms."⁴⁹ Agencies can also insulate themselves from unwanted review by using "jargon" and obfuscating assumptions in ways that make it more difficult for non-experts, like the President, to understand their analysis.⁵⁰

^{45.} See, e.g., Wendy E. Wagner, Administrative Law, Filter Failure, and Information Capture, 59 Duke L.J. 1321, 1343–51 (2010) (providing example in EPA context and citing to literature describing broader phenomenon).

^{46.} See generally Wendy Wagner, Elizabeth Fisher & Pasky Pascual, Misunderstanding Models in Environmental and Public Health Regulation, 18 N.Y.U. Envtl. L.J. 293, 336–45 (2010) (providing examples of strategic use of models in regulation to advance predetermined ends surreptitiously).

^{47.} See Nat'l Research Council, Review of the Environmental Protection Agency's Draft IRIS Assessment of Formaldehyde 26 (2011) (finding EPA's assessments were "not prepared in a transparent, consistent fashion" with regard to methodology and criteria).

^{48.} See Jennifer Nou, Agency Self-Insulation Under Presidential Review, 126 Harv. L. Rev. 1755, 1771 (2013) (discussing why agencies may want to avoid presidential oversight and exploring how agencies can insulate themselves from these interventions).

^{49.} Id. at 1793.

^{50.} See id. ("[A]gencies can choose to initially submit an economically significant rule accompanied by a *poorly translated* [cost-benefit analysis (CBA)], which requires higher reviewing costs, or a *well-translated* CBA, which requires less.").

These mutually reinforcing benefits of producing rules that are approached as technical exercises—particularly the increased authoritative role coupled with greater opacity of regulatory products to institutional overseers—operate synergistically to discourage agencies from being frank about their underlying policy choices. As a result, an agency-as-expert will be inclined to err on the side of the technical merely as a matter of political survival. From the perspective of the agency, it is competent scientific choices rather than bold political policies that will sustain them in the politically difficult times.

II. WHITE HOUSE REVIEW OF SCIENCE-INTENSIVE RULES

The possibility that agencies might lose sight of the social implications of their decisions as a result of their fastidious technical analyses—or, to use the colloquialism, the "forest will be lost for the trees"—provides the raison d'être for White House review. The White House is ideally positioned to refocus the agencies' sight lines from these analytic details to the larger policy implications that emerge from their rules.⁵¹ Indeed, the presidential creation of OIRA review was established in large part to advance this goal.⁵²

President Ronald Reagan was particularly concerned about ensuring that his political priorities were reflected in the large number of individual agency rules, or at least the most significant ones, leading him to establish the concept of a White House review process.⁵³ President Reagan's bold Executive Order tasked a small agency within the Office of Management and Budget (OMB)—OIRA—with the responsibility for ensuring both that agencies prepared cost-benefit analyses on significant rules and that the agencies' most significant rules were "cleared" through the White House before being made public.⁵⁴

The resulting institutional architecture, however, not only positions the White House, through OIRA, as a gatekeeper focused on making sure presidential policy is appropriately reflected in agency rules, but also empowers OIRA to serve as a presidential command center with few

^{51.} See, e.g., Strauss, The Place of Agencies, supra note 1, at 662–66 (arguing President can provide unique balance and uniformity to agency outcomes).

^{52.} See Harold H. Bruff, Presidential Management of Agency Rulemaking, 57 Geo. Wash. L. Rev. 533, 557 (1989) [hereinafter Bruff, Presidential Management] ("The goals of review in OIRA are based upon a recognition that, like any other outside review, executive oversight can make regulation more reasoned by forcing articulation of the basis of proposals.").

^{53.} For an excellent overview of President Reagan's role in developing OIRA review, see id. at 549–52.

^{54.} See generally Nou, supra note 48, at 1767–70 (discussing history of OIRA review); Jim Tozzi, OIRA's Formative Years: The Historical Record of Centralized Regulatory Review Preceding OIRA's Founding, Admin. L. Rev., (Special Edition) 37, 63–64 (2011) (discussing Executive Order's "[d]esignation of OIRA employees as desk officers with the responsibility to oversee the regulatory actions of each agency").

limits on the issues it can address.⁵⁵ In fact, as the following section explains, in the actual implementation of this institutional blueprint, the White House becomes ineluctably drawn into the technical details of agency rules. Limiting political branches to "just the policy," is not as simple as it sounds. Section II.A examines both the justification given for and risks associated with White House review of agency science-intensive and technical rules. Section II.B goes on to discuss the relatively elaborate role of the White House and OIRA in overseeing agency rules and policies at a general level, and recounts evidence from diverse sources regarding the penetration of this oversight into the technical details of science-intensive rules.

A. The Logistics of White House Review of Agency Science-Intensive Rules

Before examining how OIRA reviews science-intensive and technical rules, it is first worth briefly considering in more detail the underlying justification for White House review itself. Given the fact that regulatory programs—both scientific and nontechnical—are usually delegated to agencies, does the White House have any role to play in the development of these rules, including technical rules? In the abstract, the answer is yes—the White House can be a valuable and legitimate participant in informing policy choices underlying agency rules.⁵⁶ The President, for example, may advocate for policies that emerge from his or her own electoral commitments and goals, whether these goals are to decrease the costs of regulation or advance public health protection.⁵⁷ As head of the executive branch, the President may also focus on minimizing the risks associated with agency inefficiency and incompetence. Additionally, the President may find it necessary to referee between agency policies that ideally should be reconciled, either to be consistent with the presidential policy agenda or simply as a matter of regulatory coherence or efficacy.⁵⁸ While the legitimacy of any specific intervention must be

^{55.} While the ultimate decision technically resides with the agency, a number of commentators have noted the multiple reasons that agencies are likely to comply with OIRA's suggestions. See infra note 122 (identifying multiple sources of OIRA influence over agencies, including clearing their budget requests to Congress). See generally Bruff, Presidential Management, supra note 52, at 559–62 (describing OIRA's power over agencies).

^{56.} See generally Harold H. Bruff, Presidential Power Meets Bureaucratic Expertise, 12 U. Pa. J. Const. L. 461, 461 (2010) (arguing judgments underlying new regulations reflect policy choices that need support from political officers).

^{57.} But see Cynthia R. Farina, False Comfort and Impossible Promises: Uncertainty, Information Overload, and the Unitary Executive, 12 U. Pa. J. Const. L. 357, 360 (2010) (criticizing many generalizations regarding President's ability to advance electoral preferences in specific regulations as completely unrealistic). See generally Sunstein, Myths and Realities, supra note 9, at 1869–74 (outlining various benefits of OIRA review).

^{58.} Farina, supra note 57, at 372–73 (describing advantages of unitary Executive); see also Lisa Schultz Bressman & Michael P. Vandenbergh, Inside the Administrative State: A Critical Look at the Practice of Presidential Control, 105 Mich. L. Rev. 47, 68–69 (2006)

judged on a case-specific basis, for the purposes of this Essay, it is assumed that at least some White House engagement is not only appropriate but also desirable.

Yet the fact that the White House has a legitimate role to play in the macro-policies of even the most scientifically intricate agency rules does not give it or its primary oversight agency, OIRA, carte blanche to review all facets of agency rules without limit. Most obviously, because OIRA is not a scientific agency and has limited scientific staff (at last count, it had two scientists on staff),⁵⁹ there is a risk that OIRA's suggestions may lack an adequate grounding in science. Perhaps even more importantly, OIRA's changes are not subjected to external (or perhaps internal) scientific oversight.⁶⁰ Unlike the agencies that implement a "science-like" process and subject their analyses to multiple opportunities for peer review and public review,⁶¹ OIRA's changes emerge more informally and often at the eleventh hour, typically occurring after the agencies' peer and public review have concluded.⁶²

Additionally and from an institutional perspective, the unfortunate truth of the matter is that precisely because these science-intensive and technical rules are often complicated and difficult to understand, they are particularly susceptible to ends-oriented manipulation without detection. ⁶³ As such, agency technical rules can offer a particularly convenient way for the White House to advance some more controversial policies

(noting numerous agencies use OIRA as vehicle for suggesting changes to other agency rules and as many as nineteen White House offices have gotten involved in single rulemakings during Bush I Administration); Thomas O. McGarity, Presidential Control of Regulatory Agency Decisionmaking, 36 Am. U. L. Rev. 443, 447–49 (1987) [hereinafter McGarity, Presidential Control] (discussing benefits of presidential control in promoting internal executive branch coherence); Rena Steinzor, The Case for Abolishing Centralized White House Regulatory Review, 1 Mich. J. Envtl. & Admin. L. 209, 263–64 (2012) (discussing OIRA's role in collecting interagency comments and providing suggestions to agency based on interagency input).

- 59. See generally Sidney A. Shapiro, OMB and the Politicization of Risk Assessment, 37 Envtl. L. 1083, 1094 (2007) (noting small size of OIRA's staff, even during high point of its staffing efforts). Professor Sunstein also reported that OIRA "generally had two scientists on its staff" during his 2009 to 2012 tenure. Sunstein, Myths and Realities, supra note 9, at 1871.
- 60. Cf. Lisa Heinzerling, Inside EPA: A Former Insider's Reflections on the Relationship Between the Obama EPA and the Obama White House, 31 Pace Envtl. L. Rev. 325, 361–65 (2014) [hereinafter Heinzerling, Inside EPA] (discussing nontransparent nature of OIRA review); Mendelson, supra note 8, at 1149–51 ("Despite the directives and the executive order disclosure requirements... public information about the content of executive supervision of an agency decision itself... is surprisingly rare.").
- 61. See Wagner, ACUS Report, supra note 24, at 75–91 (describing relatively rigorous processes EPA, FWS, and Nuclear Regulatory Commission use to integrate science into regulatory decisions).
- 62. See infra section II.B.2 (recounting evidence of OIRA engagement in technical details of agency science-intensive rules).
- 63. Cf. McGarity, Presidential Control, supra note 58, at 454–56 (discussing White House incentives for opacity with respect to its interventions).

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without incurring the risks of adverse publicity.⁶⁴ Even when a political motive has not yet crystalized, the fact that science-intensive rules involve significant policy choices and that OIRA's changes to these rules are likely to go unnoticed creates a magnetic field of sorts that draws OIRA to these rules, a force made all the more powerful by the lack of limits and transparency on its contributions.

As a result of the overlapping risks associated with OIRA's review of technical and science-intensive rules, academic proponents have long stressed the need for heightened transparency or even complete abstinence in OIRA's review of science-intensive rules. ⁶⁵ As early as 1980, for example, ACUS issued a recommendation that while policy issues were appropriate for White House engagement, the White House must provide documentation of any intervention in the scientific or factual features of the agencies' rules. ⁶⁶

Justice Elena Kagan, a widely cited proponent of White House review, advocates for even more self-restraint in OIRA's review of technical and science-intensive rules.⁶⁷ More specifically, Justice Kagan expresses concern that the exercise of presidential power in agencies' science-intensive rules "would threaten a kind of impartiality and objectivity in decisionmaking that conduces to both the effectiveness and the legitimacy of the administrative process." This is particularly true, she points out, in determinations that involve input from congressionally required science advisory panels.⁶⁹ As a result, Justice Kagan concludes

^{64.} See, e.g., Mendelson, supra note 8, at 1163 (observing, in general, "keeping a low profile for presidential influence also allows more successful presidential pressure that is the result of presidential capture"). Sidney Shapiro makes a parallel argument in his critique of OIRA's risk assessment guidelines. See Shapiro, supra note 59, at 1095–103 (arguing OMB's nontransparent interventions into agency rules were product of weak science and strong political motives).

^{65.} See infra notes **124–126** and accompanying text (highlighting recommendations for OIRA to tread carefully, if not refrain entirely, when reviewing agency scientific determinations).

^{66.} See Intragovernmental Communications in Informal Rulemaking Proceedings (Recommendation No. 80-6), 45 Fed. Reg. 86,407, 86,408 (Dec. 31, 1980) (showing ACUS recommendation that interagency communications related to factual matters—as opposed to policy—be publicly disclosed); cf. Presidential Review of Agency Rulemaking (Recommendation No. 88-9), 54 Fed. Reg. 5207, 5208 (Feb. 2, 1989) (showing ACUS recommendation that "agency submissions to the office responsible for presidential review . . . be made available to the public when the decision to terminate is announced"). These ACUS recommendations were tracked to some extent in the transparency requirements of President Bill Clinton's Executive Order 12,866. See Exec. Order No. 12,866, 3 C.F.R. 638, 644–48 (1994), reprinted as amended in 5 U.S.C. § 601 app. at 802, 804–06 (2012) (requiring suggestions made by OIRA be identified and communications between OIRA and agencies be transparent).

^{67.} Elena Kagan, Presidential Administration, 114 Harv. L. Rev. 2245, 2356–57 (2001) (urging self-restraint in White House review of agencies' science-intensive rules).

^{68.} Id. at 2357.

^{69.} Id. (cautioning against presidential displacement of determinations by congressionally required science advisory panels).

that not only should presidential review "operate with an attitude of respect toward agency experts," but that "these differences [between the expertise of agencies and the White House] counsel hesitation both in acknowledging and asserting presidential authority in areas of administration in which professional knowledge has a particularly significant and needed function."

B. OIRA's Review of Technical and Science-Intensive Rules in Practice

Despite the institutional precariousness of White House review of the micro features of agency science-intensive rules, there is evidence that, over the last few decades, at least one arm of the White House—OIRA—has become engaged, sometimes deeply, in the technical details of agency rules at various points in their development. Indeed, there is reason to believe that this evidence of OIRA's interventions into the details of agency rules may be the tip of the iceberg with respect to larger White House influence in agency science-intensive rulemakings. It is thus clear that ensuring that OIRA involvement is limited to "just the policy" in its review is not as simple as it sounds. The following section recounts the evidence of OIRA's engagement in technical aspects of agency rules and related decisions.

1. OIRA's Involvement in Science-Intensive Rules and Policies as Evidenced by Its Own Statements and Initiatives. — As an institutional matter, OIRA could potentially provide a high level of deference to science-intensive rules or even avoid them entirely, but instead, over time, it has developed policies that seem to do exactly the opposite and allow it to actively engage in the scientific merits. During the Bush II Administration, in particular, OIRA made a concerted effort to increase its technical and scientific staff precisely in order to gain deeper and broader reach over the technical substance of agency rules.⁷³ As the former Administrator of

^{70.} Id. at 2356.

^{71.} It is not clear whether OIRA believes that heightened review of agency technical choices is appropriate because its review improves these technical decisions or because OIRA must engage vigorously in some science-intensive rules to advance the President's policies. There is clearly evidence of the latter view, but there is also some evidence that OIRA believes it serves a useful role in improving the scientific quality of agency rulemakings. Cf. Sunstein, Myths and Realities, supra note 9, at 1847 (suggesting OIRA, as convener of agencies, may improve quality of agency decisions).

^{72.} See, e.g., Bressman & Vandenbergh, supra note 58, at 68-70 (describing numerous sources of influence originating from White House, only one of which is OIRA).

^{73.} See, e.g., John D. Graham et al., Managing the Regulatory State: The Experience of the Bush Administration, 33 Fordham Urb. L.J. 953, 968–69 (2006) (discussing OIRA's effort to increase its scientific staff to keep up with science-intensive rules promulgated by agencies); see also Guest Blogger, OMB Expands Influence over Scientific Decisions, Ctr. for Effective Gov't (May 28, 2003), http://www.foreffectivegov.org/node/1427 [http://perma.cc/WP5Z-LNYM] (describing OIRA as "expanding its influence over scientific questions that have previously been left to federal regulatory agencies, hiring a number of scientific experts for the first time in its history").

OIRA, John Graham stated, in an effort to respond to the rapid growth of environmental and public health regulations,

OIRA hired highly trained experts in fields such as environmental science, engineering, epidemiology, toxicology, public health, and health policy. Although the small number of new employees at OIRA may seem modest, OIRA's ability to ask tough questions of regulators—and engage in technical dialogue with agency specialists—has increased substantially.⁷⁴

Several OIRA directives also made it clear that OIRA was expanding its reach to oversee the technical features of significant agency rules. A 2001 OIRA memorandum directed desk officers reviewing agency rules to include an evaluation of "whether the agency has . . . conducted an adequate risk assessment." OIRA staff members were also instructed to afford an unspecified "measure of deference" to technical documents that have been peer reviewed following specified procedures, implying that technical documents that have not been peer reviewed following these procedures should not receive the same deference. 76

Additionally, over the last fifteen years, OIRA issued guidances specifying the technical processes agencies should follow in their science-intensive policymaking. Professors Nicholas Bagley and Richard Revesz conclude that these guidances serve as "powerful examples of the myriad ways in which OIRA already monitors agency science and as illustrations of OIRA's growing appetite for scientific oversight." Two guidance documents in particular are notable for their scientific bent—OIRA's peer-review guidelines and its largely defunct risk assessment guidelines. The peer

^{74.} Graham et al., supra note 73, at 968-69.

^{75.} Memorandum from John D. Graham, Adm'r, Office of Info. & Regulatory Affairs, on Presidential Review of Agency Rulemaking by OIRA, to President's Mgmt. Council (Sept. 20, 2001), https://www.whitehouse.gov/omb/inforeg_oira_review_process [https://perma.cc/3F8G-HAMA] (setting forth principles and procedures governing OIRA's review of agency rules).

^{76.} Id. Based on substantial evidence, however, it is not clear whether these peerreviewed technical analyses are in fact receiving added deference from OIRA staff. See infra section II.B.2 (discussing OIRA engagement in agency rulemaking processes).

^{77.} Nicholas Bagley & Richard L. Revesz, Centralized Oversight of the Regulatory State, 106 Colum. L. Rev. 1260, 1316 (2006).

^{78.} Final Information Quality Bulletin for Peer Review, 70 Fed. Reg. 2664, 2665 (Jan. 14, 2005) [hereinafter OMB, Peer Review Quality Bulletin] (showing guidance issued by OMB in consultation with Office of Science and Technology Policy aimed at improving "quality of government science while promoting public confidence in the integrity of the government's scientific products"); Office of Mgmt. & Budget, Proposed Risk Assessment Bulletin (Jan. 9, 2006), https://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/proposed_risk_assessment_bulletin_010906.pdf [https://perma.cc/YKF7-TFQY] [hereinafter OMB, Proposed Risk Assessment Bulletin]. It should be noted that both guidance documents were developed ostensibly to advance the mandate of the Information Quality Act, which was passed in 2001. See OMB, Peer Review Quality Bulletin, supra, at 2666 (noting Bulletin issued under statute's authority); OMB, Proposed Risk Assessment Bulletin, supra, at 7 (same). Thus the promulgation of these guidelines

review guidance requires agencies to "conduct a peer review on all influential scientific information that the agency intends to disseminate" and then identifies preferred processes for this expert review.⁷⁹ The risk assessment guidelines were similarly intended "to enhance the technical quality and objectivity of risk assessments prepared by federal agencies by establishing uniform, minimum standards."⁸⁰ In the context of assessing OIRA's scientific competency, it is worth noting that both guidances were heavily criticized by scientific groups,⁸¹ and the risk assessment guidance was ultimately withdrawn because the National Academy of Sciences panel found it was "fundamentally flawed."⁸²

In his 2013 essay on OIRA, Cass Sunstein, a former OIRA Administrator, acknowledged that OIRA's heavy engagement in the scientific details of agency rules continued into the Obama Administration. In his own words, "[t]echnical work is the bread-and-butter of daily life at OIRA."83 Professor Sunstein defends this involvement based in part on the need for OIRA to coordinate interagency disagreements and collect information from numerous expert agencies. As such, he argues that OIRA operates primarily as a "convener," rather than a "decider," in scientific discussions about agency rules, although his perspective is not uniformly shared by other insiders.

2. OIRA's Engagement in Individual Science-Intensive Agency Decisions. — OIRA's engagement in agency science-intensive rules can also be appreciated at a more granular level. Some of OIRA's interventions may simply attempt to advance the White House's macro goals, but making policy changes in a type of "plug and play fashion" is often not possible with these intricate scientific rules.⁸⁷ Slipping in a different standard or compliance requirement—in order to promote a less costly regulation,

under the Bush II Administration is not necessarily a reflection solely of presidential policies.

- 79. OMB, Peer Review Quality Bulletin, supra note 78, at 2675.
- 80. OMB, Proposed Risk Assessment Bulletin, supra note 78, at 3.
- 81. See, e.g., Freeman & Vermeule, supra note 30, at 57–58, 57 n.20 (citing scientific criticism of both guidances).
- 82. Nat'l Research Council, Scientific Review of the Proposed Risk Assessment Bulletin from the Office of Management and Budget 6 (2007); see also Shapiro, supra note 59, at 1094–95, 1103–06 (providing thoughtful history and critique of this effort).
 - 83. Sunstein, Myths and Realities, supra note 9, at 1872.
- 84. See id. (arguing OIRA's main function is to convene and mediate interagency perspectives on rules rather than advance President's preferred policies).
 - 85. Id. at 1841-42.

86. Lisa Heinzerling questions this position because OIRA does not identify the agencies, much less the staff members, raising interagency concerns, leaving the impression that "no one knows who is really in charge," particularly the originating agency. Heinzerling, Inside EPA, supra note 60, at 367.

87. But cf. Kathryn A. Watts, Proposing a Place for Politics in Arbitrary and Capricious Review, 119 Yale L.J. 2, 8 (2009) (suggesting agency fact-finding and politics can be separated in somewhat clear way).

for example—can undermine other, interrelated features of the rule, a risk made all the more likely if the policy-based changes are both invisible and sidestep peer- and public-review processes.⁸⁸ Even changes to a rule as seemingly discrete as reducing the number of ambient monitors can disturb the technical cohesiveness of the rule by reducing the data available to assess compliance and jeopardizing the statistical integrity of the sampling program.⁸⁹

OIRA's engagement in science-intensive rules is evident in part from some general surveys and interviews with agencies' scientific staff. In a survey of EPA employees conducted by the Union of Concerned Scientists in 2008, for example, nearly 100 employees reported some evidence of "OMB's meddling in EPA decision making [in a way that constitutes] . . . a major hindrance to the agency's scientific integrity." Interviews with higher-level career agency staff (past and present) in EPA and OIRA reinforce the fact that OIRA sometimes plays a significant role in reviewing the scientific details of agency rules. Anonymous career staff in White House offices similarly report that OIRA does not refrain from making technical changes to science-intensive rules; OIRA review instead tends to

^{88.} For example, OIRA added a secondary standard for ozone at the very end of EPA's process, after experts had rejected such a move. See, e.g., Steinzor & Shapiro, supra note 24, at 205 (describing this incident); Juliet Eilperin, Ozone Rules Weakened at Bush's Behest, Wash. Post (Mar. 14, 2008), http://www.washingtonpost.com/wp-dyn/content/article/2008/03/13/AR2008031304175.html [http://perma.cc/5NNZ-6JWS] (same). The secondary standard was ultimately struck down by the D.C. Circuit as insufficiently supported, although the court did not mention OIRA's role. See Mississippi v. Envtl. Prot. Agency, 744 F.3d 1334, 1358–62 (D.C. Cir. 2013) (reasoning "EPA failed to determine what level of protection was requisite to protect the public welfare" (internal quotation marks omitted)).

^{89.} See, e.g., infra note 113 and accompanying text (describing 20% reduction of required ambient monitors during OIRA review).

^{90.} Union of Concerned Scientists, Interference at the EPA 28 (2008) (reporting this finding in nearly 100 surveys conducted of employees in 2007, out of a total of 1,586 surveys returned); see also Mendelson, supra note 8, at 1152-57 (providing overview of several instances of interference by OIRA and OMB in scientific rulemaking); Steinzor, supra note 58, at 247-68 (describing changes made to OIRA's role in reviewing agency regulations during Bush II Administration and their legacy during Obama Administration); Rena Steinzor, Michael Patoka & James Goodwin, Behind Closed Doors at the White House: How Politics Trumps Protection of Public Health, Worker Safety, and the Environment 29–33 (2011), http://www.progressivereform.org/articles/OIRA_ Meetings_1111.pdf [http://perma.cc/VVV9-ZL5U] (discussing OIRA's disproportionate targeting of EPA regulations). David Driesen also discusses a number of examples of changes that may have been at least partly technical in nature that were suggested by OIRA, including EPA's decision not to list manganese as a hazardous waste and OMB's opposition to more stringent emission limits governing large ships. See David M. Driesen, Is Cost-Benefit Analysis Neutral?, 77 U. Colo. L. Rev. 335, 367-68 (2006) (providing examples of OIRA's changes to agency science-intensive rules).

^{91.} See Wagner, ACUS Report, supra note 24, at 85–88 (citing interviews with high-level career staff at EPA and exchanges between EPA and OIRA officials regarding substantive interventions by OIRA into science-intensive features of EPA's NAAQS rules).

drift toward these more esoteric issues. 92 There are also specific examples of OIRA's engagement in these scientific and technical details. One of the best-documented examples of OIRA's engagement in the scientific details of agency rules arises in a set of agency decisions that actually falls outside of OIRA's jurisdiction—EPA's informal setting of nonbinding standards for various toxic substances (the Integrated Risk Information System (IRIS)). 93 Over the last twenty or more years, OIRA has been intimately involved in setting these IRIS standards. Initially, OIRA—not EPA—determined how the standards should change in response to interagency comments, set the pace of the standard-setting, and classified the interagency communications under the deliberative process privilege. 94 Even after 2009 when then-EPA Administrator Lisa Jackson restricted OIRA's role, OIRA continued to serve as a vigorous participant. 95 More pertinent for the purposes of this Essay, nearly all of the comments OIRA makes appear to be technical in nature. 96 Based on its study of OIRA's involvement in IRIS

Although it was initially a common law creation, the deliberative process privilege is most commonly invoked by the White House as an exemption to Freedom of Information Act to withhold "inter-agency or intra-agency memorandums or letters which would not be available by law to a party other than an agency in litigation with the agency." 5 U.S.C. § 552(b)(5) (2012). See generally Shilpa Narayan, Note, Proper Assertion of the Deliberative Process Privilege: The Agency Head Requirement, 77 Fordham L. Rev. 1183, 1187–202 (2009) (describing history and development of deliberative process privilege over time).

 $^{92.\,}$ Id. at $140\,$ n. $591\,$ (citing interviews with former OIRA staff about how OIRA review can get "deep' into the science" of agency rules).

^{93.} See Integrated Risk Information System: What Is IRIS, U.S. Envtl. Prot. Agency, http://www.epa.gov/IRIS/help_ques.htm#whatiris [http://perma.cc/YTD3-27QT] (last visited Aug. 9, 2015) (describing IRIS as "human health assessment program" capable of evaluating risks from exposure to environmental contaminants); see also Wagner, ACUS Report, supra note 24, at 140 (noting IRIS standards fall outside traditional scope of OIRA review outlined in Executive Order 12,866).

^{94.} See, e.g., U.S. Gov't Accountability Office, GAO-08-440, Chemical Assessments: Low Productivity and New Interagency Review Process Limit the Usefulness and Credibility of EPA's Integrated Risk Information System 57 (2008), http://www.gao.gov/assets/280/273184.pdf [http://perma.cc/P9WS-P2S9] [hereinafter GAO, Low Productivity] (describing OIRA's significant role in influencing EPA's IRIS standards and guiding peer review); see also U.S. Gov't Accountability Office, GAO-12-42, Chemical Assessments: Challenges Remain with EPA's Integrated Risk Information System app. III, at 34–40 (2011), http://www.gao.gov/assets/590/586620.pdf [http://perma.cc/KZE5-MX7X] [hereinafter GAO, Challenges Remain] (describing on chemical-by-chemical basis influential role of agencies like OMB and Department Of Defense on EPA's assessments). In 2009, EPA Administrator Lisa Jackson altered the IRIS process, with EPA now taking the lead on the assessments and requiring that all written interagency comments be submitted on the record. U.S. Envtl. Prot. Agency, IRIS Progress Report 3–4 (2011), http://www.epagov/IRIS/pdfs/irisprogressreport2011.pdf [http://perma.cc/VL3G-KDAR] (describing elements of "IRIS assessment development process").

^{95.} See GAO, Challenges Remain, supra note 94, app. III, at 24–26 (describing and criticizing OMB's role in IRIS assessments); GAO, Low Productivity, supra note 94, at 56–58 (same).

^{96.} See Wendy E. Wagner, Science in Regulation: A Study of Agency Decisionmaking Approaches: Appendices, app. F, at 1-6 (2013), https://www.acus.gov/sites/default/files/

standards, the Majority Staff of the House Subcommittee on Investigations and Oversight concluded, "[T]he Subcommittee has ample documentation showing that OIRA's staff scientists did far more than merely coordinate and facilitate science discussions across agencies. OIRA's staff scientists directly challenged the science put forward by EPA IRIS staff in very detailed peer review-type comments."⁹⁷

There are also accounts of OIRA's extensive engagement in the technical details of other science-intensive rules. 98 During the Reagan Administration, for example, OIRA made numerous, nontransparent technical changes to EPA's high-level radioactive waste disposal rule; a number of new source performance standards promulgated under the Clean Air Act; and EPA's ambient air quality standard for particulates. 99 Likewise, during the Bush II Administration, OIRA actively contributed to a number of science-intensive rules. Case accounts document the ways that OIRA intervened in EPA's National Ambient Air Quality Standards (NAAQS) ozone standard, 100 EPA's greenhouse gas regulations, 101 and

documents/COR-Science-Report-Appendices-2-27-12.pdf [http://perma.cc/W3GM-QP7T] [hereinafter Wagner, ACUS Appendices] (providing comments filed on Dichloromethane (DCM)); see also Wagner, ACUS Report, supra note 24, at 50 ("[T]he fact that OMB has historically managed the interagency review of IRIS assessment has led some to question the scientific credibility of the resulting assessments.").

97. Majority Staff of the Subcomm. on Investigations & Oversight, Nipping IRIS in the Bud: Suppression of Environmental Science by the Bush Administration's Office of Management and Budget 5 (2009), http://www.ucsusa.org/sites/default/files/legacy/assets/documents/scientific_integrity/miller-iris-report-june-09.pdf [http://perma.cc/5G HR-X2F8]. The Majority Staff include in their Report extensive documentation of communications between OIRA and the agencies and numerous examples of substantive editorial changes by OIRA to EPA's characterization of the science. As just one represent-tative example, OIRA staff made the following edits to EPA's summary of the scientific literature in an IRIS profile (OIRA's edits are in italics): "[T]his may imply that different activities may expose different age groups more than others, or that some PBDE congeners may accumulate differently with age, however the sample size here is very small and firm conclusions cannot be made." Id. at 7.

98. By the mid-1980s, there were a number of vivid accounts of OIRA's substantive interventions into agency technical rules. See Alan B. Morrison, OMB Interference with Agency Rulemaking: The Wrong Way to Write a Regulation, 99 Harv. L. Rev. 1059, 1066 (1986) (discussing OMB's deletion of short-term exposure limit for ethylene oxide "despite the overwhelming technical support... and the concurrence of everyone at the Department of Labor who reviewed the matter that such a limitation was necessary," and FDA oversight of individual GRAS determinations for over-the-counter drugs); see also infra note 99 and accompanying text (providing numerous examples of such substantive changes by OIRA).

99. See Erik D. Olson, The Quiet Shift of Power: Office of Management and Budget Supervision of Environmental Protection Agency Rulemaking Under Executive Order 12,291, 4 Va. J. Nat. Resources L. 1, 64–73 (1984) (providing quotations from interviews with officials and excerpts from memoranda and rule drafts revealing highly technical disputes over key regulatory terms).

100. See, e.g., Heinzerling, Inside EPA, supra note 60, at 354–58 (discussing this incident).

technical features of a proposed regulation to protect an endangered whale from collisions with larger boats. ¹⁰² There is also evidence that OIRA's involvement compromised the scientific integrity of information shared with the public during the BP oil spill. ¹⁰³ In an even more detailed case study, Lisa Heinzerling and Rena Steinzor discuss OIRA's changes to EPA's mercury rule, which included recommending language that downplays the link between mercury and cardiovascular effects and inserting "several sentences casting some doubt on EPA's ability, through the power plant rule, to make a difference in the blood mercury levels in women." ¹⁰⁴

More recently, during the Obama Administration, OIRA engaged in extensive rewriting of EPA's coal ash rule. 105 Several years later, OIRA delayed the Occupational Safety and Health Administration's proposed silica rule for several years while suggesting numerous technical changes to the rule. These changes apparently included raising the exposure level that triggers medical monitoring for workers and reducing the frequency with which at-risk workers should receive medical examinations; both changes affect technical features of the rule but occurred wholly outside the science-policy process the agency used to formulate the rule. 106 Also in 2013, OIRA made extensive changes to several highly technical Federal Drug Administration rules on food safety, 107 including the elimination of

^{101.} See, e.g., Felicity Barringer, White House Refused to Open Pollutants Email, N.Y. Times (June 25, 2008), http://www.nytimes.com/2008/06/25/washington/25epa. html?_r=0 (on file with the *Columbia Law Review*) (describing White House refusal to accept EPA's "conclusion that greenhouse gases are pollutants that must be controlled").

^{102.} See, e.g., Strauss, Possible Controls, supra note 2, at 133 n.21 (discussing this incident).

^{103.} See, e.g., Heidi Kitrosser, Scientific Integrity: The Perils and Promise of White House Administration, 79 Fordham L. Rev. 2395, 2411 (2011) (discussing this case study and controversy over possible OMB interference with early estimate of oil flow rate).

^{104.} Lisa Heinzerling & Rena Steinzor, A Perfect Storm: Mercury and the Bush Administration, Part II, 34 Envtl. L. Rep. 10,485, 10,491 (2004).

^{105.} See, e.g., Steinzor, supra note 58, at 260–67 (providing detailed case study of OIRA's review of rule).

^{106.} See, e.g., Robert Iafolla, After Extended OMB Review, OSHA Cut Silica Rule Price Tag by Half, Lowered Benefits, 43 Occupational Safety & Health Rep. 1057, 1057–58 (2013) (noting criticism that "it was political pressure not to release any substantial regulations rather than conducting additional analyses" that precipitated suggestions).

^{107.} See, e.g., Lisa Heinzerling, Who Will Run the EPA?, 30 Yale J. on Reg. Online 39, 40 (2013), http://www.yalejreg.com/assets/heinzerling-epa5.pdf [http://perma.cc/L2DK-VWZ8] (describing changes as "extensive" and "substantive"). In this piece, Heinzerling reports:

Documents showing extensive changes to the FDA's rule on the growing, harvesting, packing and holding of produce for human consumption are available . . . at http://www.regulations.gov/#!documentDetail;D=FDA-2011-N-0 921-0029. Documents showing extensive changes to the FDA's rule on good manufacturing practice and hazard analysis and risk-based preventive controls for human food are available . . . at http://www.regulations.gov/#!document Detail;D=FDA-2011-N-0920-0014.

monitoring requirements for pathogens in food. ¹⁰⁸ That same year, OIRA made significant changes to a technology-based standard issued by EPA, including adjustments that revised the proposed "BAT/PSES for non-chemical metal cleaning wastes to exclude discharges from certain facilities from the proposed effluent limits for copper and iron." ¹⁰⁹

In a more focused study of an entire set of EPA air quality rules—the National Ambient Air Quality Standards (NAAQS)—this author examined both quantitatively and qualitatively the nature of OIRA's involvement based on the available public administrative record. The full results are detailed in a lengthy ACUS report, but the overarching finding was that OIRA did engage in revising the technical features of these rules. In fact, the majority of the changes made by OIRA (typically several dozen in number) were technical in nature, either altering the agency's explanation or features of the rule itself. 111

While it is not possible without significant additional detective work to determine the significance of these aggregate technical changes occurring during OIRA's review, a tally of the most substantial changes reveals some potentially major alterations in EPA's rules. 112 For at least two rules, the required number of ambient monitors was reduced by about 20% while the

Id. at 40 n.5.

108. See, e.g., Helena Bottemiller, Documents Show OMB Weakened FDA's Food Safety Rules, Food Safety News (Mar. 25, 2013), http://www.foodsafetynews.com/2013/03/documents-show-omb-weakened-fdas-food-safety-rules/#.VcwMIRNViko

[https://perma.cc/2UZT-UUSX] (noting agency favored monitoring requirements and describing criticisms of OIRA's edits).

109. U.S. Envtl. Prot. Agency, Documentation of OMB Review Under Executive Order 12866: Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category 2 (May 5, 2010), http://op.bna.com/env.nsf/id/aada-9acp6x/\$File /ELG%20Redline.pdf [http://perma.cc/WC6Q-7GEQ]; see also Anthony Adragna, Document Shows Power Plant Guidelines Rule Significantly Altered in White House Review, BNA Env't Rep. (Aug. 9, 2013), http://www.bna.com/document-shows-power-n17179875765/ [http://perma.cc/Z89V-QV3G] (describing extent of OMB revisions).

110. See Wagner, ACUS Report, supra note 24, at 21–28 (providing detailed discussion of methods employed in empirical study).

111. Id. at 75–91 (providing more detailed discussion of findings of empirical investigation).

112. In its 2009 report, the Government Accountability Office identified about 30% of the rules it reviewed as involving significant changes that "affected the scope, impact, or estimated costs and benefits of the rules." U.S. Gov't Accountability Office, GAO-09-205, Improvements Needed to Monitoring and Evaluation of Rules Development as Well as to the Transparency of OMB Regulatory Reviews 29 (2009), http://www.gao.gov/new.items/d09205.pdf [http://perma.cc/F278-TB3B]. For a first-hand look at the changes made by OIRA in the NAAQS rule, see, e.g., U.S. Envtl. Prot. Agency, Primary National Ambient Air Quality Standard for Sulfur Dioxide (unpublished document), https://utexas.app.box.com/s/mq9360hjrwy8gz961894 (click on first document in list) (on file with the *Columbia Law Review*) (last visited Aug. 28, 2015) (recording changes made during OIRA review to most NAAQS rules). The list provides the redlined documents that record the changes made during OIRA review to most of the NAAQS rules.

rules were under review at OIRA.¹¹³ During OIRA review, EPA also adopted the primary standard to serve as the secondary standard for the oxides of nitrogen and sulfur—EPA had initially declined to set a secondary standard—and loosened the secondary standard for ozone.¹¹⁴ OIRA's influence could not be identified in several other rules because the changes made during its review were not recorded.¹¹⁵ But the fact that there were numerous documented (and often privileged) exchanges between OIRA and EPA on these rules (more than 110 exchanges on each) gives one the impression that OIRA's influence may have been quite significant.¹¹⁶ Finally, OMB returned two of the NAAQS ozone rules in 2011, primarily due to concerns about the effect of the rules on the economy.¹¹⁷

This empirical study of OIRA's engagement in EPA's NAAQS rules also reveals that OIRA's influence is not always limited to the formal review period. Although the docketed exchanges vary a great deal from rule to rule, overall nearly half of the communications between OIRA

113. For the Word-generated, track-changes document that highlights this change in the nitrogen dioxide final rule, see U.S. Envtl. Prot. Agency, Primary National Ambient Air Quality Standards for Nitrogen Dioxide (Feb. 9, 2010) (unpublished document), https://utexas.box.com/s/l4n4eywn4jkxt660z9yv (on file with the *Columbia Law Review*) [hereinafter Nitrogen Dioxide Redline]. For the equivalent change in the carbon monoxide final rule, see U.S. Envtl. Prot. Agency, Review of National Ambient Air Quality Standards for Carbon Monoxide 100–01 (unpublished document), https://utexas.box.com/s/8g1dgjljph13ypf2m3g4ru57q0smbcr8 (on file with the *Columbia Law Review*) (last visited Aug. 28, 2015).

114. Wagner, ACUS Report, supra note 24, at 87–88.

115. EPA did not record the changes made by OIRA in the Primary NAAQS review for lead (proposed and final) or in the primary NAAQS review for nitrogen dioxide (proposed and final). With regard to the nitrogen dioxide standard, EPA did post both the proposed and final rules before they were submitted to OIRA. A Word-generated comparison of the final rule pre-OIRA review and the rule published in the Federal Register (prepared by this author) provides an informal record of the changes made while the final rule was under review at OIRA. See Nitrogen Dioxide Redline, supra note 113.

116. For the list of docketed exchanges that were included in EPA's much larger rule docket for the lead NAAQS rule, with hyperlinks to the original documents, see Wendy E. Wagner, Documentation for Lead Rule (July 7, 2013) (unpublished Excel spreadsheet), https://utexas.box.com/s/101mijgvt78xx2525tec0qphajpc8ij4 (on file with the *Columbia Law Review*) (providing Excel list collecting all OIRA and interagency review documents on this rule). For the list of docketed exchanges between EPA and OIRA on the nitrogen dioxide rule, see Wendy E. Wagner, Documentation for Nitrogen Oxide Rule (July 10, 2012) (unpublished Excel spreadsheet), https://utexas.box.com/s/tq8588cphch1ty0qapim66b7bev7h571 (on file with the *Columbia Law Review*) (same). This author has compiled Excel lists of all EPA–OMB correspondence available for each of the rules in this study. See, e.g., Wendy E. Wagner, EPA-HQ-OAR-2010-0885 (July 24, 2014) (unpublished document), https://utexas.app.box.com/s/kjj7y9lbb9fqgzcnc6q2/1/2242849137 (click on first document in list) (on file with the *Columbia Law Review*) (documenting correspondence over ozone classification rule).

117. See Letter from Cass R. Sunstein, Adm'r, Office of Info. & Regulatory Affairs, to Lisa Jackson, Adm'r, U.S. Envtl. Prot. Agency 1–2 (Sept. 2, 2011), http://www.white house.gov/sites/default/files/ozone_national_ambient_air_quality_standards_letter.pdf [http://perma.cc/G5QU-BS23] (emphasizing President's instruction to Administrator to work with agencies "to minimize regulatory costs and burdens, particularly in this economically challenging time").

and EPA on the air quality standards occurred outside the formal window of OMB review. Indeed, some agency staff members report that OIRA can require informal consultation, and even advanced permission, before accepting an agency proposal for review. In Much like the individual redline documents that record the changes made during OIRA review, an examination of these pre-review OIRA documents (some were not classified as deliberative process) reveals quite specific disagreements between OIRA and EPA in their interpretation of scientific evidence.

In sum, while the record of OIRA's engagement in science-intensive rules is highly incomplete, the information that is available reveals potentially significant involvement by OIRA in the technical features of many of these rules throughout the decisionmaking processes. ¹²¹ Some of OIRA's interventions may be motivated by an effort to advance particular policy ends, such as lower-cost regulation, but the changes themselves relate to features of the rules that are decidedly technical. Thus, although there are compelling reasons to maintain executive involvement in agency rulemaking, given the increasingly careful methods used by agencies, permitting nontransparent involvement by OIRA risks compromising the accountability and legitimacy of science-intensive and technical rulemaking.

III. THE DESTABILIZING EFFECTS OF OIRA REVIEW ON AGENCY EXPERTISE

While historically, or at least prior to the 1980s, agencies were the primary authors of their rules and supporting preambles, today the White House, through OIRA, appears to serve as an invisible partner in developing at least some of them, contributing significantly but in ways that largely escape review and oversight. Through these interventions, moreover, OIRA appears to act more as a senior partner than another interagency voice. As an office of the White House, OIRA enjoys considerable prestige in its dealings with the agencies, but potentially still more important is the fact that OMB, within which OIRA is located, reviews and approves the agencies' budgets before they are sent to

^{118.} See Wagner, ACUS Report, supra note 24, at 79–84 (analyzing chart comparing number of exchanges inside OMB review window to number of exchanges outside window); cf. Curtis W. Copeland, Length of Rule Reviews by the Office of Information and Regulatory Affairs 36–37 (2013), http://www.acus.gov/sites/default/files/documents/Copeland%20Report%20CIRCULATED%20to%20Committees%20on%2010-21-13.pdf [http://perma.cc/32QB-VLUK] [hereinafter Copeland, ACUS Study] (noting "documentation of [OIRA's] informal reviews was usually not included in the rulemaking dockets").

^{119.} See Copeland, ACUS Study, supra note 118, at 36, 38 (reporting on this trend based on interviews with agency staff).

^{120.} See Wagner, ACUS Appendices, supra note 96, app. F, at 1–6 (listing several instances where OIRA criticized EPA for failing to reflect expert opinion in assessments).

^{121.} Dr. Copeland cautions that the existing evidence "probably understates the influence that OIRA has on agencies' rules" to the extent that the evidence requires documentation of OIRA's involvement. Curtis W. Copeland, The Role of the Office of Information and Regulatory Affairs in Federal Rulemaking, 33 Fordham Urb. L.J. 1257, 1284 (2005) [hereinafter Copeland, Role of OIRA].

Congress.¹²² By all accounts, then, OIRA's influence is substantial.¹²³ Agencies that choose to ignore or resist OIRA's suggestions do so at their peril.

These unrestricted and nontransparent opportunities for political oversight and editing of agency technical analyses—analyses presented to the public as grounded in scientific or technical evidence—create a number of instabilities in the administrative process. This Part identifies costs to the regulatory process from the current institutional design. Section III.A explores the adverse effects of White House intervention on the scientific integrity of agency rules. Section III.B then considers the negative implications of these interventions on the institutional checks and balances of congressional oversight and judicial review. Section III.C concludes by exploring how nontransparent policy-driven changes to the technical features of agency rules make the rules more vulnerable to capture and other subterranean influences hidden from public view.

A. Undermining the Scientific Integrity of Agency Analyses

Expert agencies rely primarily on rigorous processes to enhance the scientific and policy integrity of their decisions; yet, if the end result can be altered behind the scenes by a political office, the agencies' procedures can be rendered futile or even deceptive in a number of reinforcing ways. For this reason, as previously noted, Justice Kagan, along with a number of other commenters, stresses the need for OIRA to tread lightly in its oversight of science-intensive rules. ¹²⁴ Nina Mendelson, for example, argues that if greater transparency reveals that OIRA is "second-guessing an agency's more technical or scientific conclusions . . . then we might start to see executive review as less legitimate to the extent it operates to skew or displace the expertise that has long resided within the agencies." ¹²⁵ Lisa Bressman and Michael Vandenbergh simply conclude, "OIRA should avoid issues that outstrip its institutional competence" such as "agency scientific determinations." ¹²⁶

When OIRA has neither explained its role, nor publicly justified the changes it suggests, it can undermine the legitimacy and reliability of

^{122.} See, e.g., Bruff, Presidential Management, supra note 52, at 552–53 (describing power of OMB over agency budgets).

^{123.} See, e.g., Copeland, Role of OIRA, supra note 121, at 1278 (discussing OIRA's considerable authority over agency rules and concluding although agencies have final say, they "rarely publish rules that OIRA returns or ignore substantive OIRA 'suggestions'"); cf. supra text accompanying note 57 (describing presidential influence over rulemaking).

^{124.} See supra notes 65–70 and accompanying text (recounting views of commenters in urging caution with respect to White House review of science-intensive agency decisions); see also Kagan, supra note 67, at 2357 ("[T]here is no good reason for a President to displace or ignore purely scientific determinations—as to the kinds of questions, say, on which Congress often instructs agencies to seek opinions from outside advisory committees.").

^{125.} Mendelson, supra note 8, at 1177.

^{126.} Bressman & Vandenbergh, supra note 58, at 97-98.

science-intensive rules in a number of different ways, some of which are explored below.

1. Ends-Oriented Bias in OIRA's Engagement in Agency Rules. — In science, sponsor influence at early stages of a research project presents a significant risk of biasing the research in statistically significant ways, a process dubbed the "funding effect";¹²⁷ political pressure on agency analysts, whether from appointees, the Office of the President, or OIRA staff, can lead to the same result.¹²⁸ Indeed, rather than allowing agency staff to scope out a range of alternative solutions to problems, pressure from management could force analysts to identify the "best" political option and form their analysis around that option without considering the broader alternatives.¹²⁹ Such pressure not only compromises the independence of the analysis but biases it in ways that may escape scrutiny since the ends-oriented choices the "sponsors" make can become deeply embedded in the technical, scientific analysis the agency produces.¹³⁰

There are scattered reports of this ends-oriented political biasing within the executive branch, although most involve political pressure on staff scientists from agency appointees rather than from the White House itself. One of the best-documented examples occurred during the Bush II Administration, when then-Deputy Secretary of the Interior, Julie MacDonald, advanced her ideological agenda by interfering with the listing of some key endangered species. By bullying the scientific staff, particularly during her review of their preliminary reports, MacDonald managed to change the scientific record for dozens of candidate endangered species and critical habitat designations. In her study of the search for weapons of mass destruction in Iraq, Judge Patricia Wald similarly notes how political appointees—albeit more unwittingly—served to bias staff analysis through subtle pressure and minor technical changes. Investigative reporters have also uncovered evidence of

^{127.} See, e.g., Justin E. Bekelman, Yan Li & Cary P. Gross, Scope and Impact of Financial Conflicts of Interest in Biomedical Research: A Systemic Review, 289 JAMA 454, 463 (2003) ("By combining data from articles examining 1140 studies, we found that industry-sponsored studies were significantly more likely to reach conclusions that were favorable to the sponsor than were nonindustry studies.").

^{128.} See, e.g., Olson, supra note 99, at 47 (citing interview during which EPA Assistant Administrator Drayton expressed concern that early OMB engagement "over-politicizes the EPA background scientific work before it has had a chance to see the light of day").

^{129.} See, e.g., Wagner, Science Charade, supra note 6, at 1644–50 (discussing examples of "premeditated charade" in which agency officials select outcome and form analysis around predetermined ends).

^{130.} See supra section I.B.3 (explaining this problem).

^{131.} See Report, Endangered Species Act, supra note 40, at 1–2 (discussing Deputy Secretary MacDonald's abuse of authority in making endangered species decisions).

^{132.} See generally Doremus, Scientific and Political Integrity, supra note 42, at 1604–09 (describing this and other assaults on scientific integrity of federal rulemakings).

^{133.} See, e.g., Patricia M. Wald, Analysts and Policymakers: A Confusion of Roles?, 17 Stan. L. & Pol'y Rev. 241, 265–66 (2006) (describing pressures on analyst to "alter her

executive branch officials editing reports on climate change¹³⁴ and holding back information in scientific reports.¹³⁵ Heidi Kitrosser has even documented White House efforts to silence the scientists themselves, including the Bush II Administration's censoring of climate change scientists working for executive agencies.¹³⁶ In all of these cases, the ability of political management to pressure agency scientists led to a biasing effect that produced unreliable or highly incomplete scientific analyses.

In terms of its impacts on agency decisions, in fact, this early intervention by political management and OIRA staff could be even more consequential than the changes made much later, at the end of the process during OIRA's formal review. Early, invisible political pressure on staff analysts can fundamentally undermine the independence of the agency's work and lead to analyses that are incomplete or even misleading. This biasing effect is also much harder to trace. Although the agency's rule may still be subject to peer and public review, the literature on the funding effect reveals that this ends-oriented influence can often slip through the cracks of traditional review, infiltrating the analysis in multiple, invisible ways. The staff of the staff

2. Undercutting Expert-Peer Review of Agency Rules. — Most agencies are required to or voluntarily subject their influential rules to elaborate forms of external peer review,¹³⁹ but OIRA's changes are often made at points in the process that are exempt from this expert oversight. For example, under the Clean Air Act, EPA seeks reviews from the highly respected Clean Air Scientific Advisory Committee (CASAC) at every stage in the development of its NAAQS rules.¹⁴⁰ In other regulatory programs, agencies have developed peer review processes that are almost

judgments based on what she thinks the policymaker wants to hear and how [the policymaker's] good graces might benefit or injure [an analyst's] career").

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^{134.} See, e.g., Revkin, supra note 39 ("A White House official who once led the oil industry's fight against limits on greenhouse gases has repeatedly edited government climate reports in ways that play down links between such emissions and global warming, according to internal documents.").

^{135.} See, e.g., Thomas O. McGarity & Wendy E. Wagner, Bending Science: How Special Interests Corrupt Public Health Research 124–25 (2008) (describing officials' withholding information pertaining to air pollution after 9/11).

^{136.} See Kitrosser, supra note 103, at 2406–07 ("Given the degree and blatancy of its attempts to control scientific information, the Bush Administration offered some textbook examples of political interference in science.").

^{137.} See also Mendelson, supra note 8, at 1141–44 (recounting examples throughout federal and state government).

^{138.} See, e.g., supra note 127 and accompanying text (describing "funding effect"); see also McGarity & Wagner, supra note 135, at 60–96 (describing various techniques of "shaping science").

^{139.} See OMB, Peer Review Quality Bulletin, supra note 78, at 2667–72 (establishing government-wide guidance regarding peer review of government science documents).

^{140.} See 42 U.S.C. $\S7409(d)(2)$ (2012) (prescribing CASAC's involvement in formulation and revision of NAAQS rules).

as elaborate, referring difficult science-policy issues to external scientists for their review and opinion.¹⁴¹

But with respect to at least OIRA's formal review, since its intervention occurs after this process, the changes made by OIRA not only escape peer review but could actually undermine the review that has already occurred. Rogene Henderson, a former Chair of EPA's CASAC, underscores this possibility in his testimony to Congress. He observed during his tenure that, as a result of OIRA's last minute intervention into the secondary ozone standard, "[w]illful ignorance triumphed over sound science." He elaborated: "It bothers me, with all the hard work that went into this by the EPA staff and by CASAC to develop this different form for a secondary standard that someone can just, for no transparent reason, say, no, can't do that. That is what I meant by willful ignorance." 144

OIRA's belated engagement in the substance of science-intensive rules appears to violate even its own peer-review bulletin, which requires that all significant changes to the scientific analysis supporting an agency's rule be subjected to scientific peer review. Particularly since they are generally classified as deliberative process and escape more general public oversight, in fact, some form of expert peer review of OIRA's more significant changes seems particularly warranted.

3. The Lack of Transparency of OIRA Review. — Transparency is not only a cornerstone of scientific integrity¹⁴⁶ but of the administrative process.¹⁴⁷ To advance this core principle, regulatory agencies like EPA

^{141.} See Wagner, ACUS Report, supra note 24, at 113–15 (describing agencies' methods of using external-peer reviewers to improve agency projects).

^{142.} Cf. Home Box Office, Inc. v. FCC, 567 F.2d 9, 54, 56 n.123 (D.C. Cir. 1977) (observing when "[c]ompromises, fall-back positions, and the so-called 'real facts' are often reserved for" off-the-record communications, "the elaborate public discussion in these dockets has been reduced to a sham").

 $^{143.\} EPA's$ New Ozone Standards: Hearing Before the H. Comm. on Oversight and Gov't Reform, 110th Cong. 91 (2008).

^{144.} Id. at 117.

^{145.} See OMB, Peer Review Quality Bulletin, supra note 78, at 2665 (setting forth guidelines for peer review of scientific information likely to impact public policies or private sector decisions). Although OMB is silent on whether significant changes made to an agency's scientific analysis that occur wholly after peer review must be resubjected to a second round of expert review, it seems implicit in OMB's basic directive that influential science that supports regulation must be subject to peer review.

^{146.} See, e.g., Nat'l Acads. of Scis., Responsible Science, Volume I: Ensuring the Integrity of the Research Process 10–11 (1992) (underscoring importance of transparency to scientific integrity); Robert K. Merton, Science and Technology in a Democratic Order, 1 J. Legal & Pol. Soc. 115 (1942), reprinted as The Normative Structure of Science, *in* The Sociology of Science: Theoretical and Empirical Investigations 267, 270–73 (Norman W. Storer ed., 1973) (identifying communal sharing of data and information as key norm of science).

^{147.} See, e.g., Edward Rubin, The Myth of Accountability and the Anti-Administrative Impulse, 103 Mich. L. Rev. 2073, 2119 (2005) (describing accountability as "basic mechanism of administrative or bureaucratic government"); Jeremy Waldron, The Concept and the Rule of

endeavor to assemble public databases that summarize, and sometimes link to, each study that forms the basis for their rulemakings. 148 Docket indices typically record every (nonprivileged) exchange that occurs in the process of the agencies' decisionmaking, log every study that is considered, and make the data underlying federally funded studies publicly available. 149 Agency-initiated public hearings and open meetings provide additional opportunities for parties to access the agency's ongoing analysis and take part in that process. 150 Even the CASAC peerreview process, 151 has an important transparency component that includes making the peer-review comments and the agency's underlying responses available. 152

In contrast to the transparency of the agencies' decisionmaking processes, OIRA review is largely nontransparent. Professors Bagley and Revesz observe that "delay and secrecy have long been the hallmarks of OIRA review, and current OIRA practice has not gone far to ameliorate these problems, an observation reinforced in the work of others, most notably Professor Mendelson. In their empirical study of EPA staff, Professors Bressman and Vandenbergh report that "97% of EPA respondents stated that White House involvement was either not visible . . . or only somewhat visible to the public." Moreover, "Of the

Law, 43 Ga. L. Rev. 1, 57–61 (2008) (explaining duty to provide reasoning arises from fundamental rule of law principles that expect state to justify its actions).

148. See, e.g., Wagner, ACUS Report, supra note 24, at 112 (describing example of NAAQS program's HERO literature public database).

149. See Act of Oct. 21, 1998, Pub. L. No. 105-277, 112 Stat. 2681 (detailing amount of and specific instructions regarding allocation of appropriations for government departments, agencies, and corporations).

150. For example, in setting ambient air quality standards, EPA hosts a kick-off workshop that solicits comments from the public and scientific community (including invited scientists) about developments in science that should frame EPA's review. See U.S. Envtl. Prot. Agency, Generic NAAQS Review Process (2007), http://www.epa.gov/ttn/naaqs/pdfs/peacock_4_17_07_attachment2.pdf [http://perma.cc/Y7H5-QYLG] (indicating "workshop on science-policy issues" is first step in generic NAAQS review process).

151. See supra note 140 and accompanying text (describing CASAC process in greater detail).

152. See, e.g., Wagner, ACUS Report, supra note 24, at 114 (explaining EPA staff reports of proposed revisions to air quality standards are reviewed by science advisory body).

153. President Reagan was apparently responsible for institutionalizing secrecy in OIRA review. See, e.g., Morrison, supra note 98, at 1067–68 (describing problematic secrecy of OIRA review under President Reagan); Olson, supra note 99, at 58–60 (describing consequences of secrecy in OMB commentary on EPA rules under President Reagan).

154. Bagley & Revesz, supra note 77, at 1282.

155. See Mendelson, supra note 8, at 1149–57 ("Despite the directives and the executive order disclosure requirements... public information about the content of executive supervision of an agency decision itself... is surprisingly rare.").

156. Bressman & Vandenbergh, supra note 58, at 78; see also Sally Katzen, A Reality Check on an Empirical Study: Comments on "Inside the Administrative State," 105 Mich. L. Rev. 1497, 1502–03 (2007) (recognizing lack of transparency but arguing results of White House involvement provided greater political accountability).

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respondents who had awareness of the contents of the record, 90% stated that the record either rarely or sometimes did not contain evidence of White House involvement; the remaining 10% said it never did." ¹⁵⁷

Consistent with Executive Order 12,866 and as discussed in section II.B.2, some agencies do post within their larger rulemaking dockets a redlined version of the proposed or final rule that identifies the changes that occurred during OIRA's formal review. Some agencies may even include in their larger rulemaking docket some of their communications with OIRA, although the underlying substance of these communications is often omitted. Yet even for this limited record, the agencies rarely if ever identify the specific changes that were made at the insistence of OIRA as opposed to other agency actors; the rationale for these changes; or the policy implications that flow from them.

4. OIRA's Ghost-Authorship of Agency Analyses. — In the current formulation of White House review, OIRA effectively serves as co-author on the rules that it reviews, but it shoulders little to none of the responsibility for that authorship. Therefore, much like a ghostwriter, this powerful, silent partner may be inclined to take greater risks than the agency ordinarily would because of its invisibility and unaccountability. One could even imagine a President acting hypocritically by publicly claiming credit for heightened agency scientific integrity on the one hand, but secretly advancing the interests of specific constituencies by suggesting esoteric and generally nontransparent changes to agency science-intensive and technical rules on the other hand.

Still worse than this lack of attribution for presidential review is the possibility that the changes suggested by OIRA staff may actually lack the presidential stamp of approval in the first place. Both Cynthia Farina and Jennifer Nou identify a number of ways that OIRA staff can be insulated from direct accountability to their White House managers, leading to a disconnect between the suggestions made by OIRA and

^{157.} Bressman & Vandenbergh, supra note 58, at 81.

^{158.} See, e.g., Wagner, ACUS Report, supra note 24, at 76–85 (documenting EPA's incomplete compliance with Executive Order 12,866 § 6(a)(3)(E)).

^{159.} See id. (discussing these irregular docketing practices).

^{160.} See id. (concluding agencies rarely demarcate or explain OIRA changes to rules).

^{161.} See, e.g., Kitrosser, supra note 103, at 2406, 2418 (describing these perverse political incentives). Even in cases when the differences between agency staff and OIRA staff involve only the sufficiency of the available evidence to support a particular policy, the fact that OIRA's differing perspective is invisible and attributed instead to the agency alone is problematic. See, e.g., Heather E. Douglas, Scientific Integrity in a Politicized World, *in* Logic, Methodology and Philosophy of Science, Proceedings of the Fourteenth International Congress (Peter Schroeder-Heister et al. eds.) (forthcoming) (manuscript at 15) (on file with the *Columbia Law Review*) (using philosophy of science literature to illustrate problematic implications of nontransparency).

^{162.} See, e.g., Strauss, Overseer or Decider, supra note 3, at 972–73, 983–84 (addressing political implications of President accepting responsibility for agency rulemaking).

larger presidential priorities. 163 Various accounts of agency practice provide added confirmation of a possible divergence between OIRA's suggestions and presidential priorities. Professors Bressman and Vandenbergh, for example, report that "[m]any EPA respondents appear to believe that the OIRA career staff use that room to substitute their own institutional biases against regulation." 164 Professor Heinzerling raises similar concerns based on her experience inside EPA. In her words:

In my two years at EPA, I do not recall ever hearing of Vice-Presidential involvement in a regulatory matter.... It was far messier and more ill-defined than that. From my perspective, it was often hard to tell who exactly was in charge of making the ultimate decision on an important regulatory matter. ¹⁶⁵

Given this limited assurance of internal White House coordination, commentators question whether the unappointed staff at OIRA should be allowed to override the work of presidential appointees working in the agencies. Indeed, absent clear presidential authorization, the views of the Administrator of EPA would seem to deserve precedence over demands made by career staff at OIRA; but in practice the reverse is true. Indeed, the risks of contestable interventions appear even greater for the numerous, intricate changes that OIRA staff can make to science-intensive and technical rules since these modifications are likely to fall under the presidential radar and similarly lack evidence of a presidential directive. Without cataloging and explaining the various changes, both external mechanisms of expert review and internal mechanisms of accountability break down.

^{163.} See Farina, supra note 57, at 411 (suggesting number of executive appointees and varying levels of appointee competency and skill contribute to divergence from president's priorities); Nou, supra note 48, at 1801 ("The decision whether to elevate an issue to higher-level decisionmakers will likely depend on the respective staff members' senses of the political dynamics and whether their arguments might prevail during the resulting negotiations."); see also Strauss, Presidential Rulemaking, supra note 3, at 984–85 ("[T]he President is simply in error and disserves the democracy he leads when he behaves as if rulemakings were *his* rulemakings.").

^{164.} Bressman & Vandenbergh, supra note 58, at 75.

^{165.} Heinzerling, Inside EPA, supra note 60, at 342.

^{166.} As Professor Morrison noted thirty years ago:

It is one thing for OMB to play the role of institutional skeptic, questioning an agency in order to be sure that it has considered matters thoroughly. It is quite another for it to second-guess technical decisions made by career personnel, let alone those of Cabinet officers or other agency heads confirmed by the Senate.

Morrison, supra note 98, at 1067; see also Bressman & Vandenbergh, supra note 58, at 70, 98–99 (raising "concern about whether White House involvement, whether exercised by OIRA or other offices, is too idiosyncratic to constitute a model of agency legitimacy"); McGarity, Presidential Control, supra note 58, at 451, 455–56 (describing OMB as "agency that has a mission of advancing its own extra-statutory policy preferences over another agency's statutory goals").

^{167.} See, e.g., Seidenfeld, supra note 11, at 1422 (concluding "influence on agency action by 'presidential review' often will not reflect the judgment of the President himself").

B. Undermining Institutional Checks and Balances as a Result of Nontransparent OIRA Review

Administrative agencies in the United States are held accountable through multiple sources of institutional oversight—not only by the President but also by Congress and the courts. ¹⁶⁸ Yet when the President enjoys added, largely invisible power to influence science-intensive rules, it undermines corresponding disciplining mechanisms.

For its part, Congress maintains multiple methods of overseeing agency actions, and in this regard, agency science-intensive decisions have been subjected to particularly intricate legislative controls. Over just the last few decades, for example, Congress has imposed increasingly elaborate requirements on agencies for data quality¹⁶⁹ and data transparency¹⁷⁰ and has added more extensive peer-review requirements to several regulatory programs.¹⁷¹ Congress has even gone so far as to demand that agencies use only the "best available science" in select programs, signaling its high scientific ambitions for agency rules. 172 A steady stream of legislative proposals threatens even more demanding requirements for the future, including additional data transparency, peer review, and analytical requirements.¹⁷³ But if the White House can request or effectively insist on changes to the science-intensive rules without identifying or explaining the changes, then these backdoor political interventions undermine the principle objectives of these legislatively prescribed procedures.

168. See, e.g., Strauss, Institutional Design and Ethos, supra note 1, at 269 (diagramming agency oversight relationships).

169. See, e.g., Treasury and General Government Appropriations Act for Fiscal Year 2001 § 515, Pub. L. No. 106-554, § 515, 114 Stat. 2763, 2763A-154 (2000) (seeking to "ensur[e] and maximiz[e] the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies").

170. See, e.g., Data Access Act, 64 Fed. Reg. 54,926, 54,930 (Oct. 8, 1999) (granting federal government "right to . . . [o]btain, reproduce, publish or otherwise use the data first produced under an award").

171. See, e.g., Amendment to the Clean Water Act for BP Damage Assessments, 33 U.S.C. § 1321(t)(1)(E) (2012) (stipulating caliber of data quality for Trust Fund grants for Gulf Coast states); Safe Drinking Water Act, 42 U.S.C. § 300g-1(b)(3)(A) (2012) (requiring agency administrators use "best available, peer-reviewed science and supporting studies conducted in accordance with sound and objective scientific practices" and collect data via "accepted methods or best available methods").

172. 33 U.S.C. \S 1321(t)(1)(E). See generally Holly Doremus, The Purposes, Effects, and Future of the Endangered Species Act's Best Available Science Mandate, 34 Envtl. L. 397, 418–32 (2004) (describing potential motivations for Congress's best available science mandate).

173. See, e.g., 160 Cong. Rec. H1686 (daily ed. Feb. 6, 2014) (proposing "bill to prohibit the Environmental Protection Agency from proposing, finalizing, or disseminating regulations or assessments based upon science that is not transparent or reproducible"); 159 Cong. Rec. S3760 (daily ed. May 22, 2013) (proposing bill to "reauthorize and modernize the Toxic Substances Control Act").

Invisible White House review also undermines Congress's legislative delegations to the agencies-as-experts. In his important article on White House review, Professor Strauss argues that while it is institutionally appropriate and even desirable for the White House to serve as overseer of agency decisions, when it acts as "decider" in statutes that delegate the decision to the agency, the White House exceeds its legal and perhaps even constitutional authority.¹⁷⁴ Yet, whether the White House role falls into one or the other box—decider versus overseer—is effectively inscrutable under the current approach to OIRA review. For example, disputes between agencies can be "elevated" to the White House, but the fact of that elevation as well as the ensuing discussions can be hidden from view.¹⁷⁵ Indeed, if legally it is important to be able to ascertain whether the President is acting as "overseer" or "decider," then heightened transparency over this presidential role is imperative.

The courts' review of agency rules is also undermined when the White House is able to exert undisclosed influence over the agencies' science-intensive rules. 176 Throughout the last four decades of judicial review, courts have generally deferred to the agencies-as-experts in their review of rulemakings, 177 particularly when an agency provides reasoned explanations for its position. 178 But this long-standing doctrinal approach is in jeopardy if the contested choices are the result of unacknowledged, last-minute "suggestions" from the White House. The supporting analysis becomes post hoc and ends-oriented rather than an honest and rigorous engagement with the evidence that is vetted through deliberative processes and peer review.

^{174.} Strauss, Overseer or Decider, supra note 3, at 737–38, 749–50 (delineating institutional difference between President as "decider" and President as "overseer" of agency action and arguing former is inappropriate); accord Kevin M. Stack, The President's Statutory Powers to Administer the Laws, 106 Colum. L. Rev. 263, 276–99 (2006) (arguing statutes delegating authority to agencies should not be read to include president as implied recipient of authority).

^{175.} See, e.g., Heinzerling, Inside EPA, supra note 60, at 362 (noting OIRA does not disclose to public when elevations occur nor explain to agencies why items on regulatory agenda "do not fit with the President's agenda").

^{176.} In the words of Professor Strauss, "[T]he structure of judicial review of administrative action depends, top to bottom, on the presumption that the matter being reviewed is in some respects the product of an expert, not merely a political judgment." Strauss, Overseer or Decider, supra note 3, at 752.

^{177.} See, e.g., Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 103 (1983) ("[A] reviewing court must 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 . . . a reviewing court must generally be at its most deferential."); Nat. Res. Def. Council, Inc. v. Envtl. Prot. Agency, 902 F.2d 962, 968 (D.C. Cir. 1990) (deferring to agency decisions on frontiers of scientific knowledge), vacated in part, appeal dismissed in part, 921 F.2d 326 (D.C. Cir. 1991); Envtl. Def. Fund, Inc. v. EPA, 548 F.2d 998, 1004–05 (D.C. Cir. 1976) (deferring to agency when issue concerns battle of experts).

^{178.} See infra notes 181–182 and accompanying text (describing courts' predicating deference on notion that agencies made decisions based on deliberative process).

There appear to be at least two overlapping justifications for the courts' deference to agency experts, both of which are undermined by OIRA review. First, some courts provide agencies "an extreme degree of deference... when [the agency] "is evaluating scientific data within its technical expertise,""179 in large part because it is the agency, rather than the judiciary, who possesses greater knowledge and familiarity with respect to complex, science-policy issues. 180 Clearly, however, if some of the decisions are suggested by White House staff off the record and outside of the analysis process, then the courts' basis for deference no longer holds. Judges are no less technically competent than political officials; indeed with respect to science-intensive analyses, their distance from politics may actually make them more competent.

Other courts seem to predicate their extra deference not so much on the agency's superior scientific staff as on the fact that the agencies have made their decisions based on an elaborate and somewhat democratic analytical-deliberative process. The agencies' use of science advisory boards, elaborate internal and external mechanisms of peer review, and public comment processes all provide internal checks on their analysis, resulting in the kind of rigorous decisionmaking process entitled to judicial deference. The second staff of the second se

If changes can be made invisibly and outside of this deliberative process by the White House, this second basis for deference to the agency rule is no longer justified either. In fact, there is some evidence that courts vacate agency rules precisely for this reason, when evidence reveals that political staff works behind the scenes to alter the agency's technical analysis without explanation. In their essay on *Massachusetts v. Environmental Protection Agency*, Jody Freeman and Adrian Vermeule identify a line of cases that they attribute to the courts' impatience with "executive override of expert judgments" in ways that "appear to disregard established professional or bureaucratic practices and procedures." While the courts' remands are based explicitly on the lack of "reasoned explanation" by the agency for certain key agency choices, in at least some of the cases, the record presented to the court revealed that these unexplained choices were in fact made by the President after the

^{179.} City of Waukesha v. Envtl. Prot. Agency, 320 F.3d 228, 247 (D.C. Cir. 2003) (quoting Huls Am., Inc. v. Browner, 83 F.3d 445, 452 (D.C. Cir. 1996)); see also, e.g., Christopher D. Ahlers, Presidential Authority over EPA Rulemaking Under the Clean Air Act, 44 Envtl. L. 31, 69 n.295 (2014) (supporting proposition that "court has routinely stated that the review of technical and scientific determinations merits the highest level of deference").

^{180.} See, e.g., Int'l Harvester Co. v. Ruckelshaus, 478 F.2d 615, 650–51 (D.C. Cir. 1973) (Bazelon, C.J., concurring) (making this point).

^{181.} See, e.g., Meazell, supra note 30, at 739–43 (identifying such reasoned decisionmaking as primary basis for judicial deference to agency science).

^{182.} See supra notes 26–33 and accompanying text (describing these processes).

^{183.} See Freeman & Vermeule, supra note 30, at 93–94 (suggesting courts are suspicious of "executive usurpation" of determinations usually made by agency experts). 184. Id. at 94.

deliberative process had concluded.¹⁸⁵ While the courts in several cases fastidiously avoid even mentioning this eleventh-hour executive intervention into the challenged agency choices, much less making it the basis for reversal,¹⁸⁶ the fact that these interventions were both nontransparent and fell outside the agency's deliberative processes may have caused courts to look more critically at the agency's ex post justifications in the preamble and reject the rule based on its lack of a "reasoned explanation." ¹⁸⁷

But the primary problem with this "reasoned explanation" test lies less with its application—given that courts have used it to detect at least some ends-oriented changes to agency rules in cases where OIRA's role surfaces through the record—and more with the courts' remedy. Once an unsupported standard or decision is caught by the "reasoned explanation" test, the court remands the rule for explanation. But on remand, it is the agency—not the President—who must supply the missing rationale. And in responding to this remand, the agency has two options: It can provide an explanation based on its understanding of the White House's changes

185. In a case that postdates Professors Freeman and Vermeule's analysis, *Mississippi v. Environmental Protection Agency*, the D.C. Circuit remanded EPA's secondary ozone standard for lack of explanation, although the change was made by OIRA. See 744 F.3d 1334, 1362 (D.C. Cir. 2013) (remanding standard for reconsideration); see also Bruff, Presidential Management, supra note 52, at 572 (discussing how "hasty decisions" involved in OIRA review increase vulnerability of rules to judicial reversal); Driesen, supra note 90, at 367 (describing similar judicial reversal of EPA Clean Water Act entrainment rule due to inadequately supported restoration provision inserted by OIRA).

186. See, e.g., Lisa Heinzerling, Classical Administrative Law in the Era of Presidential Administration: Response to Daniel Farber and Anne Joseph O'Connell, The Lost World of Administrative Law, 92 Tex. L. Rev. See Also 171, 177–79 (2014), http://www.texaslrev.com/classical-administrative-law-in-the-era-of-presidential-administration-response-to-daniel-farber-and-anne-joseph-oconnell-the-lost-world-of-administrative-law/ [http://perma.cc/2WCA-MGPQ] (criticizing courts' effort to avoid confronting role of White House in agency rules).

187. There is no general legal directive regulating ex parte communications during informal rulemakings, see, e.g., Esa L. Sferra-Bonistalli, Ex Parte Communications in Informal Rulemakings 9–10 (2014), https://www.acus.gov/sites/default/files/documents/Final%20Ex%20Parte%20Communications%20in%20Informal%20Rulemaking%20%5B5-1-14%5D_0.pdf [https://perma.cc/M5BK-YHWL] ("[T]he APA is decidedly silent on any prohibition, treatment, and even the appropriateness of . . . 'ex parte communications' in the informal rulemaking context."), and the disclosure requirements for OIRA suggestions under Section 6(a)(2) of Executive Order 12,866 are not judicially enforceable. See Exec. Order No. 12,866, 3 C.F.R. 638, 649 (1994), reprinted as amended in 5 U.S.C. § 601 app. at 802, 806 (2012) (stating nothing in Executive Order shall affect right of judicial review).

188. See, e.g., Am. Lung Ass'n v. Envtl. Prot. Agency, 134 F.3d 388, 392–93 (D.C. Cir. 1998) (remanding rule for reconsideration because agency failed to provide reasoning for decision); see also Meazell, supra note 30, at 748–50 (describing court's authority to remand cases in which agency "fails to explain itself in a reasoned manner").

189. See, e.g., Ahlers, supra note 179, at 41–46 (documenting OIRA's role in delaying EPA's ozone NAAQS standards over time).

or it can offer a post hoc justification that it hopes the court will accept.¹⁹⁰ Either way, the best that can be expected is the imposition of an extra paper requirement on the agency to explain a change that it did not make.¹⁹¹ The worst-case result is that this type of remand may unwittingly encourage still more White House intervention since it can serve to delay the implementation of rules the White House might prefer not be promulgated in the first place.¹⁹² From the perspective of the White House, then, the remand remedy ironically increases its power over the agency, rather than the reverse.

C. OIRA's Review Increases the Susceptibility of Agency Rules to Capture

Perhaps most problematic among these adverse consequences is that invisible and unrestricted executive access to the technical details of agency rules leaves the rules vulnerable to politically directed changes that favor well-heeled interest groups without leaving "fingerprints." For science-intensive issues that undergo elaborate deliberative processes, this risk that the White House acts only as little more than a "conduit" for the private sector is particularly worrisome. ¹⁹⁴

Concerns about capture animate the academic writing on OIRA review more generally. Professors Bagley and Revesz hypothesize that—relative to agencies—OIRA is more susceptible to public-choice drift since

190. See, e.g., McGarity, Presidential Control, supra note 58, at 461 (expressing concern that, when agency supplies rationale post hoc for presidential intervention, "record that the agency fabricates for appeal is a second, but entirely irrelevant, record").

191. While in theory the agency could concede that the revised rule is unsupported or indefensible, this frank admission seems unlikely to pass muster with OIRA, particularly if OIRA suggested the change in the first place.

192. A remand requiring the agency to provide a more detailed explanation will lead to delay in the final issuance of an unwanted rule without violating the legislative deadline itself. Cf. Envtl. Def. Fund v. Thomas, 627 F. Supp. 566, 570–72 (D.D.C. 1986) (condemning OMB for holding up EPA's rule beyond statutory deadline while allowing EPA extension to promulgate regulations).

193. See Peter Behr, If There's a New Rule, Jim Tozzi Has Read It, Wash. Post (July 10, 1981), http://www.washingtonpost.com/archive/politics/1981/07/10/if-theres-a-new-rule-jim-tozzi-has-read-it/1554fe9b-2b1e-43fa-8b6b-6d1ae393924e/ [http://perma.cc/9GLM-JLUL] (internal quotation marks omitted) (quoting OMB official Jim Tozzi on his preference for direct conversation over time-consuming "memos, reports and other written messages").

194. See Strauss, Presidential Rulemaking, supra note 3, at 974, 983–84 (discussing potential for President to act as vehicle for private parties in order to get "off-the-record views" into proceedings (internal quotation marks omitted) (quoting Sierra Club v. Costle, 657 F.2d 298, 405 n.520 (D.C. Cir. 1981))); see also Bagley & Revesz, supra note 77, at 1305–06 (using public-choice-theory to illustrate President not "immune to public choice pressures"); Steinzor, supra note 58, at 262–63, 267 (detailing breakdown of OIRA meetings to reflect capture of OIRA by industry and discussing OIRA's consistently industry-friendly impact on rules).

it is not only nontransparent but also largely free of judicial oversight.¹⁹⁵ They conclude that "[i]t is frankly difficult to understand how an agency [like OIRA] committed to operating in the shadows could be well positioned to minimize public choice pathologies."¹⁹⁶ Justice Kagan concedes that when OIRA's review is "hidden from public scrutiny, the President will have greater freedom to play to parochial interests."¹⁹⁷

Regulatory participants echo these structural worries. Interest groups who restrict themselves to the four corners of the agency's administrative process report that they feel like "shmucks" when they find out that the real game is played five blocks away, in the staff offices of OIRA. PA's former science advisor, Paul Gilman, observes that lobbying OIRA has become a "cottage industry" for the sophisticated stakeholders inside the beltway. Promer EPA Administrator, William Reilly, admits openly to his own concerns about capture during his tenure:

It is profoundly frustrating to an EPA Administrator to go through all of the careful control processes of arriving at a regulatory decision or proposal and to... make sure any contact with the regulated community is recorded, noted, memorialized, public, on the record—and then to have it go to the White House and see many of the same parties engaged in influencing other people who have influence over such decisions without any public record, without any acknowledgment that this is going on. The secrecy that characterized that process, I think, is a source of great mistrust and, potentially, of corruption. Corruption in the sense that it violates process, not that it involves anyone taking any money.²⁰⁰

Scattered empirical evidence accumulating over the last three decades reinforces the possibility that OIRA sometimes represents

^{195.} See Bagley & Revesz, supra note 77, at 1309 (observing since OIRA is not covered by judicial review or APA, it may have "particular susceptibilities to public choice pressures").

^{196.} Id. at 1310.

^{197.} Kagan, supra note 67, at 2337.

^{198.} Statement of Anonymous Public Interest Attorney to Wendy Wagner, Professor, Univ. of Tex. Sch. of Law, in S.F., Cal. (Oct. 11, 2013) (discussing role of OIRA in agency rules).

^{199.} Paul Gilman, Remarks at National Academy of Sciences Workshop: Improving the Use of Science in the Administrative Process 100–01 (Sept. 10, 2012), http://sites.nationalacademies.org/PGA/cs/groups/pgasite/documents/webpage/pga_072331.pdf [http://perma.cc/4KTT-CYQ4] (describing insufficient transparency of outside influences on regulatory process). This is not a new role, however. A 1984 article on OMB by Erik Olson reported, "OMB is a new focus of power in the federal bureaucracy to which many sophisticated attorneys turn if the rulemaking agency is likely to be unreceptive." Olson, supra note 99, at 55. He cites former EPA General Counsel, Joan Bernstein, as suggesting that it was legal malpractice for an industry attorney to miss this key step in the regulatory process. Id. at 55–56.

^{200.} Interview by Dennis Williams with William Reilly, Adm'r, U.S. Envtl. Prot. Agency, in Wash., D.C. (Sept. 1995), http://www2.epa.gov/aboutepa/william-k-reilly-oral-history-interview [http://perma.cc/3MH5-7DVG].

narrow constellations of interests that have the financial resources to invest in this second bite at the apple. ²⁰¹ The danger first surfaced under President Reagan, during which time "[t]he OMB process . . . created an additional mechanism for the back-channel participation of industry groups, which reinforced the review system's antiregulatory inclinations." ²⁰² An early effort to access the documents underlying OMB's interventions into EPA rules in the early 1980s revealed considerable contacts with the private sector, including the sharing of EPA rules with industry for comment before the rules were publicly available. ²⁰³

Subsequent studies reveal continued concerns about imbalanced stakeholder engagement with OIRA. The Government Accountability Office (GAO), for example, found in 2003 that the stakeholders that utilized OIRA most frequently were industry representatives.²⁰⁴ In an empirical examination of these same rules, David Driesen found that OIRA's recommended changes reduced health and environmental protections, thus favoring industry, for twenty-four of the twenty-five rules it considered (its influence in the twenty-fifth was neutral). 205 In their study of EPA officials' views of OIRA during the Bush I and Clinton Administrations, Professors Bressman and Vandenbergh report that the strong majority of those surveyed believe that the "White House readily sought changes that would reduce burdens on regulated entities, and veered from those that would increase such burdens."206 Professor Steinzor and co-authors examined the composition of stakeholder meetings with OIRA and discovered that 65% of the attendees at the meetings were industry representatives, about five times the number of public interest groups represented.²⁰⁷ Similarly, Steven Croley, in his empirical study published in 2003, found that 56% of the meetings OIRA conducted with stakeholders to discuss rulemakings were exclusively with industry representatives, as compared with 10% held exclusively with

^{201.} See generally Bagley & Revesz, supra note 77, at 1305–12 (analyzing OIRA operations through public choice theory lens).

^{202.} Kagan, supra note 67, at 2280; see also Copeland, Role of OIRA, supra note 121, at 1267–68 (noting shortly after President Reagan established OIRA review, "OIRA met with representatives from dozens of businesses and associations seeking regulatory relief and returned dozens of rules to the agencies for reconsideration").

^{203.} See Olson, supra note 99, at 48, 56 (noting OMB accepted and sometimes solicited industry comments on proposed rules).

^{204.} See U.S. Gov't Accountability Office, GAO-03-929, Rulemaking: OMB's Role in Review of Agencies' Draft Rules and the Transparency of Those Reviews 11 (2003), http://www.gao.gov/new.items/d03929.pdf [http://perma.cc/5LYK-NJVJ] [hereinafter GAO, Role in Review] (examining OIRA contact with outside parties); cf. McGarity, Presidential Control, supra note 58, at 450 (recounting older examples of presidential meddling in agency regulation in response to special interest pressure).

 $^{205. \ \,}$ See Driesen, supra note $90,\,400\text{--}03$ (examining impact of cost–benefit analysis on environmental regulations).

^{206.} Bressman & Vandenbergh, supra note 58, at 86–87.

 $^{207.\,}$ Steinzor et al., supra note 90, at 8.

public interest groups.²⁰⁸ Although Professor Croley's conclusions are nonetheless cautiously optimistic about OIRA's broader representation of the public interest, he concludes that at least in some cases there is credence for the possibility that the White House operates, in part, as an additional "forum for interest groups who object to aspects of a rule to enlist the White House to change it."²⁰⁹

There is also evidence that these backdoor channels through OIRA can be used by interest groups who fail to persuade the agency of their position during the rulemaking process itself. EPA Administrator Douglas Costle, who served under President Reagan, characterized OIRA review as providing industry an "extra inning" for attacking EPA rules. ²¹⁰ Other indicia of the profitability of using OIRA review for securing changes to a rule are more output-oriented. In the aforementioned GAO report, eleven of the twenty-five rules in its sample showed OIRA meeting with regulated industry representatives, and in seven of these eleven rules OIRA adopted the position advanced by the regulated parties—indeed in some cases OIRA used identical language as that proffered by these parties. ²¹¹

IV. A REFORMED APPROACH THAT ENHANCES THE SCIENTIFIC AND POLITICAL INTEGRITY OF AGENCY RULES SIMULTANEOUSLY

The current incompatibility of White House review and agency decisionmaking processes inevitably leads to the much more difficult question of what executive oversight *should* consist of for these expert agencies. In search of a better institutional design, a long line of institutional architects, with Professor Strauss leading the parade, have puzzled over how to balance two seemingly inconsistent goals for the administrative state—scientific and technical expertise on the one hand and democratic accountability on the other.²¹² In other words, while decisions need to be informed by the best information that can be obtained, they also must respond to basic public preferences, or at least to the policy choices advanced by their elected representatives.²¹³

Rather than understand expert agencies and presidential control as fundamentally in conflict, this Part concludes by proposing a reformed institutional design that seeks to capitalize on these different perspectives

^{208.} Steven Croley, White House Review of Agency Rulemaking: An Empirical Investigation, 70 U. Chi. L. Rev. 821, 853, 871 (2003).

^{209.} Id. at 877.

^{210.} Olson, supra note 99, at 57 n.294.

^{211.} See GAO, Role in Review, supra note 204, at 89–90 (providing explanation of and chart illustrating findings).

^{212.} See Strauss, From Expertise to Politics, supra note 2, at 774–77 (discussing merits and drawbacks of democratic involvement in rulemaking process); see also infra section IV.A (citing this literature).

^{213.} See Seidenfeld, supra note 11, at 1451 ("[P]olitical influence must be part of the deliberative process.").

by drawing them out into the open through a more visible, public dialogue. Section IV.A presents an abstract, theory-based understanding of how to reconcile scientific expertise with policy-based choices in regulatory decisionmaking. In section IV.B, the discussion turns to practice and attempts to operationalize the model through particular adjustments to the processes for White House review and agency decisionmaking processes simultaneously. The section closes with some preliminary suggestions for how this type of reformed process might be implemented in the future.

A. Encouraging Rigorous Expertise and Political Engagement in Agency Rules in Theory

A reformed institutional blueprint begins with Professor Strauss's efforts to locate a distinctive place for agencies that is at once separate from the other three branches and at the same time inferior to and controlled by them.²¹⁴ Accordingly, and at least in theory, the agency's initial expert analyses should be kept distinct from the political officials' equally valuable input into those analyses.²¹⁵

By delineating the collaborators—by placing micro-experts (e.g., agency technical staff) in open dialogue with the macro-experts (e.g., White House staff)—each can contribute to the collective problem-solving while still contending with the information and positions of the other. Such juxtaposition seems more likely to spark rigorous policymaking discussions by drawing out the different perspectives rather than allowing them to merge their contributions in secret. As Colin Scott notes, in a healthy administration, conflict and tension are not only

^{214.} See, e.g., Strauss, The Place of Agencies, supra note 1, at 578–80 (arguing agencies should be viewed as subordinate entities rather than distinct branch of government); Strauss, Presidential Rulemaking, supra note 3, at 983–85 (criticizing presidential control of rules that are indistinguishable from contributions made to rules by agencies); see also Strauss, Overseer or Decider, supra note 3, at 757 (touting independence and unique democratic legitimacy of agencies).

^{215.} Cf. SEC v. Chenery Corp., 332 U.S. 194, 209 (1947) (noting agency's experience, appreciation of complexities and policies, and responsible treatment of facts "justif[y] the use of the administrative process"); Frederickson et al., supra note 15, at 2 (identifying as one of "elemental features of public administration" individual competence, "which include[s]... expertise").

^{216.} See, e.g., Dan Wood & Richard Waterman, Bureaucratic Dynamics: The Role of Bureaucracy in a Democracy 126 (1994) (observing "[i]t is healthy for bureaucracy to use its information advantages to better inform principals on either policy matters or the nature of the bureaucratic process"); Colin Scott, Accountability in the Regulatory State, 27 J.L. & Soc'y 38, 55 (2000) (touting importance of checks and balances in which "opposed maximizers" hold one another in check); Strauss, From Expertise to Politics, supra note 2, at 776–77 (gesturing towards this collaboration and suggesting, in such settings, courts should play much more limited oversight role).

^{217.} See, e.g., Shapiro et al., supra note 24, at 489–90 (describing various democratic theories of administrative state and identifying combined independence and deliberative origins of agency position as among most important in ensuring rulemaking has democratic grounding).

inevitable but desirable, since "the objective should not be to iron out conflict, but to exploit it to hold regimes in appropriate tension."²¹⁸ The resulting enhanced discourse between diverse institutional contributors to complex agency rules thus produces an "aggregate accountability" whereby the entire system works well because it works productively together.²¹⁹

To those well versed in science-policy studies, a proposal to separate expertise from policy may seem foolhardy. The National Academy's effort to demarcate risk assessment (the "science") from risk management (the "policy") in the 1980s was largely discredited as practically impossible given the interwoven judgments needed in assessing risk.²²⁰

Yet some independence and separation of the two forms of decision-making is in fact possible at discrete points in the decisionmaking process, particularly when experts amass and summarize the available evidence to inform a larger policy question. Policymakers, for example, should formulate the questions that technical analysts research, but the job of assembling and evaluating the quality of the evidence bearing on the question(s) is appropriately conducted by agency experts. Technical analysts can also be involved in creating competing models to synthesize the evidence, provided this work is accompanied by clear explanations of the underlying assumptions and other framing choices made in the development of the models.²²¹ The result of these expert assessments is thus not a quantitative "answer" but a rigorous summary of the available research and alternatives.²²²

Even in this more limited role of the agency expert as informationgatherer, however, there is the potential for hidden judgments to find their way into policymaking. To protect against that risk, the agency experts' syntheses and models must also be subjected to rigorous public comment and expert peer review at each step in the analysis. Consistent with the scientific process (and in contrast to top-down political directives), the core ingredient for this expert analysis is rigorous

^{218.} Scott, supra note 216, at 57; see also Kitrosser, supra note 103, at 2419 (reaching similar conclusion).

^{219.} Scott, supra note 216, at 60 (emphasis omitted).

^{220.} See, e.g., Ellen K. Silbergeld, Risk Assessment and Risk Management: An Uneasy Divorce, *in* Acceptable Evidence: Science and Values in Risk Management 99, 99 (Deborah G. Mayo & Rachelle D. Hollander eds., 1991) (discussing artificial separation and problems it creates).

^{221.} See, e.g., Pasky Pascual et al., Making Method Visible: Improving the Quality of Science-Based Regulation, 2 Mich. J. Envtl. & Admin. L. 429, 470–71 (2013) (arguing agencies' use of transparent methods of questioning allows courts to determine soundness of their work).

^{222.} See, e.g., U.S. Envtl. Prot. Agency, Policy Assessment for the Review of the Particulate Matter National Ambient Air Quality Standards 1-15 to 1-16 (2011), http://www.epa.gov/ttn/naaqs/standards/pm/data/20110419pmpafinal.pdf [http://perma.cc/FE4A-6PGU] (summarizing available data on particulate matter).

scrutiny from diverse critics through a transparent process.²²³ By positioning agency career professionals as independent experts who summarize the relevant evidence under the watchful eye of external scientists and the public, the agency experts develop a more dispassionate and grounded perspective that provides distance from the heated political center.²²⁴ In Justice Stephen Breyer's words, "[a] depoliticized regulatory process [that is based in expertise, rationalization, and insulation] might produce better results, hence increased confidence, leading to more favorable public and Congressional reactions."²²⁵

This expert review of the evidence will inform but not constrain policy choices made throughout the decisionmaking process. The policymaker still must frame the initial question(s) that drives the expert analysis of the evidence. The policymaker also must make the needed policy choices at the end and throughout the decision process. Thus, if a policy decision is selected that phases out a pollutant about which little is known, the policymaker's decision is set against this evidentiary record and must be defended or criticized accordingly. Conversely, if a policy decision is made to forgo regulatory controls on a toxic chemical, then the policymaker's choices must be defended against the agency expert's summary and synthesis of the relevant literature and data; policymakers cannot hide behind backroom negotiations that lead to invisible changes in model parameters or that cherry-pick only those studies that support their preordained conclusion.²²⁶

By delineating the contributions of expert agency staff from political staff, the level of public visibility and engagement in complicated, science-intensive rules is elevated. Since the White House offers an institutional perspective grounded in a type of democratic accountability that emerges from the electoral process, ²²⁷ its appropriate contribution is to provide a larger macro-perspective on the issues rather than engage in the technical minutiae. Moreover, if there are disagreements between the

^{223.} See, e.g., Amy Gutmann & Dennis Thompson, Democracy and Disagreement 12–16 (1996) (expanding on deliberative feature of agency processes); Wood & Waterman, supra note 216, at 145 (same).

^{224.} See, e.g., Seidenfeld, supra note 11, at 1446 ("[P]roperly structured, administrative law can encourage rulemaking teams to reflect many of the values and perspectives of the various stakeholders affected by a regulatory matter and to gain valuable understanding from consideration of those various perspectives.").

²²⁵. Stephen Breyer, Breaking the Vicious Circle: Toward Effective Risk Regulation $55-56 \ (1993)$.

^{226.} Thus, while an effort to insulate the experts' review of the scientific literature from policymaking will inevitably entail some arbitrary line-drawing, the alternative—namely, throwing the entire science-policy decision to the winds of the political process and abandoning any pretense of rigorous expert analysis in the agencies—is substantially less desirable.

^{227.} For a thoughtful discussion about what that means, see Kitrosser, supra note 103, at 2403–05 (outlining unitary argument for presidential accountability and discussing how number of officials and decisions complicates executive accountability).

agency and presidential staff on the appropriate policies, these must be resolved without using scientific-sounding analyses as cover. Even if presidential priorities end up carrying significant weight in the agency's decisionmaking process by distinguishing between expert summaries of the evidence and policy decisions made based on that evidence, "political influence [is not allowed to] undermine the deliberative benefits that agency rulemaking delivers." ²²⁸

B. Encouraging Rigorous Expertise and Political Engagement in Agency Rules in Practice

While the institutional concept of agency independence is simple, operationalizing it is difficult since it requires instituting artificial but inflexible firewalls between expert analysis and policymaking. Despite these design challenges, basic scientific principles can help delineate the expert staff's contribution from political input, such as providing authorship and attribution to staff when appropriate; ensuring expert analyses are subjected to rigorous scrutiny; and insisting on transparent and candid explanations of the significant inputs in the analysis. EPA has, in fact, already instituted these procedures in one of its highly regarded regulatory processes, which is discussed later in this section. EPA's effort reveals that these types of formalized processes are not only possible but can be effective in creating a more robust synthesis of the scientific record and political considerations.

Four separate reform measures are proposed here to advance the idealized collaboration between expertise and politics and protect against the risk that contributions of political officials will be conflated with the analyses of scientific staff. First, to facilitate independence, the staff technical analyses should be memorialized in discrete reports that are firewalled from political input unless that input is placed into the public record. While the production of discrete reports is not essential, reports make it easier to protect expert analyses from political influence by identifying a limited number of staff authors during finite time periods. These staff reports can also be produced at multiple stages of the agency's analysis, including producing a summary of the relevant scientific and technical literature that bears on a policy question; developing risk and modeling scenarios; and identifying plausible alternative policy options based on an analysis of the evidence.

^{228.} Seidenfeld, supra note 11, at 1451.

^{229.} The line-drawing around technical projects will necessarily be somewhat arbitrary given the mixed science-policy features of the agency decisions. Yet, based on EPA's NAAQS program, there is promising precedent for establishing these lines of separation. See infra note 240 and accompanying text (highlighting informal firewalls used to insulate scientific staff from political engagement). Additionally, while numerous diverse networks make the notion of "an agency," much less "an independent agency," an oversimplification or even a fiction, a focus on project outputs (e.g., technical reports) largely sidesteps these messier features of agency operations.

The most important feature of this particular reform measure, however, is ensuring that all suggestions on staff scientific analyses, including those offered by the White House and sister agencies, be treated like ex parte communications and placed on the record rather than withdrawn from public view by deliberative process protections.²³⁰ Agency-expert analyses should also be firewalled from political management within the agency itself.²³¹ Indeed, political appointees within the agency or from sister agencies may present greater threats to the legitimacy of agency expertise than the White House.²³²

Second, even after these expert assessments of the literature and modeling reports are completed and the agency has formulated a proposed rule signed by its political appointee, the changes made at the suggestion of the White House—at any point, whether during or before formal OIRA review—should be documented consistent with the requirements of Executive Order 12,866.²³³ Additionally, at least for technical changes, the White House should provide some explanation for its suggestions since these changes fall outside of the White House's presumptive area of expertise.²³⁴ This added documentation protects against the potential for science-intensive rules to become the devil's playground.

230. See, e.g., Doremus, Scientific and Political Integrity, supra note 42, at 1646–47 (proposing firewalls); see also Bressman & Vandenbergh, supra note 58, at 95–96 (stressing earlier involvement of OIRA in agency rulemakings requires transparency, ideally implemented as docketed communications).

231. See Doremus, Scientific and Political Integrity, supra note 42, at 1634–35 (offering recommendation with respect to proceduralizing role of appointees); see also Steinzor, supra note 58, at 264–65 (providing example of added influence of affected agencies in EPA's coal ash rule).

232. Thus, rather than draw lines between the agency and the White House for heightened transparency and accountability, as required by Executive Order 12,866, see Exec. Order No. 12,866, 3 C.F.R. 638, 640–41 (1994), reprinted as amended in 5 U.S.C. § 601 app. at 802, 803 (2012), the lines recommended here are drawn within the agency between career and political staff, albeit only with respect to preparation of discrete but necessary technical assessments that inform decisionmaking. Cf. Strauss, Possible Controls, supra note 2, at 135–39 (considering strict separation between career and political staff in abstract—and presumably with respect to more than just transparency requirements—but expressing doubts separation will actually draw accurate line between politics and science).

233. See Exec. Order No. 12,866, 3 C.F.R. 638, 644–46, reprinted as amended in 5 U.S.C. § 601 app. at 802, 804–05 (describing reporting requirements for significant agency actions); see also Mendelson, supra note 8 (arguing for heightened transparency of OIRA's changes); Strauss, Possible Controls, supra note 2, at 151–53 (insisting on transparency as prerequisite for White House influence). While the Executive Order's reporting requirements have been interpreted by OIRA to require transparency only during its review process, the underlying conception of demarcating OIRA's contribution (as well as the ambiguous language) favors an interpretation that expects transparency for any significant suggestion made by OIRA at any point in the rulemaking process.

234. In addition, rather than waiting until the rule is published, these changes should be made part of the administrative record immediately so that they can be considered by commenters and peer reviewers in critiquing the proposed rule and deciding whether to file an appeal.

Third, consistent with the literature on expert public administration, a quid pro quo for insulating staff analyses from undisclosed political influence is a requirement that agencies' technical analyses be subjected to rigorous public and scientific comment and review. Although some agencies already deploy this deliberative engagement in their science-intensive decisionmaking, for the remaining agencies, this recommendation will entail the extra step of documenting the evidentiary basis upon which the proposed rule or other policy is based, ideally at a point before a proposed rule is issued.²³⁵

Fourth and finally, while agency expertise would enjoy heightened independence, at the same time the agency should be required to actively solicit input from the political branches at each key step in the decisionmaking process, particularly at the initial framing and prioritization stages, as well as at the end in selecting the best alternative. This will help ensure that the macro-level policymakers truly do engage with the micro-level agency experts.²³⁶ The need for earlier dialogue between the White House and agencies has been highlighted by institutional architects like Professor Strauss²³⁷ and reinforced in more focused studies of agency-OIRA relationships. Professor Nou, for example, suggests that some of the existing agency self-insulation against presidential review may be more a function of this late timing of OIRA review than anything else. 238 EPA respondents in a Bressman and Vandenbergh study similarly identify the need for earlier—but transparent—OIRA involvement as a feature of a reformed institutional approach.²³⁹ And while the current method of presidential engagement and OIRA oversight is not structured in a way to make this early input routine or perhaps even feasible, considerable staff resources in OIRA will become available if OIRA's elaborate technical editing of agency rules is reduced or even curtailed.

Although each of these changes may seem idealistic, EPA has already implemented most of them in setting ambient air quality standards. EPA institutes informal firewalls that seek to keep political engagement, including appointees within the agency, at arm's length from the scien-

^{235.} See, e.g., Wagner, ACUS Report, supra note 24, at 61–63 (discussing absence of initial technical analysis at FWS in implementing Endangered Species Act).

^{236.} But see Seidenfeld, supra note 11, at 1443–44 (recommending only end-of-therule White House review to avoid ends-oriented pressure on agency staff).

^{237.} See, e.g., Strauss, Possible Controls, supra note 2, at 149–50 (discussing benefits of greater White House involvement in agency priority-setting). Such engagement will require more resources and time, which may make it impracticable in some cases.

 $^{238. \ \, \}text{See}$ Nou, supra note 48, at 1796--98 (discussing agency use of timing strategies to avoid rule reversal).

^{239.} See Bressman & Vandenbergh, supra note 58, at 95–96 (noting EPA respondents "commented that OIRA review occurs too late in the rule-making process"). Professors Farber and O'Connell also champion this earlier, transparent engagement of OIRA in agency rules. See Farber & O'Connell, supra note 8, at 1184.

tific staff in their preparation of technical reports.²⁴⁰ EPA subjects the staff analyses that form the evidentiary backdrop for its proposed ambient air quality standards to multiple rounds of both public and scientific review, again all on the record.²⁴¹ And, with respect to soliciting policy engagement, EPA convenes a scoping session at the initiation of each rulemaking process that engages all groups, presumably including sister agencies and the White House, in framing the relevant questions for the scientific analysis supporting the possible revision of air quality standards.²⁴² Indeed, the only reform proposal that is not already firmly established in EPA's approach is strict compliance with the transparency requirements of section 6 of Executive Order 12,866 with respect to documenting OIRA's suggestions to agency rules.²⁴³

Beyond producing a more vigorous institutional dialogue, this reformed process promises valuable secondary benefits.²⁴⁴ First and most significantly, it helps protect against capture by placing political and interagency comments on the record and forcing these officials to identify the macro-policy concerns that motivate their various comments.²⁴⁵ The reforms also make the issues at stake in a given ruling more accessible and concrete to the public, in part by encouraging full explanations for choices made in the rule, including those advanced by the White House, and in part by providing an added check on the agency's analyses. Finally, by engaging OIRA earlier, the agency's analysis is less likely to be derailed later in the process; macro-policy preferences will be on the table at the outset of the rulemaking lifecycle.

With the theory and preliminary blueprint on the table, the final set of challenges involves overcoming the multiple disincentives to implementation. The most obvious problem—apparent from the drift of OIRA into the technical features of rules and its stubborn lack of transparency over the last twenty years—is the President's own self-interest in engaging in this type of technical meddling without corresponding public accountability. And, while the agencies do have countervailing incentives to raise the visibility of OIRA's changes, they generally lack both the power and stamina to resist political pressure over the long term.

In the abstract, repositioning OIRA as an agency committed to ensuring that agency decision *processes* are scientifically rigorous—rather than engaging in the substantive technical details of individual rules—seems a more appropriate and cost-effective role for this White House

^{240.} See, e.g., Wagner, ACUS Report, supra note 24, at 36, 39–40 (discussing this informal practice).

^{241.} See, e.g., id. at 38 (noting extensive deliberative steps in NAAQS analysis).

^{242.} See, e.g., id. at 32 (describing scoping session).

^{243.} See, e.g., id. at 78 (documenting some noncompliance with section 6(a)(2) of Executive Order by EPA in setting NAAQS standards).

^{244.} See Mendelson, supra note 8, at 1163–66 (cataloging these advantages).

^{245.} See Bressman & Vandenbergh, supra note 58, at 91 (making this point).

office committed to regulatory and informational excellence. Given the historical roles of both the President and OIRA with respect to agency rules, however, it may be the case that reinventing OIRA will demand outside intervention.

Congress could enact direct reform through an amendment to the APA that requires documentation of all political comments and deliberations over agency-expert scientific reports or memoranda, treating these communications essentially as ex parte contact.²⁴⁶ Alternatively, Congress could establish a scientific integrity office that investigates and reports on staff complaints of controversial interventions between political management and scientific staff analysts, particularly at early stages of the rulemakings.²⁴⁷

The courts could also be enlisted through reform legislation to police these added procedural requirements. Even without legislation, however, the courts should continue to resist providing agency expertise extreme deference if there is not some evidence of independence in the development of the expert assessment and an accompanying rationale for the significant and contested technical choices made in agency rules.²⁴⁸ To the extent that interventions from OIRA or the White House appear to be the culprit for an agency's incoherence in explaining its scientific choices, moreover, the court could note that fact in order to raise it to public view.²⁴⁹

CONCLUSION

As Professor Strauss has noted, "finding appropriate space both for the understandings science can bring and for the expression of democratic concerns [in rulemakings] is challenging indeed."²⁵⁰ Yet thanks to his pioneering work, we can conceptualize a reformed process.

^{246.} Congressional focus on OIRA technical changes is particularly likely to fall safely within Congress's powers to regulate executive functions. See, e.g., William D. Araiza, Judicial and Legislative Checks on Ex Parte OMB Influence over Rulemaking, 54 Admin. L. Rev. 611, 627 (2002) (reaching this conclusion).

^{247.} Professors Farber and O'Connell likewise suggest that Congress could task GAO with conducting more regular investigations of White House engagement in agency rules, including, for example, targeted investigations of political intervention into agency staff analyses. See Farber & O'Connell, supra note 8, at 1182 (suggesting tasking GAO with investigations of regulatory review process).

^{248.} Id. at 1186 (making this suggestion); Olson, supra note 99, at 77 (same); Seidenfeld, supra note 11, at 1457 (same).

^{249.} In Mississippi v. Envtl. Prot. Agency, 744 F.3d 1334 (D.C. Cir. 2013), the court did reverse and remand one of EPA's secondary standards for lack of support in the record, but the court never mentioned OIRA's role in creating that standard, a feature which was in fact noted in the petitioner's brief. See Final Opening Brief of State Petitioners at 32 n.24, *Mississippi v. Envtl. Prot. Agency*, 744 F.3d 1334 (No. 08-1200) (noting Administrator did not expressly rely on OMB). The court thus missed an opportunity to increase the visibility and costs of White House review with respect to science-intensive rulemakings.

^{250.} Strauss, Possible Controls, supra note 2, at 151.

Both the President's OIRA and the agencies can be forced to reconcile their distinct perspectives in a public dialogue. The White House will serve as the protagonist for ensuring that macro-considerations imbedded deep within the agencies' technical and science-intensive rules are exposed to public scrutiny, while the agency will have the institutional space to maximize the scientific integrity of its rulemaking process without overt political influence. Reforming White House review in this way does not necessitate a radical change in institutional design—it requires only some political self-restraint from the offices of the President and possibly modest legislative reinforcement from Congress.