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THIN RATIONALITY REVIEW

Jacob Gersen* and Adrian Vermeule**

Under the Administrative Procedure Act, courts review and set aside agency action that is “arbitrary [and] capricious.” In a common formulation of rationality review, courts must either take a “hard look” at the rationality of agency decisionmaking, or at least ensure that agencies themselves have taken a hard look. We will propose a much less demanding and intrusive interpretation of rationality review—a thin version. Under a robust range of conditions, rational agencies have good reason to decide in a manner that is inaccurate, nonrational, or arbitrary. Although this claim is seemingly paradoxical or internally inconsistent, it simply rests on an appreciation of the limits of reason, especially in administrative policymaking. Agency decisionmaking is nonideal decisionmaking; what would be rational under ideal conditions is rarely a relevant question for agencies. Rather, agencies make decisions under constraints of scarce time, information, and resources. Those constraints imply that agencies will frequently have excellent reasons to depart from idealized first-order conceptions of administrative rationality.

Thin rationality review describes the law in action. Administrative law textbooks typically suggest that the State Farm decision in 1983 inaugurated an era of stringent judicial review of agency decisionmaking for rationality. That is flatly wrong at the level of the Supreme Court, where agencies have won no less than 92 percent of the sixty-four arbitrariness challenges decided on the merits since the 1982 Term. The Court’s precedent embodies an approach to rationality review that is highly tolerant of the inescapable limits of agency rationality when making decisions under uncertainty. State Farm is not representative of the law; beloved of law professors, and frequently cited in rote fashion by judges, State Farm nonetheless lies well outside the mainstream of the Supreme Court’s precedent. To encapsulate the Court’s approach to rationality review, the best choice would be the powerfully deferential opinion in Baltimore Gas, decided in the same Term as State Farm. Plausibly, rather than living in the era of hard look review or the State Farm era, we live in the era of Baltimore Gas.

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INTRODUCTION

Under Section 706(2)(A) of the Administrative Procedure Act (APA), courts “shall” set aside agency action that is “arbitrary [and] capricious.”¹ The conventional antonym of “arbitrary and capricious” is rational; as the D.C. Circuit puts it, “[t]he ‘arbitrary and capricious’ standard deems the agency action presumptively valid provided the action meets a minimum rationality standard.”² Hence, courts applying the arbitrary and capricious test review the rationality of agency decisions.

The traditional and highly deferential approach, under the constitutional law of due process, equated rationality review of agency decisionmaking with rational-basis review of legislation.³ Starting with *Citizens to Preserve Overton Park, Inc. v. Volpe*⁴ in 1971, however, a vast and baroque caselaw elaborated the requirements of rational agency decisionmaking under the APA. And in 1983, the Court in *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co. (State Farm)*⁵ specifically held that rationality review of agencies under 706(2)(A) should be more demanding than rational-basis review.⁶ In a common formulation of rationality review, courts must either take a “hard look” at the rationality of agency decisionmaking, or at least ensure that agencies themselves have taken a hard look at the relevant problems. Hard look review is taken to encompass multiple quasi-procedural obligations that, taken together, ensure agency rationality.⁷

We will propose a much less demanding and intrusive interpretation of the “arbitrary and capricious” standard in section 706(2)(A). The argument has both prescriptive and descriptive components. Prescriptively, we urge that rationality is a much *thinner* notion than some commentators seem to think, and that rational decisionmaking requires far less from agencies than lawyers tend to realize.⁸ Courts have sometimes adopted an excessively intrusive approach because, acting in the best of faith, they have misunderstood what rationality requires. In particular, they have failed to grasp a crucial twist: under a robust range of conditions, *rational agencies may have good reason to decide in a manner that is inaccurate, nonrational, or arbitrary.*⁹

1. 5 U.S.C. § 706(2)(A) (2012).

2. *White Stallion Energy Ctr., LLC v. EPA*, 748 F.3d 1222, 1233 (D.C. Cir. 2014) (quoting *Nat. Res. Def. Council, Inc. v. EPA*, 194 F.3d 130, 136 (D.C. Cir. 1999)).

3. See *Pac. States Box & Basket Co. v. White*, 296 U.S. 176, 181–82 (1935).

4. 401 U.S. 402, 416–17 (1971).

5. 463 U.S. 29, 42–43 (1983).

6. See *State Farm*, 463 U.S. at 43 n.9 (“We do not view as equivalent the presumption of constitutionality afforded legislation drafted by Congress and the presumption of regularity afforded an agency in fulfilling its statutory mandate.”).

7. See Louis J. Virelli III, *Deconstructing Arbitrary and Capricious Review*, 92 N.C. L. REV. 721, 737–39 (2014).

8. See *infra* Part II.

9. This reads “arbitrary” in a decision-theory sense rather than a legal sense. Our argument is precisely that where agencies have valid second-order reasons for acting inaccurately,

Although this claim is seemingly paradoxical or internally inconsistent, it simply rests on an appreciation of the limits of reason, especially in administrative policymaking. Agency decisionmaking is nonideal decisionmaking; what would be rational under ideal conditions is rarely a relevant question for agencies. Rather, agencies make decisions under constraints of scarce time, information, and resources. Those constraints imply that agencies will frequently have excellent reasons to depart from idealized first-order conceptions of administrative rationality. We will thus examine a series of limitations to agency rationality and to the communication of reasons by agencies, and argue for an approach to rationality review that takes these limitations seriously—thin rationality review.

In a simplistic and idealized conception of administrative rationality, which is rarely articulated in explicit terms but which implicitly underlies many judicial decisions, rational agencies should (1) attempt to choose the best policy among the feasible options, after considering all relevant statutory factors and policy variables, and then (2) explain to interested parties and to the court the agency's reasons for thinking that the chosen policy is best, as compared to the alternatives.¹⁰ This conception turns out to be riddled with legal mistakes, conceptual slips, and institutional problems.

As to (1), under the best reading of the arbitrary and capricious test, agencies have no legal obligation to consider all policy variables that strike judges as arguably relevant. Agencies often have good reason to choose policies that do not necessarily represent the best feasible option. Agencies may choose policies that the agency has not compared to other feasible options. And agencies may choose policies that do not even produce net benefits in the case at hand. The critical issue here is uncertainty, which sometimes gives agencies good second-order reasons to depart from the simplistic first-order conception of rationality under conditions we will identify.

As to (2), agencies may find it difficult to explain their reasons to generalist judges on reviewing courts, even, or especially, when those reasons are valid. This is the problem of *tacit expertise*—tacit knowledge held by experts, which is costly to transmit to nonexperts, and which is always distorted in the transmission. We do not suggest that agencies should never be obliged to communicate reasons to courts, only that rationality review should calibrate that obligation with sensitivity to the risk that genuine reasons are sometimes incommunicable between experts and generalists, or at least costly to communicate. One of the main reasons agencies exist at all is specialization, and specialization creates information asymmetries. Asymmetric information implies, in turn, that the knowledge agencies possess cannot always be

nonrationally, or arbitrarily, they should not be deemed to have acted in an "arbitrary and capricious" manner within the meaning of Section 706(2)(A) of the APA. See Adrian Vermeule, *Rationally Arbitrary Decisions in Administrative Law*, 44 J. LEGAL STUD. 5475, 5482–89 (2015).

10. See *infra* Section II.A.

effectively evaluated by reviewing courts or other generalist institutions, and sometimes it cannot even be effectively conveyed to those institutions.¹¹

All this is negative critique, but our positive conception is straightforward. In contrast to thick rationality review, the thin version posits that agencies are (merely) obliged to make decisions *on the basis of reasons*. Second-or-higher order reasons may, in appropriate cases, satisfy that obligation. What is excluded by the arbitrary and capricious standard is genuinely ungrounded agency decisionmaking, in the sense that the agency cannot justify its action even as a response to the limits of reason. While truly capricious decisionmaking in this sense is no doubt uncommon, it does exist; the caselaw contains examples.¹² For purposes of interpreting section 706(2)(A), “arbitrary and capricious” action is *unreasoned* agency action.

So much for prescription. Descriptively, our approach fits some but not all of the caselaw; it neither justifies all extant decisions, nor condemns them all.¹³ Current law is actually a mixed bag—far more so than one might think from reading administrative law textbooks, which typically suggest that *State Farm* inaugurated an era of stringent judicial review of agency decisionmaking for rationality. As we will see, that suggestion is flatly wrong at the level of the Supreme Court. At that level, agencies almost never lose. Indeed, the facts show that *State Farm* itself is an outlier. Starting in October Term 1982, when *State Farm* was decided, the Court has passed on the merits of arbitrariness challenges sixty-four times.¹⁴ Of those, agencies have lost arbitrary and capricious challenges only five times—a remarkable win-rate of 92 percent.¹⁵

At the level of doctrine and announced principles, many of the modern cases feature strong rebukes of lower courts for excessive interference, or

11. We put aside the limited cases, in the federal system, in which specialized agencies are reviewed by specialized Article III courts. Most federal agency action that is reviewed by any Article III court is reviewed by a general-purpose Article III court. *See generally* James E. Pfander, *Article I Tribunals, Article III Courts, and the Judicial Power of the United States*, 118 HARV. L. REV. 643 (2004). We also put aside review by specialized Article I courts.

12. *See, e.g., infra* text accompanying notes 35–39 (discussing *Judulang v. Holder*, 132 S. Ct. 476 (2011)).

13. *See infra* Part I.

14. *See infra* Appendix.

15. *See infra* Appendix. This aggregate statistic depends on the classification of some cases as either statutory or arbitrariness holdings. A few cases are blurry because the Court rules against the agency on alternative grounds, both statutory interpretation and arbitrariness review. In very few cases, there is ongoing confusion about the so-called second step of analysis under *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984); these decisions fold arbitrariness analysis into *Chevron* Step Two. *See, e.g.,* *Judulang v. Holder*, 132 S. Ct. 476, 483 n.7 (2011) (stating that *Chevron* Step Two examines whether the agency interpretation is “arbitrary or capricious in substance” (quoting *Mayo Found. for Med. Educ. & Research v. United States*, 562 U.S. 44, 53 (2011))). However, there are not enough debatable cases of either type to make any real difference; even on the most conservative possible estimate (the estimate maximally biased against our thesis), agencies win arbitrariness challenges in the Supreme Court about 88 percent of the time. We provide further details in the Appendix. The overall trend in the data is clear: it is very rare indeed for the Supreme Court to hold an agency action arbitrary and capricious.

specifically disavow idealized conceptions of rationality review developed by lower courts. Over against *State Farm* there stands a long line of decidedly deferential decisions running from *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*¹⁶ in 1983 to *FCC v. Fox Television Stations, Inc.*¹⁷ and *EPA v. EME Homer City Generation, L.P.*¹⁸ in recent years. (The exceptions like *Judulang v. Holder*¹⁹ stand out, and are more easily recalled, precisely because they are rare.) This line of precedent embodies an approach to rationality review that is more aware of, and tolerant of, the inescapable limits of rationality when agencies make decisions under uncertainty—the chronic condition of decisionmaking in the administrative state. *State Farm* is not representative of the law. Beloved by law professors and frequently cited in rote fashion by judges, it nonetheless lies well outside the mainstream of the Supreme Court’s precedent.

Of course there are many possible explanations for these data, which we will examine in detail. Selection effects must be accounted for, both at the stage of the selection of cases for litigation, and at the stage of selection of cases for review by the Supreme Court. Agencies’ won-loss record in arbitrariness challenges before the D.C. Circuit is somewhat less impressive, although the data is sketchy. (As we will see, there may well be a connection between the D.C. Circuit’s episodic bullying of agencies and the Supreme Court’s marked tendency to validate agency decisions in the face of legal challenges.) At a minimum, however, administrative lawyers need to reassess, perhaps dramatically, the folk wisdom about the era of hard look review. Forced to pick one case to encapsulate the Court’s approach to rationality review, the best choice would be the powerfully deferential opinion in *Baltimore Gas*, decided in the same term as *State Farm*. Plausibly, rather than living in the era of hard look review or the *State Farm* era, we live in the era of *Baltimore Gas*.

In *Baltimore Gas*, decided the same term as *State Farm*, the Supreme Court upheld the Nuclear Regulatory Commission’s determination that, for purposes of licensing under the National Environmental Policy Act, the permanent storage of certain nuclear wastes would be assumed to have *no* significant environmental impact (the “zero-release” assumption).²⁰ Per Judge Bazelon, the D.C. Circuit had struck down the agency’s judgment on arbitrariness grounds.²¹ The Court reversed that decision in emphatic terms. Quoting *Vermont Yankee*, Justice O’Connor wrote that “[a]dministrative decisions should be set aside in this context, as in every other, only for substantial procedural or substantive reasons as mandated by statute . . . not

16. 462 U.S. 87 (1983).

17. 556 U.S. 502 (2009).

18. 134 S. Ct. 1584 (2014).

19. 132 S. Ct. 476 (2011).

20. *Balt. Gas & Elec. Co.*, 462 U.S. at 87–88.

21. *Id.* at 95.

simply because the court is unhappy with the result reached.”²² Moreover, “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, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.”²³ In our view, it is time to stop discussing *State Farm* whenever arbitrariness review is mentioned. The better reflex—better theoretically, and more faithful to the caselaw—would be for lawyers to mention “*Baltimore Gas*” review.

Part I lays out the descriptive claim. We begin by distinguishing two versions of *State Farm*—the case itself on the one hand, and on the other, the broader culture of hard look review for which the case has become a symbol and shorthand. We then state some basic findings about the Court’s caselaw since *State Farm*, consider various explanations for those findings, and underscore their inconsistency with a simple narrative about the prevalence of hard look review. Although there are many possible explanations for the facts, it is clearly false that the Court is in any sense committed to stringent supervision of agency rationality.

In Part II, the prescriptive section, we discuss the limitations of agency rationality, especially when making decisions under uncertainty, and the limitations on agency ability to communicate reasons to generalist reviewers. Our main claim is that administrative law should, and often does, recognize that agencies have good second-order reasons for departing from first-order rationality. Accordingly, so long as agencies act on the basis of reasons, including second- or higher-order reasons, the thin conception of rationality review is satisfied. We modulate this claim by examining similarities and differences between different types of reviewers—most notably generalist judges, on the one hand, and the reviewers of a different type (a mix of economists and lawyers) who staff the Office of Information and Regulatory Affairs (OIRA) on the other. Although some of our points apply to OIRA as well as to the federal judiciary, some do not. In any event, OIRA is not central for our project. Judicial review is our focus, and hard look review by judges is our principal target.

Taken together, the descriptive and prescriptive sections offer a unified account of rationality review. The caselaw and the theory march in tandem to a surprising extent, although with notable exceptions and outliers. To some substantial degree, judicial practice already embodies the thin approach to rationality review that theory recommends—an approach that is far more flexible, accommodating, and intelligent about agency rationality and its inescapable limitations than is the hard look approach.

22. *Id.* at 97 (alterations in original) (quoting *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 558 (1978)).

23. *Id.* at 103.

I. DESCRIPTION: THE REAL WORLD OF *State Farm*A. *State Farm* and “*State Farm*”

A problem with our topic is that there are really two versions of *State Farm*. One is the opinion itself, which is narrower than many commentators have made it out to be. Another is the broader aura of the decision. Commentators, generally suspicious of agency rationality, have puffed up *State Farm* into a synecdoche for hard look review, contributing to a pervasive but latent culture of academic skepticism towards agency explanations and agency decisionmaking. Just as there are two versions of *Marbury v. Madison*—the rather narrow decision itself, and the inflated and heavily symbolic *Marbury v. Madison* that the Court so routinely invokes as a symbol of judicial supremacy²⁴—so too *State Farm* as doctrine coexists uneasily with “*State Farm*” as symbol.

Our target is the latter, not the former. *State Farm* itself, we will argue, is in important respects less demanding than the lawyers’ culture of hard look suggests. The decision is clear, for example, that judges have no warrant to require agencies to consider and discuss any policy alternative that the judges happen to believe is relevant to the problem at hand.²⁵ And we will see that the Supreme Court has been careful, over time, about policing the boundaries and maintaining the limits of *State Farm*. But the problem is that lower courts and (especially) commentators have sometimes been less careful. Overreading *State Farm*, they have applied it as though it demands a kind of unbounded, ideal rationality from agencies, insensitive to the costs of information and decisionmaking. Thin rationality review, by contrast, emphasizes that agencies are constrained by limited resources, information, and time, and asks what (nonideal) reasons agencies may have for acting inaccurately, nonrationally, or arbitrarily in light of those limits.

While “*State Farm*” as symbol is not the law, there is nothing in *State Farm* itself that is incompatible with our approach. Suppose judges applying *State Farm* started to fold in all the second-order reasons and nonideal constraints we will discuss, and they started to say that even after a “hard look,” agencies may act inaccurately, nonrationally, or arbitrarily, where agencies have good reason to do so. Then we would have no quarrel with the resulting caselaw, but only because our normative claim—that good decisionmaking allows for departures from first-order rationality where there is adequate reason for such departures—would have been built into hard look review itself. (In which case, of course, “hard look” would then be something of a misnomer).

24. See, e.g., *NLRB v. Noel Canning*, 134 S. Ct. 2550, 2559–60 (2014); *Zivotofsky v. Clinton*, 132 S. Ct. 1421, 1427–28 (2012) (“At least since *Marbury v. Madison* . . . we have recognized that when an Act of Congress is alleged to conflict with the Constitution, ‘[i]t is emphatically the province and duty of the judicial department to say what the law is.’” (citation omitted) (quoting *Marbury v. Madison*, 5 U.S. (1 Cranch) 137 (1803))).

25. See *infra* text accompanying notes 75–76.

B. *Some Facts About the Law*

What does the real world of arbitrary and capricious review look like, and where do we look to find out? Our descriptive survey is impressionistic, but suggestive. We begin with an overview of *State Farm* in the Supreme Court and then turn to the courts of appeals. There is a distribution of cases in both settings with important cases in the tails. Nevertheless, the outliers should not be allowed to blur the overall picture. There are, of course, instances of aggressive and intensive review under the arbitrary and capricious framework; but in the Supreme Court at least, agencies almost always win. If the task for appellate courts is to practice what the Supreme Court both preaches and practices, the message is to apply a thin form of rationality review. In the run of cases, arbitrary and capricious review entails a predictably and sensibly deferential review of agency policy judgments.

1. The Supreme Court

Since the 1982–1983 Term, when *State Farm* was decided, the Court has passed on the merits of arbitrariness challenges sixty-four times.²⁶ The agency lost on arbitrariness grounds in only five cases, and in three additional cases the agency lost on statutory and arbitrariness grounds.²⁷ What should we make of the fact that the Court deems agency decisions arbitrary at most 13 percent of the time, and indeed only 8 percent of the time if we confine ourselves to pure arbitrariness cases? Clearing the hard look hurdle in the Supreme Court is hardly a heroic task.

To make headway on this question, consider first the hard cases for our proposition: those in which the agency's decision was struck down as arbitrary. To be sure, these cases are outliers, but like all exceptions, they are important data points for understanding the rule. Two of these cases, *Massachusetts v. EPA*²⁸ and *Morgan Stanley Capital Group, Inc. v. Public Utility District No. 1*,²⁹ actually involve agency decisions not to act at all. Famously, *Massachusetts v. EPA* overturned EPA's decision not to decide whether greenhouse gases constituted "pollution" pursuant to the Clean Air Act.³⁰ But this was hardly a run-of-the-mill hard look case. While agency decisions not to act—at least decisions not to engage in rulemaking—may be subject to hard look review,³¹ in practice, agency failures to act tend to reach the

26. See *infra* Appendix.

27. See *infra* Appendix.

28. 549 U.S. 497 (2007).

29. 554 U.S. 527 (2008).

30. *Massachusetts v. EPA*, 549 U.S. at 534–35.

31. For an overview of the law bearing on review of agency "inaction," see Cass R. Sunstein & Adrian Vermeule, *The Law of "Not Now": When Agencies Defer Decisions*, 103 GEO. L.J. 157 (2014). Very roughly speaking, the Court says that (1) agency nonenforcement decisions are presumptively unreviewable, *Heckler v. Chaney*, 470 U.S. 821 (1985); (2) agency refusals to engage in rulemaking are reviewable, although that review is "extremely limited" and "highly deferential," *Massachusetts v. EPA*, 549 U.S. at 527–28.

Supreme Court in a posture of near-complete failure by the agency to carry out its statutory obligations on a given issue.³² When the agency loses in such cases, the Court is saying, in effect, that the agency must do *something*, but that is a far cry from intensive hard look review of an ultimate agency decision. When the agency has decided which of several policy options to pursue, the Supreme Court almost never strikes down that judgment as arbitrary. It is when the agency has said “we will do nothing” that the Supreme Court is willing to step in.

The Supreme Court case that most directly challenges our view is probably *Judulang v. Holder*.³³ The case involved a challenge to the Board of Immigration Appeals’ (BIA) policy for deciding when resident aliens may apply to the Attorney General for relief from deportation. Justice Kagan’s opinion observed that “[w]hen an administrative agency sets policy, it must provide a reasoned explanation for its action. That is not a high bar, but it is an unwavering one.”³⁴ The key language here is “not a high bar.” In concluding that the BIA’s “comparable grounds” approach to determining immigration status was entirely arbitrary, the Court explained that the decision rule must bear *some* relationship to relevant statutory facts or factors.³⁵ The Court explained that the agency’s policy turned on issues having nothing to do with even arguably relevant facts: “Rather than considering factors that might be thought germane to the deportation decision, that policy hinges § 212(c) eligibility on an irrelevant comparison between statutory provisions.”³⁶ As important, the Court made clear that the factors that must be considered are not limited to those expressly identified in the statute. Rather, the Court said that legitimate factors for the agency to consider for arbitrariness review are those “tied, even if loosely, to the purposes of the immigration laws or the appropriate operation of the immigration system.”³⁷ The BIA lost in the case because it lacked even this level of tangential support for its policy, but *Judulang v. Holder* actually clarifies that agencies have more latitude to select factors to explain or justify their decisions than has traditionally been taught. It seems clear that this most recent instance of hard look review is remarkably modest and far more consistent with *Baltimore Gas* than *State Farm* itself. And more broadly, the few cases in which the agency loses before the Court feature either refusals to act altogether, or the adoption of a decision rule that is entirely unrelated to any statutorily relevant factor, and in that sense genuinely capricious.

32. There is an exception to the presumption against nonreviewability of agency enforcement decisions for cases in which the agency has entirely abdicated its enforcement responsibility. See *Heckler*, 470 U.S. at 833 n.4; Sunstein & Vermeule, *supra* note 31.

33. 132 S. Ct. 476 (2011).

34. *Judulang*, 132 S. Ct. at 479.

35. See *id.* at 485.

36. *Id.*

37. *Id.*; see also Sharon B. Jacobs, *The Administrative State’s Passive Virtues*, 66 ADMIN. L. REV. 565, 615 (2014) (discussing this aspect of the decision).

Our main point, however, is that the rare cases like *Judulang v. Holder* must not be allowed to take up too much space in the collective memory of the profession. To a first rough approximation, agencies almost *always* win arbitrariness challenges in the Supreme Court.³⁸ And to be clear, the distribution of these cases is diverse. Six of the cases involve challenges to Environmental Protection Agency actions, including enforcement orders, permit decisions, and notice and comment rules.³⁹ Two cases review Board of Immigration proceedings.⁴⁰ Five cases review decisions of the Federal Communications Commission, both rate-setting, enforcement actions, and several informal rulemakings: no action was held to be arbitrary and capricious.⁴¹ The agency represented most in the sample of Supreme Court challenges is the Department of Health and Human Services (HHS), which saw fourteen challenges before the Court. In all but one, the agency's action was upheld as not arbitrary and capricious. The other cases involved a smorgasbord of agencies, including the National Labor Relations Board (three enforcement orders upheld as not arbitrary and capricious), the Department of the Interior, the Department of Commerce, the Securities and Exchange Commission, and the Merit Systems Protection Board. The agencies at issue are quite heterogeneous, and the cases include a mix of actions from informal rulemaking, formal adjudication, enforcement actions, licensing and permit decisions, to rate-setting, and so on. In case after case, no matter the agency and no matter the action, the most likely outcome by an overwhelming margin is for the Court to uphold the action as not arbitrary and capricious. Nor does there seem to be much partisan disagreement about the thinness of review. The cases upholding agency action include majority opinions by Justices Scalia, Rehnquist, Roberts, Souter, Stevens, Ginsburg, Thomas, White, Breyer, Powell, Kennedy, Blackmun, Alito, Kagan, and O'Connor. In short, all of the justices are well represented in the thin rationality review camp.

2. Courts of Appeals

In the courts of appeals, the record of arbitrary and capricious review is more mixed. We consider both large-N empirical evidence and then an impressionistic survey of some recent decisions. There are quite a few empirical studies of judicial review of agency action—broadly defined—in the courts of appeals, but few of arbitrary and capricious review specifically. Miles and Sunstein remarked in 2008 at the “sparse empirical literature . . . on the actual operation of the hard look doctrine,” noting additionally that “[t]here

38. See *infra* Appendix.

39. See *infra* Appendix.

40. See *infra* Appendix.

41. See *infra* Appendix.

is no systematic evidence on the rate of invalidation under hard look review.⁴² In reviewing empirical studies across multiple judicial review doctrines, Richard J. Pierce, Jr. noted in 2011 that only Miles and Sunstein had examined agency success rates in the courts of appeals under *State Farm*.⁴³

Miles and Sunstein conclude that agencies win 64 percent of court of appeals cases reviewing their decisions for arbitrariness.⁴⁴ Their data set includes “all published appellate rulings from 1996 to 2006 involving review of decisions of the EPA and review of NLRB decisions either for arbitrariness or for lack of substantial evidence.”⁴⁵ The authors sensibly limited their analysis to decisions reviewing those two agencies because the issues at stake mapped easily onto political worldviews—the primary focus of the article. But if one looks at the distribution of actual cases, just under 85 percent of the cases they study are NLRB cases.⁴⁶ The NLRB is an important agency, but as students of administrative law will quickly recognize, the board makes policy in a way that is almost unique in the universe of administrative agencies, proceeding to formulate rules of general applicability through adjudication rather than rulemaking.⁴⁷ Moreover, as the authors note, the NLRB’s decisions—when it does anything at all—tend to be more consistently “liberal” by traditional metrics, making them targets of whatever conservative judicial politics might exist.⁴⁸

Thus, the 64 percent figure is somewhat misleading. Judges voted to overturn far more consequential EPA decisions on arbitrariness grounds in barely more than one-fourth of the cases.⁴⁹ EPA decisions are upheld against arbitrariness challenges nearly 80 percent of the time.⁵⁰ This is, of course, a partial sample of the arbitrary and capricious universe—NLRB and EPA decisions during 1996–2006—but there is little in the data to suggest that hard look is being used as an elaborate or onerous form of review.

More recently, however, there have been several notable cases in which courts of appeals have adopted a form of hard look review that is consistent with neither the Supreme Court’s principles and practice, nor even with past lower court approaches. In *Business Roundtable v. SEC*, the D.C. Circuit struck down SEC rule 14a-11, which required “public companies to provide

42. Thomas J. Miles & Cass R. Sunstein, *The Real World of Arbitrariness Review*, 75 U. CHI. L. REV. 761, 765 (2008).

43. See Richard J. Pierce, Jr., *What Do the Studies of Judicial Review of Agency Actions Mean?*, 63 ADMIN. L. REV. 77, 84 (2011).

44. Miles & Sunstein, *supra* note 42, at 767.

45. *Id.* at 766.

46. 653 cases were reviewed, with 554 from the NLRB and the remainder from the EPA. See *id.* at 774.

47. E.g., STEPHEN G. BREYER ET AL., *ADMINISTRATIVE LAW AND REGULATORY POLICY* 521–22 (7th ed. 2011).

48. See Miles & Sunstein, *supra* note 42, at 777.

49. See *id.* at 778–79.

50. See *id.*

shareholders with information about, and their ability to vote for, shareholder-nominated candidates for the board of directors.”⁵¹ The court concluded that the SEC’s Rule was arbitrary and capricious: “Because the agency failed to ‘make tough choices about which of the competing estimates is most plausible, [or] to hazard a guess as to which is correct,’ we believe it neglected its statutory obligation to assess the economic consequences of its rule.”⁵² So far, the reaction to *Business Roundtable* has been mixed, but the modal response among administrative lawyers has been a mix of surprise and dismay.⁵³ Importantly, some have taken the case to stand for the proposition that an agency rule is arbitrary and capricious if it is not supported by careful and rigorous cost-benefit analysis, including a detailed statement of any potential costs or benefits that cannot be quantified and a clear statement about how and why competing estimates of costs were resolved.⁵⁴ So interpreted, the case stands for an ambitious form of arbitrariness review that requires cost-benefit analysis to the extent possible, unless statutorily precluded.⁵⁵

On this view, *Business Roundtable* constitutes an outlier approach to arbitrariness review, in which the court required an elaborate showing of cost-benefit analysis where possible. Shortly we will argue in general terms that this approach neither is, nor should be, the law. As for the case, suffice it to say that *Business Roundtable* illustrates the problems of hard look judicial review, particularly with respect to economic market regulation. Many of the potential effects, and therefore the costs and benefits, of the rule would have been a function of a complex set of interdependent strategies and replies by firms, investors, competitors, and so on—a form of strategic uncertainty.⁵⁶ Both the benefits and the costs of the rule, and others like it, are uncertain precisely because it is difficult to predict with any precision how markets will react.⁵⁷ No doubt there are those who believe that this means

51. 647 F.3d 1144, 1146 (D.C. Cir. 2011).

52. *Business Roundtable*, 647 F.3d at 1150 (alteration in original) (citation omitted) (citing Pub. Citizen v. Fed. Motor Carrier Safety Admin., 374 F.3d 1209, 1221 (D.C. Cir. 2004)).

53. See, e.g., John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 124 YALE L.J. 882, 917–20, 917 n.116 (2015); James D. Cox & Benjamin J.C. Baucom, *The Emperor Has No Clothes: Confronting the D.C. Circuit’s Usurpation of SEC Rulemaking Authority*, 90 TEX. L. REV. 1811, 1813 (2012); Jill E. Fisch, *The Long Road Back: Business Roundtable and the Future of SEC Rulemaking*, 36 SEATTLE U. L. REV. 695, 697–98 (2013); Grant M. Hayden & Matthew T. Bodie, *The Bizarre Law and Economics of Business Roundtable v. SEC*, 38 J. CORP. L. 101, 102 (2012); Bruce Kraus & Connor Raso, *Rational Boundaries for SEC Cost-Benefit Analysis*, 30 YALE J. ON REG. 289, 315–17 (2013); Cass R. Sunstein & Adrian Vermeule, *Libertarian Administrative Law*, 82 U. CHI. L. REV. 393, 440–48 (2015).

54. Sunstein & Vermeule *supra* note 53, at 440–42.

55. For discussion and references, see *id.* at 437–48.

56. For distinctions among brute uncertainty, strategic uncertainty, and model uncertainty in administrative policymaking, see Vermeule, *supra* note 9, at S9–S13.

57. See Jeffrey N. Gordon, *The Empty Call for Benefit-Cost Analysis in Financial Regulation*, 43 J. LEGAL STUD. S351 (2014).

the SEC should have stayed its hand, but there is a good deal of space between that view and a conclusion that the SEC may not lawfully enact a rule requiring notice about ways in which shareholders may nominate and elect directors. We certainly have no view on the wisdom of Rule 14a-11. But in a domain where the consequences of the rule are uncertain, the stakes high, and the importance of specialized knowledge critical, there is no reason to think that a three-judge panel knows better than the SEC. We will return to these themes in the next Part.

All that said, let us keep the larger picture firmly in view. Unusual cases tend to grip the mind. But *Business Roundtable*, and a set of other related or similar cases,⁵⁸ are outliers. The days of systematically aggressive hard look review, as in the D.C. Circuit's decisions from the 1970s and early 1980s, are mostly behind us, thanks in part to the Supreme Court, which sat down heavily on the D.C. Circuit in both *Vermont Yankee*⁵⁹ and *Baltimore Gas*.⁶⁰ And the Court recently overturned another procedural innovation from the D.C. Circuit in *Perez v. Mortgage Bankers Association*.⁶¹

3. Problems

Judicial decisions are the result of a complex set of anticipated behaviors by agencies and courts. If agencies believe that judicial review will be aggressive, then strategic agencies may be more conservative in their policy choices, adopting decisions that are well justified by the available evidence. As a consequence, agencies would usually win in litigation, making it appear that courts are applying a highly deferential standard. By the same token, if agencies believe judicial review will be modest, they might be more aggressive in their decisions, stretching policies just to the edge of justifiability and beyond. If so, agencies might lose a lot in litigation, making it appear that courts are adopting a stringent form of review. These are familiar dynamics that travel under the rubric of selection effects.⁶²

Selection effects are not a challenge to our prescriptive vision of arbitrariness review, but they are a potential problem for our descriptive account of arbitrariness review. To illustrate, we have claimed that agencies virtually never lose on arbitrariness grounds in the Supreme Court, and that agencies rarely lose on arbitrariness grounds in the courts of appeals. We have interpreted that empirical regularity to suggest that the Supreme Court is directing the lower courts to utilize a thinner form of rationality review, one that requires merely that the agency's decision not be pure caprice. When the Supreme Court takes an arbitrariness case on review, it is almost

58. For the details, see Sunstein & Vermeule, *supra* note 53, at 435–48.

59. *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519 (1978).

60. *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87 (1983).

61. 135 S. Ct. 1199 (2015).

62. See George L. Priest and Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984).

always to support the agency's decision. Selection effects, however, threaten our interpretation, or at least throw a fly into the soup.

Suppose we are correct and the courts apply a form of thin rationality review. If agencies recognize this, they might begin to relax the rigor with which they justify their own decisionmaking. Courts, applying the same standard of thin rationality review, would suddenly strike down more agency actions, not because the court has adopted more aggressive review, but because the agency has weakened its decisionmaking. Similarly, suppose the courts are engaging in an ambitious thick form of rationality review. Agencies, recognizing this practice, may begin to beef up their decisionmaking process and justify their conclusions with more elaborate and careful consideration. As a result, courts—again, applying the same thick form of rationality review—would uphold many more agency decisions, making it appear that there was a new easy bar to clear over which agencies virtually never trip. Furthermore, when agencies lose in the courts of appeals, the Solicitor General (SG) often acts as a gatekeeper whose consent agencies must win in order to file a certiorari petition in the Supreme Court. If the SG files petitions only when the agency's case is strong, agencies might have a better win-rate in the Supreme Court than in the lower courts, as indeed they do. All these possibilities are intrinsically speculative. We cannot say anything definitive about selection effects, nor can proponents of hard look review. We can, however, be intellectually candid about the selection-effects problem, a practice we hope will be embraced by others as well.

That said, there is some indirect evidence we can bring to bear. In what is perhaps (we hope) the definitive word on empirical studies of agency win-rates in litigation, David Zaring performed a meta-analysis of existing data and also added new data on judicial review of agency fact-finding.⁶³ Zaring found that no matter what standard of review was utilized (hard look, *Chevron*, or substantial evidence), and no matter what aspect of the decision was reviewed (policy, law, or fact), agency win-rates were surprisingly stable.⁶⁴ Almost uniformly, agencies won in litigation about 70 percent of the time.⁶⁵ Neither the standard of review nor the aspect of the underlying decision being challenged seemed to matter much at all. To be sure, selection effects might be operating offstage in all these settings, including in the lower courts, but at a certain point that abstract possibility ceases to impress. The important point for our purposes is that no matter what linguistic formulation courts invoke when engaging in rationality review, courts don't seem to be engaging in hard look analysis—or at least it requires major epicycles about selection effects to save the hard look story. Agencies usually win, and rather than requiring anything like a searching hard look inquiry, the resulting distribution of agency wins is far more consistent with a thin form of rationality review.

63. See David Zaring, *Reasonable Agencies*, 96 VA. L. REV. 135 (2010).

64. See *id.* at 169.

65. *Id.*

Another type of indirect evidence involves the putative problem of “ossification.” The myth of rigorous *State Farm* review has long been accompanied by several mini-myths, part of the inherited generational wisdom about the costs of intensive judicial review of agency policymaking. Chief among these is the problem of agency ossification: consistent agency losses in litigation, coupled with fear of judicial review, resulted in agency paralysis. Informal rulemaking began taking years, if not decades; rulemaking records grew exponentially as agencies were forced to address every possible concern, with respect to every possible issue in every rulemaking, no matter how large or small.⁶⁶ The *State Farm* version of hard look review made it increasingly difficult for agencies to do their jobs—or so we have been taught.

If true, agency ossification would be some empirical evidence in favor of the strong version of *State Farm* review. Like rigorous *State Farm* review itself, however, the ossification phenomenon is long on anecdote and short on data. In fact, recent studies of agency rulemaking find virtually no evidence of the ossification thesis. EPA rules go from start to finish in an average of a year and a half.⁶⁷ In one exhaustive study of the unified regulatory agenda, Anne O’Connell concludes that the “costs to rulemaking . . . are certainly not so high as to prohibit considerable rulemaking activity.”⁶⁸ And, in another comprehensive survey of agency regulatory activity, Yackee and Yackee conclude that agencies are able to promulgate large numbers of rules fairly quickly.⁶⁹

If there is little evidence of actual ossification, why has the idea of ossification had so much influence? In part, it is because the few outlier examples are high profile and therefore highly visible; but for that very reason, one cannot accurately generalize from those cases to the remainder of the distribution of rulemakings. We suspect, however, that there is a simpler explanation as well. If one believes that *State Farm* entails searching hard look review, then it simply stands to reason, as a matter of nearly inimitable logic, that ossification will result. Once that misguided assumption is relaxed, the fact that there is little evidence of ossification makes perfect sense. Arbitrariness review is like a legal phantom: it can scare, but rarely hurts. So long as agencies comply with some minimal rationality requirements, they usually win in litigation.

The possibility of strong selection effects complicates our descriptive claim about agencies’ overwhelming win-loss record in the Supreme Court

66. See Thomas O. McGarity, *Some Thoughts on “Deossifying” the Rulemaking Process*, 41 DUKE L.J. 1385, 1385–86 (1992); Richard J. Pierce, Jr., *Seven Ways to Deossify Agency Rulemaking*, 47 ADMIN. L. REV. 59, 60–62 (1995); Mark Seidenfeld, *Demystifying Deossification: Rethinking Recent Proposals to Modify Judicial Review of Notice and Comment Rulemaking*, 75 TEX. L. REV. 483, 483 n.1 (1997).

67. See Stephen M. Johnson, *Ossification’s Demise? An Empirical Analysis of EPA Rulemaking from 2001–2005*, 38 ENVTL. L. 767, 784 (2008).

68. Anne Joseph O’Connell, *Political Cycles of Rulemaking: An Empirical Portrait of the Modern Administrative State*, 94 VA. L. REV. 889, 932 (2008).

69. Jason Webb Yackee & Susan Webb Yackee, *Administrative Procedures and Bureaucratic Performance: Is Federal Rule-Making “Ossified”?*, 20 J. PUB. ADMIN. RES. & THEORY 261 (2009).

and, a fortiori, their impressive—but not overwhelming—win-loss record in the courts of appeals. However, the selection effects hypothesis is speculative, and there is indirect evidence that it is at most a weak force—evidence both from Zaring’s global comparison of standards of review and from the ossification studies. And let us be clear that what the Court *says* is even more important than the win-loss record. As we will detail in the next Part, the Court’s approach to rationality review is thin in precisely our sense. Justices of all types—unlike some lower court judges—show a deep appreciation for the constraints under which agencies act, high tolerance for agency action under uncertainty, and a willingness to allow agencies to adopt strategies of second-order rationality that permit inaccurate, nonrational, or arbitrary action in particular cases.

II. PRESCRIPTION: THIN RATIONALITY REVIEW

What if anything might justify the pattern of deferential rationality review we have observed in Part I? There is a theory implicit, and sometimes explicit, in the bulk of the Court’s caselaw: thin rationality review. In this Part, we lay out the theory in both negative and positive terms, and examine its institutional implications for judicial review of agency action. We will also examine some indirect implications for nonjudicial review of agency action, OIRA review being the main example.

We begin, in Section II.A, with a series of negative claims. There are many things that rationality review does *not* require, and that the Court has generally disavowed, despite contrary assumptions or arguments scattered through the lower court caselaw and especially the commentary. Judges may not require agencies to conduct quantified cost-benefit analysis, even presumptively; may not always require agencies to conduct comparative policy evaluation, obliging agencies to show that the chosen policy is superior to feasible alternatives, or superior to the agency’s own past choices; may not require agencies to have valid first-order reasons for all their choices; may not force agencies to opt for “conservative” assumptions in the face of uncertainty; need not require a “rational connection between the facts found and the choices made,”⁷⁰ depending upon how exactly that critical idea is understood; need not require agencies to be able to explain or convey their reasons, to the satisfaction of a panel of generalist judges; and may not lard rationality review with quasi-procedural obligations.

In Section II.B, we offer a simple positive formulation of rationality review that attempts to capture the thin conception. We hold that agencies must act based on reasons, but also that (1) agencies may *have* reasons they cannot *give*, at least at acceptable cost; and (2) the set of admissible reasons includes second-order reasons to act inaccurately, nonrationally, or arbitrarily. That formulation seems paradoxical; we will attempt to explain that the paradox is illusory.

70. *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168) (1962)).

Finally, in Section II.C, we will consider whether and how our thin conception of rationality review applies, not only to judicial review, but to review by OIRA or other executive branch institutions. Some, but not all, of our negative prescriptions hold, *mutatis mutandis*—most controversially, our suggestions that reviewers have no basis in the theory of rational decisionmaking for requiring agencies to conduct quantified cost-benefit analysis (although there may be other grounds for doing so), and that agencies may have good reasons that they may be unable to communicate to the reviewer. Most generally, our claim that agencies may have good second-order reasons to act in ways that are inaccurate, nonrational, or arbitrary holds, regardless of the nature of the reviewing body.

A. Negative Prescriptions

1. “Relevant Factors”

To clear some ground, we will briefly mention a recurring confusion that stems not from *State Farm*, but from the original framework for rationality review laid down in *Overton Park*. Chief among the latter’s innovations was the idea that agencies must consider “the relevant factors,” and also avoid “clear error[s] of judgment.”⁷¹ The injunction to consider the “relevant factors” has fostered nontrivial confusion, because the source of those factors is not obvious. Is *Overton Park* saying, for example, that judges should identify policy factors in the problem at issue, policy factors that seem relevant to them, and then require agencies to consider those factors?

Not at all; indeed, the Court has specifically repudiated that procedure both in *State Farm* itself⁷² and in subsequent cases.⁷³ Understood in the larger framework of judicial review of agency action, the function of the “relevant factors” inquiry is simply to ensure that the agency has given due consideration to any factors *made relevant by the authorizing statute itself*, and to ensure that the agency has not considered any factors the statute rules off-limits. Absent constitutional problems, Congress enjoys the power to set the agency’s deliberative agenda by statute, either in positive or negative terms, and the “relevant factors” inquiry ensures that agencies respect Congress’s choices.

71. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971).

72. *State Farm*, 463 U.S. at 51 (“Nor do we broadly require an agency to consider all policy alternatives in reaching decision. It is true that rulemaking ‘cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man . . . regardless of how uncommon or unknown that alternative may have been . . .’ But the airbag is more than a policy alternative to the passive restraint Standard; it is a technological alternative within the ambit of the existing Standard.”) (alterations in original) (quoting *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council*, 435 U.S. 519, 551 (1978)).

73. *See Pension Benefit Guar. Corp. v. LTV Corp.*, 496 U.S. 633, 646 (1990) (“If agency action may be disturbed whenever a reviewing court is able to point to an arguably relevant statutory policy that was not explicitly considered, then a very large number of agency decisions might be open to judicial invalidation.”).

Given that the relevant factors inquiry is really one of statutory interpretation, it is subject to the rules of statutory interpretation that always govern in administrative law. One of those is the *Chevron* doctrine, under which agencies, rather than courts, enjoy the authority to fill in statutory gaps and ambiguities. The Court has made it plain that *Chevron* applies to the interpretive question about what factors the statute makes relevant.⁷⁴ And, three terms ago, the Court also explained that *Chevron* applies to agency interpretations of their own jurisdiction as well.⁷⁵ In particular, where statutes are silent or ambiguous, agencies—rather than courts—enjoy discretion to decide what the relevant factors may be and whether to consider those factors.⁷⁶

Agencies also enjoy discretion to decide *when* to consider those factors. The Court has also been clear that agencies need not consider all logically relevant policy factors at once, but may instead parcel them out into different proceedings, considering problems by parts and proceeding one step at a time.⁷⁷ Relatedly, agencies may in adjudication single out one or a few defendants from the mass of similarly situated firms, in order to create a test case, or to examine the relevant questions case by case—even if from the defendant’s point of view, the selection is entirely arbitrary.⁷⁸

This relaxed approach makes eminent sense. The precondition for *Chevron* to apply is a “step zero” analysis, which asks whether Congress has delegated law-interpreting authority to agencies rather than courts.⁷⁹ The

74. See *id.* at 647–52.

75. See *City of Arlington v. FCC*, 133 S. Ct. 1863 (2013).

76. *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843–45 (1984).

77. See *Mobil Oil Expl. & Producing Se., Inc. v. United Distrib. Cos.*, 498 U.S. 211, 230–31 (1991) (“An agency enjoys broad discretion in determining how best to handle related, yet discrete, issues in terms of procedures and priorities. . . . [A]n agency need not solve every problem before it in the same proceeding. This applies even where the initial solution to one problem had adverse consequences for another area that the agency was addressing.” (citations omitted)). There is some tension between this principle and the Court’s recent holding in *Michigan v. EPA*, that an agency instructed to consider all “appropriate and necessary” factors must consider costs and benefits at every stage of the proceedings. See 135 S. Ct. 2699, 2709 (2015); *cf. id.* at 2714 (Kagan, J., dissenting) (“The Agency acted well within its authority in declining to consider costs at the opening bell of the regulatory process given that it would do so in every round thereafter . . .”). As we discuss later, however, *Michigan v. EPA* is best understood to stand for the narrow, indisputable, and indeed nearly tautological proposition that at every stage of the administrative process, an agency decisionmaker must always consider both the pros and cons of whatever course of action the decisionmaker undertakes; it cannot look only to one side of the ledger. See *infra* text accompanying notes 137–146. So read, *Michigan v. EPA* is entirely compatible with *Mobil Oil* and with thin rationality review generally. After all, although the agency must consider the pros and cons of every decision it makes, it still enjoys “broad discretion” over timing and resource allocation, and “need not solve every problem before it in the same proceeding.” See *Mobil Oil*, 498 U.S. at 230–31.

78. “[W]hether all firms in the industry should be dealt with in a single proceeding or should receive individualized treatment are questions that call for discretionary determination by the administrative agency.” *Moog Indus., Inc. v. FTC*, 355 U.S. 411, 413–14 (1958) (allowing the FTC to cull one firm from the herd).

79. See Thomas W. Merrill & Kristin E. Hickman, *Chevron’s Domain*, 89 GEO. L.J. 833, 873–89 (2001); Cass R. Sunstein, *Chevron Step Zero*, 92 VA. L. REV. 187, 207–19 (2006).

animating objectives of *Chevron*—political accountability and expertise—both suggest that Congress’s default intention is that agencies, rather than courts, should determine which policy factors count as “relevant,” and which factors should be considered in which proceeding, absent clear statutory indication to the contrary or some special reason to think that the question is so important that it is not fit for agency resolution.⁸⁰ As to any reasonably complex policy problem, an indefinitely large number of policy factors are potentially relevant, or can be claimed to be relevant by litigants who benefit from delaying agency action. Generalist judges who attempt to sift the wheat from the chaff will run every risk of becoming confused, absent explicit statutory guidance, and will inevitably end up making *de facto* policy choices that should lie within the province of relatively more responsive and better-informed agencies.

So an agency that otherwise enjoys delegated interpretive authority under *Chevron* “step zero” also enjoys the authority to decide which factors count as “relevant” for purposes of *Overton Park*—provided, of course, that the underlying statute is silent or ambiguous. Where statutes are clear, however, either mandating or prohibiting consideration of relevant factors, courts must enforce their terms. In other words, the ordinary *Chevron* inquiry governs. For our purposes, the important point is that rationality review neither requires, nor even permits, generalist judges to decide on their own initiative that a given factor that happens to strike them as important is a legally “relevant factor” under *Overton Park*. Absent clear statutory instruction or an issue of extraordinary political and economic significance, policy relevance is a matter for agency determination.

2. Cost-Benefit Analysis—Quantified and Otherwise

With the advent of *Business Roundtable*, some have begun to suggest that cost-benefit analysis is a necessary component of rational decisionmaking, so that a requirement of cost-benefit analysis should be read into arbitrary and capricious review.⁸¹ How can a decision be rational if it is unjustified by

80. *FDA v. Brown & Williamson Tobacco Corp.* and *King v. Burwell* both say that *Chevron* deference does not apply to questions of great “economic and political significance.” *King v. Burwell*, 135 S. Ct. 2480, 2488–89 (2015); *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 159–60 (2000).

81. Sunstein’s separate section in *Libertarian Administrative Law*—with which Vermeule emphatically disagrees, see Sunstein & Vermeule *supra* note 53, at 443–46—seemingly endorses the following propositions:

To the extent that available evidence permits quantification, it would be arbitrary not to quantify. . . . To the extent that *Business Roundtable* stands for this general principle, it is on firm ground. . . . Indeed, it would generally seem arbitrary for an agency to issue a rule that has net costs (or no net benefits), at least unless a statute requires it to do so.

Id. at 441. For further discussion, see also Justice Scalia’s statement at oral argument in *Michigan v. EPA*:

I’m not even sure I agree with the premise that when . . . Congress says nothing about cost, the agency is entitled to disregard cost. I would think it’s classic arbitrary and capricious agency action for an agency to command something that is outrageously expensive

the attendant costs and benefits?⁸² Legally, there are two related-but-distinct ideas. As to the interpretation of agency organic statutes, one view holds that congressional silence or ambiguity should be read to require cost-benefit analysis, quantified where possible.⁸³ In a related view, unless statutes clearly prohibit the consideration of costs, arbitrariness review should be understood to require that agencies supply quantified cost-benefit analysis, wherever quantification is possible.⁸⁴

In our view, however, these claims hover between confused and mistaken. There is a thin tautological sense in which rationality requires that decisionmakers do what is better, as opposed to what is worse. But rationality certainly does not require quantified cost-benefit analysis in the technical sense. As for the interpretation of organic statutes and of arbitrariness review under the APA, there is no plausible basis for even a presumptive requirement of quantified cost-benefit analysis.

a. *Conceptual Problems*

At the conceptual level, there is slippage in this literature between a tautology on the one hand, and a highly sectarian decision-procedure on the other.⁸⁵ The tautology is that a decisionmaker should do what is best, all things considered. In that sense, it may always be said, without possibility of

and . . . in which the expense vastly exceeds whatever public benefit can be . . . achieved. I would think that's . . . a violation of the Administrative Procedure Act.

Transcript of Oral Argument at 14, *Michigan v. EPA*, 135 S. Ct. 2699 (2015) (No. 14-46). The actual decision in *Michigan v. EPA* did not go nearly that far, however. See *infra* text accompanying notes 137–148.

82. Compare CASS R. SUNSTEIN, *RISK AND REASON: SAFETY, LAW, AND THE ENVIRONMENT* 6, 99–132 (2002), and Cass R. Sunstein, *Cognition and Cost-Benefit Analysis*, 29 J. LEGAL STUD. 1059 (2000) (advocating cost-benefit analysis as a corrective to cognitive problems and judgment errors), with RICHARD A. POSNER, *CATASTROPHE: RISK AND RESPONSE* 139 (2004), Sidney A. Shapiro & Christopher H. Schroeder, *Beyond Cost-Benefit Analysis: A Pragmatic Reorientation*, 32 HARV. ENVTL. L. REV. 433, 446–50 (2008) (describing adoption of cost-benefit analysis as part of a “comprehensive rationality” that rational choice theorists consider essential to rational decisionmaking”), and Amartya Sen, *The Discipline of Cost-Benefit Analysis*, 29 J. LEGAL STUD. 931, 935 (2000) (“At the risk of oversimplification, explicit valuation is a part of the insistence on a rationalist approach, which demands full explication of the reasons for taking a decision, rather than relying on an unreasoned conviction or on an implicitly derived conclusion.”).

83. See CASS R. SUNSTEIN, *THE COST-BENEFIT STATE: THE FUTURE OF REGULATORY PROTECTION* 59–60 (2002) [hereinafter SUNSTEIN, *THE COST-BENEFIT STATE*]; Cass R. Sunstein, *Cost-Benefit Default Principles*, 99 MICH. L. REV. 1651, 1691–94 (2001) [hereinafter Sunstein, *Cost-Benefit Default Principles*].

84. See Sunstein, *Cost-Benefit Default Principles*, *supra* note 83, at 1686.

85. For the view that quantified cost-benefit analysis is best understood as a decision-procedure, see Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 YALE L.J. 165, 167 (1999). For the view that it is a sectarian decision-procedure, see *id.* (“Many law professors, economists, and philosophers believe that CBA does not produce morally relevant information and should not be used in project evaluation.”).

contradiction, that the decisionmaker should ensure that the “benefits” exceed the “costs.” Were a decisionmaker to say that “the benefits are X ; the costs are Y ; we find that $Y > X$; nonetheless we choose to do X ,” one would either doubt the decisionmaker’s rationality or assume some misunderstanding or miscommunication.⁸⁶ (As we will see, however, this sort of example assumes certainty, or at least well-formed probability assessments, as to the costs and benefits. Under conditions of genuine uncertainty, perhaps arising from high costs of information, rationality even permits decision-procedures that do not attempt to figure out, in a first-order way, whether benefits exceed costs.)

Thus an informal and nonquantified sense of cost-benefit analysis—thinking about the “pros” and “cons”⁸⁷—is ubiquitous, both in law and life. Charles Darwin famously drew up a list of pros and cons in deciding whether to marry.⁸⁸ But this informal sense of cost-benefit analysis is not what is at stake in the legal debates. In *Business Roundtable*, the SEC offered a detailed qualitative discussion of the pros and cons of its rule.⁸⁹ The court nonetheless objected that the agency’s cost-benefit analysis was inadequate because the agency had not tried hard enough to quantify some of the relevant factors.⁹⁰

As *Business Roundtable* illustrates, proponents urge a particular, highly structured decision-procedure: quantified CBA.⁹¹ That procedure is technical, but it is also highly controversial, even polarizing, especially in its purest form, which is not only quantified but monetized. Proponents praise it as a mechanism for welfare-maximization, for promoting democratic transparency in agency decisionmaking, or for securing presidential control of agencies.⁹² Opponents criticize it for reducing incommensurables to a common denominator, for smuggling in controversial value judgments and hidden margins of discretion, and for crowding out nonquantifiable considerations.⁹³

86. See Sen, *supra* note 82, at 934.

87. See generally Sen, *supra* note 82 (describing a “general social choice approach” to cost-benefit analysis). For a clear-minded treatment of the distinctions among intuitive judgment, unquantified cost-benefit analysis and quantified cost-benefit analysis, see Coates, *supra* note 53, at 892–93.

88. 2 THE CORRESPONDENCE OF CHARLES DARWIN 1837–1843 444 (Frederick Burkhardt et al. eds., 1986). Cases like Darwin’s list actually suggest that some decisions ought not to be made even on the basis of *informal* cost-benefit analysis, although we need not establish that proposition here.

89. See Facilitating Shareholder Director Nominations, 75 Fed. Reg. 56,668, 56,753–71 (Sept. 16, 2010) (to be codified at 17 C.F.R. pts. 200, 232, 240, and 249).

90. See *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1149–51 (D.C. Cir. 2011).

91. See, e.g., MATTHEW D. ADLER & ERIC A. POSNER, *NEW FOUNDATIONS OF COST-BENEFIT ANALYSIS* 100 (2006).

92. See, e.g., *id.*; RICHARD L. REVESZ & MICHAEL A. LIVERMORE, *RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH* 12–13 (2008); SUNSTEIN, *THE COST-BENEFIT STATE*, *supra* note 83, at 6–10.

93. See, e.g., FRANK ACKERMAN & LISA HEINZERLING, *PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING* 7–12 (2004); THOMAS O. MCGARITY,

The problems and promise of quantified CBA have been rehashed many times, and we do not address its merits here. But quantified CBA is a specialized, sectarian decision-procedure, not a requirement of rational decisionmaking. Many demonstrably rational economists, philosophers, lawyers and other students of decisionmaking do not believe that rationality requires quantified CBA. Some believe, on the contrary, that best practices of decisionmaking actually *forbid* resort to quantified CBA, because it has no moral relevance whatsoever and sometimes misleads.⁹⁴ More temperately, others believe that quantified CBA is sometimes useful, sometimes not, but reject the idea that it is inscribed in the very nature of rationality.⁹⁵ Quantified CBA is both disputable and widely disputed. To impose it on agencies in the name of rationality would be to squelch reasonable disagreement by sheer force.

b. *Legal Problems*

The legal issue is whether judges may require agencies to use quantified CBA, at least presumptively, either as a matter of arbitrariness review under the APA, or else by interpretation of agencies' organic statutes.⁹⁶ We argue that judges have no warrant for so requiring. The Court has emphatically banned judges from imposing decision-procedures on agencies as a matter of federal common law, and there is no source of positive law that might be read to impose a global, judicially enforceable mandate of quantified CBA on agencies, even presumptively. (Later we will take up the very different issue of quantified CBA mandates during executive review; such mandates by their terms are not enforceable in court.)⁹⁷

Quantified CBA is a particular decision-procedure—emphasis on procedure. Under *Vermont Yankee*⁹⁸ and *Perez*,⁹⁹ agencies have discretion about whether to adopt such procedures, and courts have no power to force them

REINVENTING RATIONALITY: THE ROLE OF REGULATORY ANALYSIS IN THE FEDERAL BUREAUCRACY 142–59 (2005); Coates, *supra* note 53; Amy Sinden et al., *Cost-Benefit Analysis: New Foundations on Shifting Sand*, 3 REG. & GOVERNANCE 48, 55–56 (2009).

94. See Adler & Posner, *supra* note 85, at 171–72 (discussing objections).

95. See *id.*

96. Confusingly, in recent years, some of the academic commentary has concluded that *Chevron* (or at least *Chevron* Step Two) and arbitrariness review are actually equivalent. If an agency has adopted a view that is an unreasonable interpretation of its organic statute, that view must also be arbitrary and capricious; if an agency view is arbitrary and capricious then it cannot be a reasonable interpretation of the statute. See, e.g., Gary S. Lawson, *Reconceptualizing Chevron and Discretion: A Comment on Levin and Rubin*, 72 CHI.-KENT L. REV. 1377, 1377–79 (1997); Ronald M. Levin, *The Anatomy of Chevron: Step Two Reconsidered*, 72 CHI.-KENT L. REV. 1253, 1276 (1997); Laurence H. Silberman, *Chevron—The Intersection of Law & Policy*, 58 GEO. WASH. L. REV. 821, 827–28 (1990). For our purposes, this debate is something of a sideshow. We simply note it because the language of cases and commentary is often imprecise, slipping back and forth between doctrinal frameworks for this reason.

97. See *infra* text accompanying note 217.

98. 435 U.S. 519 (1978).

99. 135 S. Ct. 1199, 1207 (2015).

to do so, beyond the procedures prescribed by the APA itself. Suppose that an agency is charged with deciding whether to regulate mercury emissions from electric utilities,¹⁰⁰ and suppose also that the court tells the agency that—even after the agency has considered the relevant statutory factors—the agency must, if possible, quantify and monetize the various factors. What the court has done is to prescribe *how*, and by what procedures, the agency is to exercise its discretion. That is the very thing the Court has “[t]ime and again . . . reiterated” that lower courts are forbidden to do.¹⁰¹

The only way around the *Vermont Yankee* problem is to locate the mandate for cost-benefit analysis either in organic statutes or in section 706 itself, but neither approach succeeds. Where agency organic statutes are silent or ambiguous, it is wildly implausible that Congress intends (or could be deemed fictionally to intend) a global default rule requiring cost-benefit analysis. Across the broad landscape of federal regulatory statutes, Congress sometimes mandates quantified CBA, sometimes refers vaguely to considerations of “cost,” sometimes leaves matters ambiguous, sometimes contents itself with Delphic silence, sometimes explicitly *forbids* consideration of cost, and sometimes mandates other decision-procedures altogether, such as “feasibility” analysis.¹⁰² There is no legal basis to elevate one of these approaches to global default-rule status, apart from a sectarian preference for one approach or the other. The regulatory system writ large, like the Administrative Procedure Act, is a series of “compromises” that allows “opposing social and political forces” to “come to rest.”¹⁰³ There is irreducible reasonable disagreement about the best regulatory decision-procedure, including the very plausible view that there is no single best decision-procedure, independent of context.

The same statutory landscape militates strongly against reading a (presumptive) requirement of quantified CBA into the “arbitrary and capricious” language of section 706(2)(A). To do so implies that Congress itself acts irrationally whenever it mandates feasibility analysis, or forbids cost considerations, as it sometimes does. Are the proponents prepared to invalidate as irrational all statutes that mandate feasibility, or forbid considerations of cost, perhaps under the Due Process Clause? Invalidate the Occupational Safety and Health Act, perhaps?¹⁰⁴ (It is no answer to say that the standard of rationality review is more deferential for Congress, although

100. See *Michigan v. EPA*, 135 S. Ct. 2699, 2708 (2015).

101. *Perez*, 135 S. Ct. at 1207. *Michigan v. EPA* clearly declined to impose any such requirement. 135 S. Ct. at 2711.

102. See Jonathan S. Masur & Eric A. Posner, *Against Feasibility Analysis*, 77 U. CHI. L. REV. 657, 658 (2010) (collecting examples). Masur and Posner criticize feasibility but do not claim that Congress should be taken to intend to require that agencies perform quantified CBA whenever statutes are silent or ambiguous. *Id.* at 662–63, 687–712.

103. *Wong Yang Sung v. McGrath*, 339 U.S. 33, 40 (1950).

104. Cf. Cass R. Sunstein, *Is OSHA Unconstitutional?*, 94 VA. L. REV. 1407 (2008). Sunstein criticizes OSHA on nondelegation grounds but is also sharply critical of feasibility analysis. The logic of his view is that the Act is patently irrational and therefore vulnerable to a due process challenge.

that is true.¹⁰⁵ The view at issue is that not doing quantified CBA, when that is possible, is no more rational than using a Ouija board—unconstitutional under any standard.) Whatever the answer to those questions, such provisions show that many presumptively reasonable legislators, at various times, have not thought it irrational to mandate decision-procedures other than quantified CBA. The proponents' reading of 706(2)(A) would thus produce an immediate and severe incoherence in the federal regulatory system overall.

c. Current Law

So there is no basis for either a global default rule requiring quantified CBA whenever statutes are silent or ambiguous, or else for reading an obligation to perform quantified CBA into the arbitrariness standard of 706(2)(A). Fortunately, current law emphatically rejects both ideas in any event. The Supreme Court has consistently held that quantified CBA is discretionary for agencies.¹⁰⁶ There are a few exceptions that are memorable precisely because they diverge from the normal course of judicial practice. But a brace of recent cases has clarified the terrain.

In *Entergy Corp. v. Riverkeeper, Inc.*,¹⁰⁷ the Court upheld EPA's use of cost-benefit analysis in the face of statutory silence with respect to standards in section 316(b) of the Clean Water Act. The Second Circuit had held that the EPA was not permitted to use cost-benefit analysis in determining the content of regulations under section 316(b).¹⁰⁸ At issue in the case were EPA regulations concerning the technology required for operators of large power plants that utilize "cooling water intake structures," drawing water in from water sources to cool the plant, in the process killing aquatic life. The Clean Water Act requires that

[a]ny standard . . . applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the *best technology available* for minimizing adverse environmental impact.¹⁰⁹

So-called closed-cycle cooling systems recirculate the water used to cool the facility and therefore extract less water from the local water source and generate less risk of harm to aquatic life. The EPA's rule required new sources to

105. See *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 n.9 (1983) ("We do not view as equivalent the presumption of constitutionality afforded legislation drafted by Congress and the presumption of regularity afforded an agency in fulfilling its statutory mandate.").

106. See Amy Sinden, *Cass Sunstein's Cost-Benefit Lite: Economics for Liberals*, 29 COLUM. J. ENVTL. L. 191, 240 (2004); cf. Thomas O. McGarity, *Professor Sunstein's Fuzzy Math*, 90 GEO. L. J. 2341, 2343 (2002).

107. 556 U.S. 208 (2009).

108. *Riverkeeper, Inc. v. EPA*, 475 F.3d 83, 99–100 (2d Cir. 2007).

109. 33 U.S.C. § 1326(b) (2012) (emphasis added).

use technology approximating the performance of closed-cycle cooling system. For certain classes of existing sources, however, the EPA required reductions in the harm to aquatic organisms, but nowhere near the reduction that would be accomplished if the EPA mandated performance at the closed-cycle cooling system level.¹¹⁰ While the closed-cycle cooling system performance would reduce impingement and entrainment mortality by up to 98 percent, the costs of compliance for these existing sources would be nine times greater (\$3.5 billion) than reducing aquatic damage by 80–95 percent using the alternative performance standards.¹¹¹ Put informally, the EPA concluded that the marginal costs of achieving the best possible reduction in aquatic harm drastically outweighed the corresponding marginal benefit.

Writing for the majority, Justice Scalia explained that the EPA could permissibly read “best” to simply mean “most advantageous.”¹¹² One possible interpretation of “best” is the technology that achieves the greatest reduction in adverse environmental impact.¹¹³ Another, however, is the technology that “most efficiently produces some good.”¹¹⁴ The Court quickly dispensed with the notion that statutory silence necessarily precludes or mandates cost-benefit analysis. On the contrary, discussing several cases in which statutory silence was read to preclude cost-benefit analysis,¹¹⁵ or at least to not require it,¹¹⁶ the Court explained that “under *Chevron*, that an agency is not *required* to do [cost-benefit analysis] does not mean that an agency is not *permitted* to do so.”¹¹⁷ Even though other standards in the CWA might preclude cost-benefit analysis in express terms, the EPA was free to adopt a reasonable interpretation of the statutory standard above as allowing cost-benefit analysis. Far from announcing a default rule in favor of cost-benefit analysis, the Court made clear that statutory ambiguity will generally be read to give agencies discretion with respect to whether or not to utilize it.

*Environmental Protection Agency v. EME Homer City Generation L.P.*¹¹⁸ is similar. The case involved a challenge to the EPA’s interstate air pollution rules governing the conduct of upwind states that contribute significantly to air pollution in downstream states. The Clean Air Act requires States to

110. *Entergy*, 556 U.S. at 215–16; National Pollutant Discharge Elimination System—Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities, 69 Fed. Reg. 41,576, 41,599–606 (July 9, 2004) (to be codified at 40 C.F.R. pt. 23.2).

111. *Entergy*, 556 U.S. at 216.

112. *Id.* at 218.

113. *Id.*

114. *Id.*

115. *Id.* at 223 (discussing *Whitman v. American Trucking Ass’ns., Inc.*, 531 U.S. 457 (2001)).

116. *Id.* (discussing *Am. Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490 (1981)).

117. *Id.*

118. 134 S. Ct. 1584 (2014).

eliminate “amounts” of pollution that “contribute significantly to nonattainment” in downwind states.¹¹⁹ But because multiple states may affect conditions in a downstream state, the statute requires the EPA to apportion reductions. The D.C. Circuit had held that the statute required EPA to allocate responsibility for reducing emissions proportionally to each State’s physical contribution.¹²⁰ The EPA’s method of determining cost-reduction obligations balanced the magnitude of the state’s contribution to the pollution of downstream air conditions and the costs associated with reducing them.¹²¹ The challengers argued that the EPA was forbidden to consider costs, but, as in *Entergy*, the majority again clarified that unless the statute clearly mandates otherwise, the EPA is free to consider costs. “The Agency has chosen, sensibly in our view, to reduce the amount easier, *i.e.*, less costly, to eradicate, and nothing in the text of the Good Neighbor Provision precludes that choice.”¹²² In short, in the face of statutory silence, the agency is free to use cost-benefit analysis or not, as it sees fit.

In *Utility Air Regulatory Group v. EPA*¹²³ (“UARG”) the Court considered a challenge to the EPA’s interpretation of the Clean Air Act as it pertains to greenhouse gases (GHGs). In *Massachusetts v. EPA*,¹²⁴ the Court had held that greenhouse gas emissions were “pollutants” for at least some purposes of the Clean Air Act. After *Massachusetts v. EPA*, the agency issued greenhouse gas emission standards for new motor vehicles.¹²⁵ Stationary sources are governed by two separate provisions of the Clean Air Act (as relevant here)—the Prevention of Significant Deterioration (PSD) provisions¹²⁶ and the Title V permitting program.¹²⁷ Those provisions set numerical triggers for what sort of entity is regulated (100 or 250 tons per year of a pollutant).¹²⁸ Because greenhouse gases, unlike other air pollutants, are emitted in vastly greater amounts, those numerical thresholds would have

119. Clean Air Act, 42 U.S.C. § 7410(a)(2)(D)(i) (2012).

120. *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 20–21 (D.C. Cir. 2012), *rev’d*, 134 S. Ct. 1584 (2014).

121. See Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 76 Fed. Reg. 48,208, 48,254 (Aug. 8, 2011) (to be codified at 40 C.F.R. pts. 51, 52, 72 et al.); see also *EME Homer City*, 134 S. Ct. at 1597.

122. *EME Homer City*, 132 S. Ct. at 1607.

123. 134 S. Ct. 2427, 2434 (2014).

124. 549 U.S. 497, 528–29 (2007).

125. See *UARG*, 134 S. Ct. at 2436–37.

126. See Clean Air Act, 42 U.S.C. §§ 7471–7492 (2012).

127. *Id.* § 7661.

128. See *id.* §§ 7479(1), 7661(2)(B), 7602(j).

brought thousands of new small entities under the rubric of the EPA permitting process.¹²⁹ Accordingly, the EPA sought to cover initially only those entities emitting more than 100,000 tons of greenhouse gases per year.¹³⁰ In short, the Court in *Massachusetts v. EPA* prodded the agency to adopt an ambitious reading of the statute, which then threatened to render part of the existing regulatory framework unworkable.

Without delving too deeply into the technical details of the Clean Air Act, there were essentially two types of sources at issue in the EPA rule challenged in *UARG*. The first group would not have been subject to the PSD or Title V permitting process at all, but for their greenhouse gas emissions. The Court held that the EPA's interpretation, which brought these thousands of sources into the Act's coverage, was unlawful.¹³¹ The second group of sources were subject to the permitting process for the emission of other air pollutants anyway. For this group of sources, there was a subsequent interpretive question about whether the EPA's decision to require Best Available Control Technology (BACT) for greenhouse gases was a permissible interpretation of the statute. The Court held that it was.¹³² The challengers essentially argued that BACT does not work for greenhouse gases.¹³³ The Court's discretion-preserving language is striking: "applying BACT to greenhouse gases is not so disastrously unworkable, and need not result in such a dramatic expansion of agency authority, as to convince us that EPA's interpretation is unreasonable."¹³⁴

Because *UARG* strikes down an EPA interpretation, it might at first glance be read as an aggressive form of judicial review in tension with *Energy* and *EME Homer*. In reality, however, it is precisely the opposite. EPA had advanced a view that the agency was required to adopt the same definition of "air pollutant" throughout the Clean Air Act, and therefore GHGs needed to be treated as criteria pollutants. As Justice Scalia explained, however, "the presumption of consistent usage readily yields to context, and a statutory term—even one defined in the statute—may take on distinct characters from association with distinct statutory objects calling for different implementation strategies."¹³⁵ Because the EPA's rigid interpretation would render the statutory scheme unworkable, it was not a permissible interpretation of the statute. But where the interpretation would not render the scheme unworkable (for "anyway" sources), EPA was free to adopt either interpretation. Indeed, this latter part of the opinion is striking for just how

129. See *Regulating Greenhouse Gas Emissions Under the Clean Air Act*, 73 Fed. Reg. 44,354, 44,498–99 (proposed July 30, 2008); see also *UARG*, 134 S. Ct. at 2436.

130. See *Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule*, 75 Fed. Reg. 31,514, 31,523–24 (June 3, 2010) (to be codified at 40 C.F.R. pts. 50–52, et al.).

131. *UARG*, 134 S. Ct. at 2443–46.

132. *Id.* at 2447–49.

133. *Id.* at 2447.

134. *Id.* at 2448.

135. *Id.* at 2441 (quoting *Env'tl. Def. v. Duke Energy Corp.*, 549 U.S. 561, 574 (2007)).

far removed from mandatory cost-benefit analysis it is. The agency was not required to pick a rule that was even close to cost-benefit justified so long as it was “not so disastrously unworkable.”¹³⁶

Finally, there is the recent decision in *Michigan v. EPA*,¹³⁷ in which the Court invalidated an EPA rule under the Clean Air Act relating to hazardous emissions from power plants. The relevant statutory text authorized regulation only if “appropriate and necessary.”¹³⁸ As framed by the litigation, the question was whether the EPA could defer consideration of costs at the stage of deciding *whether* to regulate, and later take costs into account at the stage of deciding *how much* to regulate—how stringent regulation should be.¹³⁹ In an opinion by Justice Scalia, the Court held that under the statutory text, cost was a “relevant factor,” and the EPA’s decision to ignore cost at the first decisional stage was unreasonable.¹⁴⁰ The decision is most easily and naturally read as a *Chevron* Step Two decision, on a straightforward statutory issue under the particular scheme of the relevant Clean Air Act provisions.¹⁴¹

Proponents of quantified cost-benefit analysis point to seemingly broad language in the opinion,¹⁴² as when the majority opined that “[o]ne would not say that it is even rational, never mind ‘appropriate,’ to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits.”¹⁴³ On the broadest possible reading, this could mean that it is arbitrary and capricious for agencies not to conduct quantified and monetized cost-benefit analysis where possible. Yet this is an interpretation the Court took pains to disavow later in the opinion. Justice Scalia went out of his way to emphasize that while rationality may require “paying attention to the advantages and the disadvantages of agency decisions,”¹⁴⁴ that is not the same as requiring *quantification* of the advantages and disadvantages:

The Agency must consider cost—including, most importantly, cost of compliance—before deciding whether regulation is appropriate and necessary. We need not and do not hold that the law unambiguously required the Agency, when making this preliminary estimate, to conduct a formal cost-benefit analysis in which each advantage and disadvantage is assigned

136. *Id.* at 2448.

137. 135 S. Ct. 2699 (2015).

138. Clean Air Act, 42 U.S.C. § 7412 (2012).

139. *Michigan v. EPA*, 135 S. Ct. at 2706–09.

140. *Id.* at 2711–12.

141. Or straightforward for those who believe that *Chevron* has two steps. *But see* Matthew C. Stephenson & Adrian Vermeule, *Chevron Has Only One Step*, 95 VA. L. REV. 597 (2009).

142. *E.g.*, Cass R. Sunstein, *Thanks, Justice Scalia, for the Cost-Benefit State*, BLOOMBERG VIEW (July 7, 2015), <http://www.bloomberglaw.com/articles/2015-07-07/thanks-justice-scalia-for-the-cost-benefit-state> [<http://perma.cc/8ENH-NJWP>] (calling the opinion in *Michigan v. EPA* a “ringing endorsement of cost-benefit analysis by government agencies”).

143. *Michigan v. EPA*, 135 S. Ct. at 2707.

144. *Id.* (emphasis omitted).

a monetary value. It will be up to the Agency to decide (as always, within the limits of reasonable interpretation) how to account for cost.¹⁴⁵

Decisions about quantification, in other words, are a matter for reasonable agency discretion, contra *Business Roundtable. Michigan v. EPA* is clearly alert to the distinction between the colloquial, informal sense of “costs and benefits,” on the one hand, and formalized quantified and monetized cost-benefit analysis on the other. The decision is principally an interpretive holding, about the meaning of the phrase “appropriate and necessary” in a particular section of the Clean Air Act. But insofar as it addresses issues of rationality review in passing, it stands only for the unobjectionable proposition that rationality requires consideration of both the “advantages *and* the disadvantages of agency decisions.”¹⁴⁶ Absent specific statutory instruction, agencies may not conduct a one-sided assessment of either costs or benefits without the other, any more than they may consider only one side’s factual evidence. The case stands for nothing broader than that unexceptional proposition.

d. “State Farm *with Teeth*”

Finally, there is an emergent idea in the commentary that tries to link a more intensive version of arbitrariness review with the performance of cost-benefit analysis by agencies. Professor Catherine Sharkey’s proposed “*State Farm with Teeth*” argues for a more intensive elevated standard for judicial review of some independent agency decisions, particularly cost-benefit analysis *not* reviewed by OIRA.¹⁴⁷ The core idea is that courts should review agency decisions backed by high-quality cost-benefit analysis less intensively than they otherwise would. Judicial practice along these lines would not expressly require cost-benefit analysis, but would do so indirectly.

To the extent that there is an implicit claim in Sharkey’s proposal that courts should adopt a thin version of rationality review for agency decisions

145. *Id.* at 2711; *accord id.* at 2717 (Kagan, J., dissenting) (“As the Court notes, [accounting for costs] does not require an agency to conduct a formal cost-benefit analysis of every administrative action.”).

146. *Id.* at 2707. This is not to say, of course, that *Michigan v. EPA* is correct. In our view, the Court slipped from an unexceptional premise, that agencies should consider both the advantages and disadvantages of their decisions, to the very different and indefensible conclusion that agencies must consider those things all together, at every stage of regulatory proceedings. On the contrary, the background presumption of administrative law is that agencies may parcel out the consideration of relevant factors into different stages of proceedings or even different proceedings. *See supra* note 77 (discussing *Mobil Oil Expl. & Producing Se., Inc. v. United Distrib. Cos.*, 498 U.S. 211, 230–31 (1991)). Although the presumption may of course be overcome by clear statutory instructions to the contrary, the textual phrase “appropriate and necessary” should have been deemed insufficient to do so. *See Michigan v. EPA*, 135 S. Ct. at 2714–15 (Kagan, J., dissenting) (“[The majority’s] micromanagement of EPA’s rulemaking, based on little more than the word ‘appropriate’—runs counter to Congress’s allocation of authority between the Agency and the courts.”).

147. Catherine M. Sharkey, *State Farm “With Teeth”: Heightened Judicial Review in the Absence of Executive Oversight*, 89 N.Y.U. L. Rev. 1589, 1592 (2014).

that *have* been subject to OIRA review, we certainly agree. But to the extent that she advocates a thicker version of review for agencies that have not engaged in rigorous cost-benefit analysis, the idea is neither an accurate description of existing judicial practice, nor in our view a desirable shift in doctrine. The proposal ignores the fundamental feature of agency decision-making under conditions of severe uncertainty. To illustrate, agencies addressing health risks from pollution rarely know the exact shape of the dose-response curve at low levels of exposure.¹⁴⁸ The challenge is to utilize other available information, for example effects of exposure at higher levels or effects of exposure on animals, to make a reasoned *inference* about the likely effects at low levels of exposure.¹⁴⁹ So too agencies regulating financial markets will rarely be able to precisely state the costs or benefits of a proposed rule because the actual effect will depend on a complex set of interdependent decisions by market participants. The problem to be solved is a lack of certainty about those effects. To require an agency to justify its decision using the exact information that is inevitably lacking is the very opposite of rationality. It is akin to requiring that all requests to learn an unknown foreign language be made in that language, or that all research be funded only if the results are already known.

But we have now moved to the question of agency decisionmaking under uncertainty; let us take up that topic directly.

3. Connecting Facts and Choices: Uncertainty, Rationality, and Arbitrariness

In a frequently quoted passage, *State Farm* announced that an agency must “examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”¹⁵⁰ This has become a basic principle of rationality review: agencies must explain their choices, in light of the facts. We will suggest, however, that there is much less to this requirement than meets the eye—both as a matter of the theory of rational decisionmaking, and under current law. The obligation to explain choices, given the facts, is far less demanding than lower courts sometimes assume—although the Court itself has usually understood the problem and followed the correct approach.

The critical problem is that facts sometimes underdetermine agency choices. It is not necessarily the case, and perhaps not even usually the case, that given some state of the world, the agency will always have (let alone be able to give) reasons for choosing one policy over all competitors, or over

148. See U.S. ENVTL. PROT. AGENCY, EPA-SAB-EC-WKSHP-02-001, WORKSHOP ON THE BENEFITS OF REDUCTIONS IN EXPOSURE TO HAZARDOUS AIR POLLUTANTS: DEVELOPING BEST ESTIMATES OF DOSE-RESPONSE FUNCTIONS 2 (2002), [https://yosemite.epa.gov/sab%5CSABPRODUCT.NSF/34355712EC011A358525719A005BF6F6/\\$File/ecwshp02001%2Bappa-g.pdf](https://yosemite.epa.gov/sab%5CSABPRODUCT.NSF/34355712EC011A358525719A005BF6F6/$File/ecwshp02001%2Bappa-g.pdf) [<https://perma.cc/QHK2-YBML>].

149. *Id.* at C-1.

150. *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)).

any given alternative. Rather, it can be the case, and may often be the case, that agencies will face a situation in which (1) the agency is obligated to choose; (2) there exists more than one policy that can be justified, given the best evidence about the state of the world; and yet, (3) there is no decisive reason to choose one policy over another.

Cases of this sort arise under genuine uncertainty, so-called Knightian uncertainty.¹⁵¹ Knightian uncertainty arises when the decisionmaker has no respectable epistemic basis for attaching probabilities to possible outcomes. This is not to say that subjective probabilities cannot be elicited and then attached, by brute force, but those probabilities lack any credible epistemic warrant or foundation.

From the fact that it is always possible to elicit these subjective probabilities, we should not conclude that one ought rationally to act upon them. One could certainly elicit from a political scientist the subjective probability that he attaches to the prediction that Norway in the year 3000 will be a democracy rather than a dictatorship, but would anyone even contemplate *acting* on the basis of this numerical magnitude?¹⁵²

Furthermore, it has been shown empirically that subjective probabilities are highly sensitive to the method used to elicit them, implying that they are artifactual.¹⁵³

Absent probabilities, what is the rational decisionmaker to do? The main issue is whether the decisionmaker should adopt a more or less optimistic or pessimistic approach. At the extreme of pessimism is “maximin,” which indicates the choice with the best worst-case outcome; at the extreme of optimism is “maximax,” which indicates the choice with the best best-case outcome; and indeed any weighted average of these extremes is also possible.¹⁵⁴ Importantly, any of these approaches is equally rational, given the circumstances; there is no general way to arbitrate among them, no further requirement of rationality that would knock out all but one approach.

Sometimes, of course, law will impose further constraints, even if the theory of rational decisionmaking does not. Particular regulatory statutes might command a highly cautious or pessimistic (“precautionary”) approach. But there is no *general* requirement to that effect; the law rejects any general preference for maximin over maximax. The Supreme Court has consistently overturned judges who attempt to impose on agencies a mandate to

151. See FRANK H. KNIGHT, *RISK, UNCERTAINTY AND PROFIT* (1921).

152. JON ELSTER, *EXPLAINING TECHNICAL CHANGE* 199 (1983).

153. See *id.* at 185–207; JON ELSTER, *NUTS AND BOLTS FOR THE SOCIAL SCIENCES* 34–35 (1989); ADRIAN VERMEULE, *JUDGING UNDER UNCERTAINTY* 171–72 (2006); David Kelsey & John Quiggin, *Theories of Choice Under Ignorance and Uncertainty*, 6 J. ECON. SURVEYS 133 (1992).

154. See Kenneth J. Arrow & Leonid Hurwicz, *An Optimality Criterion for Decision-making Under Ignorance*, in *UNCERTAINTY AND EXPECTATIONS IN ECONOMICS* 1 (C. F. Carter & J. L. Ford eds., 1972). The generalized version is the so-called “ α -maximin framework,” which models decisionmakers as choosing a parameter that may range from maximal pessimism to maximal optimism. For a review of the literature, with legal and regulatory applications, see Daniel A. Farber, *Uncertainty*, 99 GEO. L.J. 901 (2011).

make “conservative” or “worst case” assumptions under uncertainty.¹⁵⁵ There is thus an element of *irreducible* discretion in agency choice under genuine uncertainty. The facts underdetermine the choice, and as far as the law and the theory of rational choice goes, the agency can simply choose how pessimistic or optimistic to be.

In an important set of cases, then, agencies face a dilemma: although the agency does best by choosing one of the available options from within the feasible set, any choice of a *particular* option is necessarily arbitrary. The agency thus faces a “rationally arbitrary decision”¹⁵⁶: it is rational to act arbitrarily, in the sense of making a policy choice that cannot be justified relative to other available choices, but can be justified by the need to make some choice or other from within the feasible set. Rationality and arbitrariness are usually cast as strict antonyms, but this is a confusion. Agencies acting under uncertainty may have perfectly good second-order reasons to make one choice or another, within the feasible set, even if they lack any first-order reason to choose one option over another within the feasible set. In cases of this sort, agencies act based on reasons, even if they have no first-order reasons for their choices; they act arbitrarily, but have perfectly good reason to do so.

As a recent illustration, the Secretary of the Interior was required by law to decide whether to list the southwestern flat-tailed horned lizard as a threatened species or not, yet there was no reliable data on the number of extant lizards;¹⁵⁷ “the administrative record did not support a finding that the lizard population was viable *or* nonviable.”¹⁵⁸ In such circumstances, the agency has excellent second-order reasons—here, compliance with a legal mandate—to make a decision one way or another, even though no decision can be fully justified.

Courts should recognize the existence of this sort of dilemma. The hallmark of such cases is *mirror-image reversibility*: the agency’s choice of A over B is arbitrary, in the sense that the agency can give no valid first-order reason for the choice, but it is equally true that the agency can give no valid reason for the opposite choice either. The agency is constrained to choose,

155. See *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 356 (1989) (finding that under NEPA, court of appeals erred in requiring agencies to perform a “worst case analysis” under uncertainty, in part because worst-case analysis “distort[s] the decisionmaking process by overemphasizing highly speculative harms”); *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983) (upholding NRC’s maximally optimistic “zero-release” assumption for spent nuclear fuels, observing that “a reviewing court must generally be at its most deferential” when an agency “mak[es] predictions, within its area of special expertise, at the frontiers of science”).

156. See Vermeule, *supra* note 9.

157. *Tucson Herpetological Soc’y v. Salazar*, 566 F.3d 870 (9th Cir. 2009); Vermeule, *supra* note 9, at S9–S11.

158. Richard Murphy, *We Found Out That Counting Lizard Poop Is Not a Good Way to Count Lizards: Now What?*, JOTWELL (Jan. 6, 2015) (emphasis added), <http://adlaw.jotwell.com/we-found-out-that-counting-lizard-poop-is-not-a-good-way-to-count-lizards-now-what/> [<http://perma.cc/VH9D-LJDN>].

but any choice it makes would fail ordinary arbitrariness review. Recognizing this dilemma, the court should defer to the agency's choice.

Any other judicial approach will create deadweight losses for the system. If the court *itself* picks arbitrarily, substituting its own decision for the agency's, there is by hypothesis no added benefit whatsoever, but there is the extra cost of the judicial proceeding itself, including not only the out-of-pocket costs but also the delay in reaching some choice or other. Furthermore, as we will discuss shortly under the rubric of tacit expertise, the agency's choice may actually be better than the court's in ways and on grounds that the agency cannot explain to the court; the agency may simply have better instincts, even in situations of severe uncertainty. If, on the other hand, the court demands first-order reasons for the agency's choice, then *any* of the agency's possible choices can be overturned as arbitrary. On that approach, one of two pathological results will occur. Either the agency will be trapped in an indefinite cycle of reversal, as the court overturns every new agency attempt to make a policy choice, or—more likely—agencies will have powerful incentives to engage in a charade, in which they offer the reviewing court bogus first-order reasons to prefer one alternative over the other. In such situations, it is pathological for courts to relentlessly demand that the agency supply first-order reasons that in the nature of things cannot be given. At the frontier of uncertainty, rationality simply runs out.

Two doctrinal conclusions follow, one involving Section 706(2)(A) of the APA, the other involving *State Farm* and the rational connection test. The first conclusion is that decisions may be arbitrary in a theoretical sense without being arbitrary in a legal sense. In cases involving mirror-image reversibility, agency decisionmaking may be rationally arbitrary but not *legally* arbitrary.

The second conclusion is that in cases of this sort, agencies may validly select policies without a *direct* connection between the facts found and the choices made. Because the facts and the state of the world underdetermine choices, agencies cannot reasonably be asked to show, based on the facts, that the choice they make is superior to the alternatives. This is not to say that there is no rational connection between facts and choices. It is to say that the nature of the rational connection is different than in standard cases. The rational connection lies at the second order, not the first; it arises because the agency has good reason to decide, even if it lacks good reason for the decision. In this sense, the *State Farm* test of rational connection is more capacious, more forgiving, and less demanding than is conventionally understood.

So far we have said nothing at all about the empirical incidence of such cases. Our claim is analytic, and will hold, or not, regardless of the nature of the problems that actual agencies actually face. Still, if only to underscore the importance of getting the right conceptions of rationality and rationality review, it is worth recording our sense of the matter.

On one view, which is certainly possible and which cannot be refuted on a priori grounds, cases of genuine uncertainty are rare in the field of agency decisionmaking; agencies mostly encounter problems of risk, to

which quantifiable probabilities can be attached, and to which quantified cost-benefit can be applied. Our view is different. Agencies frequently encounter novel problems at the frontiers of scientific and technical knowledge, such that even expert probability assessments are unreliable and real uncertainty is pervasive. The ordinary problems of risk assessment and regulation, involving calculable probabilities and known risks, have a diminishing market share over time, as agencies handle easy problems and move on to more difficult ones. When agencies face regulatory choices premised on guesses about the effects of climate change,¹⁵⁹ or the chances of a novel type of domestic terror attack,¹⁶⁰ or the future of a species whose number is simply unknown,¹⁶¹ or the effects of a novel regulatory constraint on shareholder voting,¹⁶² they face choices in which any probability assessments lack respectable epistemic foundations—they face genuine uncertainty. A sensible theory of rationality review has to take account of the pervasive presence of uncertainty in the administrative state.

4. Comparative Policy Evaluation (Over Time)

Uncertainty has another critical dimension, involving the rationality of information-gathering by agencies. Rational agencies will invest resources in acquiring information, which may resolve Knightian uncertainty, transforming it into risk or even certainty.¹⁶³ Yet “in some cases the value of further investments in information gathering will itself be genuinely uncertain.”¹⁶⁴ If so, the problem of rational arbitrariness will replicate itself at this higher level as well.¹⁶⁵ In a genuinely uncertain choice environment, the decisionmaker must stop the search for the best policy sooner or later, somewhere or other, or else fall into an infinite regress—deciding whether to acquire information about the costs of acquiring further information, and so on.¹⁶⁶ Policymaking under uncertainty is

like going into a big forest to pick mushrooms. One may explore the possibilities in a certain limited region, but at some point one must stop the explorations and start picking because further explorations as to the possibility of finding more and better mushrooms by walking a little bit further

159. See *Massachusetts v. EPA*, 549 U.S. 497 (2007).

160. See *Tri-Valley CAREs v. U.S. Dep’t of Energy*, 671 F.3d 1113 (9th Cir. 2012); *Jifry v. FAA*, 370 F.3d 1174 (D.C. Cir. 2004).

161. See *Tucson Herpetological Soc’y*, 566 F.3d 870.

162. See *Bus. Roundtable v. SEC*, 647 F.3d 1144 (D.C. Cir. 2011).

163. Vermeule, *supra* note 9, at S4.

164. *Id.*

165. *Id.*

166. *Id.* at S21. See generally Hans O. Melberg, A Critical Discussion of Jon Elster’s Arguments About Rational Choice, Infinite Regress and the Collection of Information (May 1999) (unpublished Ph.D. dissertation, University of Oslo) (on file with author).

would defeat the purpose of the hike. One must decide to stop the explorations on an intuitive basis, i.e. without actually investigating whether further exploration would have yielded better results.¹⁶⁷

In administrative law, the problem of information acquisition arises most critically with respect to arbitrariness review, particularly the scope of agencies' obligation to consider and evaluate policy alternatives. We have seen that although both *State Farm* and successor cases explicitly repudiate the idea that agencies must consider all feasible policy alternatives,¹⁶⁸ many judges act as though there is such an obligation, often without quite saying so. The underlying impulse here is the tempting thought that *comparative* policy evaluation is a necessary element of rational decisionmaking, for agencies or indeed for any institution or actor. Surely, the intuition runs, rationality requires choosing the *best* option, relative to the chooser's preferences, within the feasible set of choices. Suppose there is an agency charged with reducing air pollution, at acceptable cost; and suppose the agency were to say that "policy *P* is cheaper than policy *Q*, and *P* yields more reduction in air pollution. But *Q* isn't bad at all; we think it's good enough. We choose *Q*." Isn't that irrational?

Judges who reason this way have an entirely legitimate intuition, but they fail to realize that the intuition does not always hold, and that the conditions under which it fails to hold are especially likely to arise in the administrative setting. The underlying issue is the validity of "satisficing"—of picking something on the ground that it is "good enough."¹⁶⁹ Satisficing is intrinsically noncomparative. The satisficer picks a feasible option whose quality exceeds some predefined aspiration level, regardless of whether there might be an even better option somewhere in the feasible set.¹⁷⁰ In real life, people constantly satisfice; indeed, people who relentlessly seek the best possible option have a mad air about them. The ubiquity of satisficing should alert judges that comparative policy evaluation is an approach that makes sense only under particular conditions.

What are those conditions, and what are the conditions under which satisficing is sensible? Satisficing becomes sensible in the presence of substantial costs of information and search—in a word, under uncertainty.¹⁷¹ In the earlier example, the agency's choice of *Q* over *P* was irrational only because the context of choice was entirely static and transparent; the options were known, as were their full costs and benefits. In static contexts, absent

167. Jon Elster, *Bad Timing*, in *THE THIEF OF TIME* 87, 96 (Chrisoula Andreou & Mark D. White eds., 2010) (quoting LEIF JOHANSEN, 1 LECTURES ON MACROECONOMIC PLANNING 144 (1977)).

168. See *supra* text accompanying notes 71–80.

169. Michael Byron, *Satisficing and Optimality*, 109 *ETHICS* 67, 72 (1998).

170. See MICHAEL SLOTE, *BEYOND OPTIMIZING* 7–10 (1989).

171. See HERBERT A. SIMON, *REASON IN HUMAN AFFAIRS* 85 (1983); Byron, *supra* note 169, at 71; Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 *Q.J. ECON.* 99, 112 (1955).

uncertainty, satisficing is indeed irrational and comparative policy evaluation is indispensable.¹⁷² In more dynamic contexts, however, satisficing comes into its own. The satisficing decisionmaker applies a stopping rule that constrains the open-ended search for the very best policy, in favor of one that meets or exceeds the aspiration level.¹⁷³

The crucial twist here is that, while satisficing is a rational strategy for agents with limited time and information who are forced to make choices under uncertainty, the selection of an aspiration level is itself inescapably arbitrary. Nothing in the idea of satisficing, or in the choice situation itself, tells the rationally satisficing agent where to locate the aspiration level, higher or lower. In that sense, satisficing is a strategy of rational a-rationality, of rationally arbitrary decisionmaking. It is an approach that seemingly lacks any justification in first-order reason—an observer may well complain “why did you stop there, not somewhere else?”—but it is justified as a strategy, over an array of problems, by higher-order considerations.

All this is important because uncertainty pervades regulation and other forms of agency policymaking. In the administrative setting, choices are rarely fully-specified, static and transparent. The chronic condition of agency policymaking is the search for sensible policies under uncertainty. At some point, the agency will have to suspend the search and choose something good enough, even if it is abstractly possible that there exists a better policy that is technically feasible. Administrative law doctrine, at its best, recognizes exactly this point by underscoring that agencies’ obligation to

172. Cf. DAVID SCHMIDTZ, *RATIONAL CHOICE AND MORAL AGENCY* 28–40 (1995) [hereinafter SCHMIDTZ, *RATIONAL CHOICE*]; David Schmitz, *Satisficing as a Humanly Rational Strategy*, in *SATISFICING AND MAXIMIZING: MORAL THEORISTS ON PRACTICAL REASON* 30, 31 (Michael Byton ed., 2004).

173. In the presence of information costs and search costs, another strategy is constrained optimization. On this approach, decisionmakers should invest in gathering information just up to the point at which the (increasing) marginal costs of doing so equal the expected marginal benefits of further information. Cf. George J. Stigler, *The Economics of Information*, 69 J. POL. ECON. 213, 216 (1961). Whereas the satisficer stops when the choice at hand is good enough, the constrained optimizer stops looking for a better choice when the marginal benefit of finding a better option, discounted by the probability of finding such an option, is equal to or less than the marginal costs of further search. The optimizing approach, however, assumes that the decisionmaker always has epistemically well-grounded probability distributions over the marginal costs and benefits of further search—an assumption we reject. In any event, the two strategies are simply different. “An optimizing strategy places limits on how much we are willing to invest in seeking alternatives. A satisficing strategy places limits on how much we insist on finding before we quit that search and turn our attention to other matters.” SCHMIDTZ, *RATIONAL CHOICE*, *supra* note 172, at 34–35; see also Jonathan Brodie Bendor et al., *Satisficing: A ‘Pretty Good’ Heuristic*, 9 B.E. J. THEORETICAL ECON. 1 (2009). Finally, even were it true that satisficing is just a form of optimization-under-constraints, our substantive point in text would be unaffected. Whether agency decisionmaking under uncertainty is described as satisficing or as constrained optimization, the substantive point is that *comparative* evaluation of policies is not always required by rationality—and *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009), holds that it is not required by administrative law. See *infra* text accompanying notes 182–188.

consider policy alternatives is limited to *reasonable* alternatives.¹⁷⁴ The adjective represents an implicit recognition that consideration of technically feasible alternatives is often a game not worth the candle. Even in *State Farm*, the Court was careful to specifically deny that agencies have any obligation to “consider all policy alternatives in reaching decision.”¹⁷⁵

That denial has sometimes been forgotten by lower federal courts. At its worst, intrusive judicial review threatens to create an infinite regress, in which agencies have to be able to give reasons for suspending the search for optimal policies, reasons that require the very information whose absence is the reason for stopping in the first place. “The reason agencies do not explore all arguments or consider all alternatives is one of practical limits of time and resources. Yet, to have to explain all this to a reviewing court risks imposing much of the very burden that not considering alternatives aims to escape.”¹⁷⁶

As in other settings, however, the Supreme Court often displays a better understanding of uncertainty and its significance for administrative law than do the lower courts.¹⁷⁷ Thus *Baltimore Gas* allowed the Nuclear Regulatory Commission to adopt a maximally *optimistic* assumption about the environmental effects of spent nuclear fuel in the remote future, an assumption of “zero-release.”¹⁷⁸ In our terms, *Baltimore Gas* recognized that under uncertainty maximax is just as valid as maximin.¹⁷⁹ More importantly still, *FCC v. Fox*¹⁸⁰ squarely held that comparative policy evaluation is *not* a general requirement of rational agency decisionmaking. Agencies have *no* general legal obligation, as far as the APA is concerned, to show that the chosen policy is the best among the feasible alternatives, relative to the agency’s stated goals. As the Court put it,

[T]he agency must show that there are good reasons for the new policy. But it need not demonstrate to a court’s satisfaction that the reasons for

174. See Stephen Breyer, *Judicial Review of Questions of Law and Policy*, 38 ADMIN. L. REV. 363, 393 (1986); see also *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 551 (1978); *Nat’l Wildlife Fed’n v. FERC*, 912 F.2d 1471, 1484–85 (D.C. Cir. 1990) (per curiam) (finding that FERC need not consider an alternative project that was not reasonable under statutory requirements); *City of New York v. U.S. Dep’t of Transp.*, 715 F.2d 732, 744 (2d Cir. 1983) (finding that DOT need not consider the barging of nuclear waste, as it was an unreasonable alternative).

175. *Motor Vehicles Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 51 (1983).

176. Breyer, *supra* note 174, at 393.

177. For a stellar recent exception to this generalization, see *Center for Sustainable Economy v. Jewell*, 779 F.3d 588, 610–12 (D.C. Cir. 2015) (allowing Interior Department to treat option value—the informational value of delaying a decision—in qualitative rather than quantitative terms).

178. *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 104 (1983).

179. On this view, the NRC’s assumption of “zero-release” of spent nuclear fuels should not be taken too literally. It was not a prediction that not one iota of such fuels would ever be released. Rather it was a policy choice, one that opted for maximax assumptions—highly optimistic assumptions—in the presence of severe uncertainty. *Id.* at 92.

180. 556 U.S. 502 (2009).

the new policy are *better* than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency *believes* it to be better¹⁸¹

The obligation to show that “there are good reasons for the new policy,” coupled with the lack of any obligation to show that chosen policy is better than the alternatives, is in effect a satisficing approach, rather than a comparative one.

A wrinkle in *Fox* is that the issue of comparative policy evaluation in the case involved a change in agency position over time. The case involved a change of agency policy; the principal dissent, by Justice Breyer, urged that agencies should have to show the comparative superiority of the new policy—a somewhat puzzling stance, given Breyer’s usual sensitivity to the impossible burdens that a requirement of full comparative evaluation would impose.¹⁸² The Court rejected Breyer’s view as too demanding. The Court observed—citing *State Farm*, quite correctly—that rationality review requires agencies to take into account data that can “readily be obtained,” but does not require “obtaining the unobtainable.”¹⁸³ To be sure, the Court added critical qualifiers that close some of the distance between majority and dissent. The Court, for example, acknowledged that agencies should explain changes in factual assertions, and should take into account knowable and known costs of transition to the new policy (“reliance interests”).¹⁸⁴ But there remains an irreducible difference between majority and dissent: the Court is very clear that comparative policy evaluation, in and of itself, is not a requirement of rationality review.¹⁸⁵

The *Fox* principle, denying any agency obligation to engage in comparative policy evaluation, fits perfectly with the principle that agencies may proceed one step at a time, enjoying “broad discretion” to parcel out policy questions across different proceedings, present and future.¹⁸⁶ The two principles actually entail one another. Because agencies need not consider all relevant alternatives *now*, they cannot have any obligation to show that the currently chosen action is superior to the relevant alternatives, which may be allocated to a separate proceeding entirely, or simply put off the table for the time being. The point common to both principles is that agencies need only

181. *Fox*, 556 U.S. at 515.

182. See Breyer, *supra* note 174.

183. *Fox*, 556 U.S. at 519.

184. *Id.* at 515.

185. Ronald M. Levin summarizes *Fox* as follows: “The Court’s position on the issue comes down to this: Unless reliance interests or inconsistent readings of a factual record are involved, open acknowledgment of the change and a defense of the new policy on its own terms should ordinarily suffice.” Ronald M. Levin, *Hard Look Review, Policy Change, and Fox Television*, 65 U. MIAMI L. REV. 555, 573 (2011). The latter clause is what the *Fox* majority and dissent disagreed about.

186. *Mobil Oil Expl. & Producing Se., Inc. v. United Distrib. Cos.*, 498 U.S. 211, 230 (1991).

have some adequate reason for what they do now; they need not rank possible actions and show that the one chosen is best.

Whether the issue is comparative evaluation of feasible policy choices at a given time, or over time, the point is the same. Under uncertainty, in the presence of costs of information and search, rationality does not require agencies to show that they have chosen the best of the technically feasible alternatives. Thanks to *Fox*, the prevailing law of rationality review does not require that either.

5. Accuracy vs. Other Values: Tradeoffs and Decision Rules

Lurking in the background of thick rationality review is an assumption that arbitrariness review requires the agency to make the best decision, in the narrow sense, identifying the optimal policy response to the complete set of facts that are known or could be discovered. We have already shown that this idea is inconsistent with existing Supreme Court doctrine, which neither requires optimal cost-benefit balancing nor requires that the agency identify and adopt the best of all feasible policy alternatives.¹⁸⁷ There are also a range of other conditions under which, for good second-order reasons, rationality review does *not* require that the agency pick the best expected policy, in the first-order sense.

a. *Mean-Variance Tradeoffs*

A standard problem for agencies (and all decisionmakers) involves mean-variance tradeoffs. When making predictions about the effects of different policies, agencies must predict the most likely or average effect of a policy. The agency's "best guess," for example, might be that changing the National Ambient Air Quality Standards (NAAQS) for ozone will save 10,000 lives. But that estimate—the average or mean—has a variance as well. The better the information or data the agency has, the lower the variance. The more speculative or uncertain the information, the higher the variance. Just to illustrate, a good estimate might entail a variance of plus or minus 1,000 lives; a lower quality estimate might entail a variance of plus or minus 8,000 lives.¹⁸⁸

Assuming the agency has already gathered all cost-justified information, it is entirely rational to pick the policy with the *lower* expected number of lives saved if that policy option also produces a smaller variance. Take an extreme example for the sake of crisply illustrating the point. If policy *A* is expected to save 10,000 lives, plus or minus 9,000, and policy *B* is expected to save 9,999 lives, plus or minus 1, rationality does not require policy *A*, and it might very well require the opposite. To give a more banal example, suppose that one's ideal temperature is 72 degrees. When choosing between

187. See discussion *supra* Section II.A.2.c.

188. We use the plus or minus nomenclature only for expositional purposes. The agency is summarizing a probability distribution and we could explain with the mean-variance problem with greater formality. The point here is a simple one, however.

two potential vacation locales, it is entirely rational to choose spot *A* with an average temperature of 70 degrees plus or minus 2 degrees, instead of locale *B* which has an average temperature of 72 degrees plus or minus 20 degrees. There are many contexts in which variance is more important than the mean, and at a minimum, it is well within the bounds of rationality—on any standard conception—to prefer locale *A* as a vacation destination to locale *B*. Agencies face analogous decisions constantly. A strong form of rationality review that requires agencies to pick policy alternative with the highest expected return would be seriously misguided. Mean-variance trade-offs exist in almost any agency decisionmaking setting and agencies should not be required to ignore them by a confused formulation of rationality review by courts.

b. *Speed vs. Accuracy*

Increasingly, agencies are asked to formulate new rules under significant time pressure. The timelines that Dodd-Frank established for the promulgation of hundreds of new rules regulating the financial industry were astonishingly short, and as a consequence most of the deadlines were missed by the agencies.¹⁸⁹ The Food and Drug Administration was successfully sued because it failed to meet the aggressive time-frame established by the Food Safety Modernization Act.¹⁹⁰ Statutory deadlines respond, in part, to long-standing criticism in the commentary that the pace of agency rulemakings was too slow.¹⁹¹

Whether or not agencies, in fact, tend to move too slowly, it is clearly true that that agencies are often under pressure to act more quickly. In the case of true emergencies, the “good cause” exception of the APA will allow agencies to avoid notice-and-comment requirements at least for a brief time period.¹⁹² Yet this is only relevant to a particular subset of agency action, involving legislative rulemaking; there are many other cases in which speed is of the essence. Dollars or lives may be lost if agencies move slowly. In such cases, agencies face an inevitable tradeoff between speed and accuracy.

The speed-accuracy tradeoff is an important special case of the costs of information-gathering. With more careful study, consultation, the design of

189. See Jacob E. Gersen, *Administrative Law Goes to Wall Street: The New Administrative Process*, 65 ADMIN. L. REV. 689, 692, 724–25 (2013).

190. See *Ctr. for Food Safety v. Hamburg*, 954 F. Supp. 2d 965 (N.D. Cal. 2013).

191. See, e.g., STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION* (1993) (explaining the “vicious circle” caused by systemic problems with the regulatory system); McGarity, *supra* note 66 (criticizing the rigid restraints imposed on informal rulemakings); Pierce, *supra* note 66 (criticizing judicially-induced rulemaking ossification and discussing potential judicial solutions); Paul R. Verkuil, *Commentary, Rulemaking Ossification—A Modest Proposal*, 47 ADMIN. L. REV. 453 (1995) (criticizing Pierce’s proposed judicial solutions to rulemaking ossification and proposing alternative legislative solutions).

192. See, e.g., *Jifry v. FAA*, 370 F.3d 1174 (D.C. Cir. 2004) (upholding, against arbitrariness challenge, an FAA regulation promulgated without notice and comment under the “good cause” exception); see also Adrian Vermeule, *Our Schmittian Administrative Law*, 122 HARV. L. REV. 1095, 1122–25 (2009) (examining the “good cause” exception).

new experiments, the construction of new models, and so on, agencies could more accurately identify the best policy. Yet rationality will sometimes dictate acting quickly, trading accuracy for speed, because of the costs of waiting. Indeed, a rule that always favors more accurate decisionmaking and ignores temporal problems would arguably be irrational—not to mention that it would result in virtually no agency action ever. As should be immediately clear, this is a problem for thicker forms of arbitrariness review, which require a strongly rational connection between the facts known and the choice made.¹⁹³ It is often rational, indeed optimal, to not spend the time gathering information so that a clear rational connection exists between *particular* facts and the *particular* choice made, because that would require sacrificing the benefits of expedition. This sort of tradeoff does not always exist, but it sometimes does exist, and arbitrariness review should be flexible enough to accommodate.

c. *Asymmetric Error Costs*

Administrative law doctrine on arbitrariness review tends to obfuscate the problem of asymmetric error costs. Criminal law has long been focused on these sorts of costs. The Blackstone principle—that it is better to let ten guilty persons go free than to convict one innocent person—is a potential justification for many defendant-favoring rules of criminal procedure.¹⁹⁴ This principle is an outgrowth of the problem of asymmetric error costs: it is much worse to err by putting an innocent person in prison than to err by putting a guilty person on the street, or so the argument goes. Irrespective of whether one agrees with this intuition,¹⁹⁵ problems of asymmetric error costs abound in the law. Decisions about whether to list endangered species have this flavor. Failing to list a species that should have been protected will result in extinction; listing a species that didn't need to be protected will result in some financial costs but can be corrected at some later point. Failing to regulate a new pollutant that should have been regulated will result in illness and deaths. Regulating a new pollutant unnecessarily will result in financial costs.

The costs of making mistakes in administrative law are often asymmetric, and it is perfectly rational for agencies to take asymmetric error costs into account. Even if the best available evidence suggests the best policy alternative is X, it is rational for an agency to select policy Y because the costs of error are not symmetric. This is one common justification for the “precautionary principle.”¹⁹⁶ Even if the agency has failed to pick the best policy

193. Louis J. Virelli III, *Deconstructing Arbitrary and Capricious Review*, 92 N.C. L. REV. 721, 758–60 (2014).

194. Daniel Epps, *The Consequences of Error in Criminal Justice*, 128 HARV. L. REV. 1065 (2015) (describing and challenging the Blackstone principle).

195. See, e.g., *id.* at 1094–124 (offering a “dynamic” critique of the Blackstone principle based on its systemic consequences for the criminal justice system).

196. See Barnabas Dickson, *The Precautionary Principle in CITES: A Critical Assessment*, 39 NAT. RESOURCES J. 211, 211–15 (1999).

in a first-order sense, it has good second-order reasons for not doing so. The agency's *decision rule* is rational, even if its narrow *decision* is not. It is an open question whether (lower) courts would accept this sort of justification, but they should.

6. Tacit Expertise

Finally, the literature on rationality review has entirely ignored a crucial distinction between *having* reasons and *giving* reasons.¹⁹⁷ Here two different strands of thought about rationality review come to the fore. In one strand, the desirable thing, the thing rationality review aims to produce, is to ensure that agencies have good reason for what they do. On this conception, if reviewing courts (or other reviewing institutions) could somehow be assured that agencies were *in fact* acting based on reasons, then it wouldn't matter if those reasons were never actually communicated to courts. The communication itself has a strictly derivative and incidental value; it is a strictly evidentiary mechanism, one that helps courts or other reviewers to flush out illicit agency motivations by comparing the agency's actions to its stated rationales. But in principle the communication of reasons by agencies could be dispensed with if the judges were otherwise assured that agencies were acting on the basis of valid reasons.

On a very different conception, the act of public communication of agency reasons is itself valuable, independent of its evidentiary function. The public communication may enable nonjudicial oversight of agencies, promote democratic transparency, and give agencies *ex ante* incentives to formulate rational policies, in light of the looming prospect that they will be obliged to explain the policies to third parties. On this conception, it is important not merely that agencies *have* reasons, but that they *give* them.

These two conceptions will diverge entirely if there exists a class of cases in which agencies have reasons they cannot give, explain or convey, at acceptable cost. Unfortunately, there is every reason to think that such cases not only exist, but are common. *Tacit expertise* is a widespread phenomenon. In many fields, experts have tacit knowledge that they cannot communicate, at least at acceptable cost, to generalist observers or other nonexperts. Tacit knowledge is how-to local knowledge. In Hayek's terms, it is based on "particulars"—"circumstances of time and place" that "by [their] nature cannot enter into statistics and therefore cannot be conveyed to any central authority in statistical form."¹⁹⁸ Because such knowledge is ubiquitous, there is always a question whether those who can do something are able to explain how they do it. Those who can do often can't teach.

Although some tacit expertise may simply be incommunicable in principle (riding a bicycle is the stock example: one can *show* how to ride, but not

197. For an overview of relevant philosophical literature, see HARRY COLLINS, *TACIT AND EXPLICIT KNOWLEDGE* (2010).

198. F. A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519, 524 (1945).

explain how to ride in the abstract), probably the more common case involves tacit expertise that can be explained with sufficient time and effort. The issue is the cost of doing so. If the cost is substantial, there will be cases in which forcing an explanation is simply not worth it. In such cases, that is, decisionmakers will have legitimate tacit reasons for their choices, reasons that cannot be communicated to reviewers at acceptable cost.

a. *Tacit Expertise, Agencies, and Courts*

In the administrative state, agencies have trouble explaining to generalist reviewers critical elements of regulatory problems that line experts, acting in the field and saturated with local, field-specific knowledge, understand on an essentially intuitive basis.¹⁹⁹ Presumably for just this reason, in the intraexecutive setting, a critical OMB guidance document on cost-benefit analysis observes that “professional judgment” is essential to high-quality regulatory analysis, especially when nonquantifiable costs and benefits are at issue.²⁰⁰ Courts should certainly be no more skeptical of expert professional judgment than is OMB. Judicial review should take into account the existence of cases in which agencies possess tacit expertise and thus have reasons it is costly for them to give.

It goes without saying that the opposite cases also exist, in which agencies have no sensible reason for their choices, or are making decisions based on biased information, or political motivations in the pejorative sense. In such cases, the requirement to not only have a (public-regarding) reason, but to give such a reason, may prevent arbitrary agency behavior. Our point is simply that these two types of cases are *both* real; both must be taken into account by the institutional calculus. A review procedure that is oblivious to the phenomenon of tacit expertise will code some set of cases as instances of arbitrary agency action, in the sense of unreasoned agency action, when in reality they are cases of reasoned action that cannot be explained at acceptable cost. Again, it is a separate question whether the best legal conception of rational agency decisionmaking should or should not code such cases as “arbitrary.” But without appreciation of the issue of tacit expertise, one cannot even recognize the critical questions.

In the real world, a review procedure that is oblivious to tacit expertise will induce coping tactics and tactics of self-defense by agencies confronted

199. For an illuminating analysis of “craft expertise” based on experience, very much compatible with our approach here, see Sidney A. Shapiro, *The Failure to Understand Expertise in Administrative Law: The Problem and the Consequences* (Jan. 7, 2016) (unpublished manuscript) (on file with Michigan Law Review). For a first stab at the “tacit expertise” issue, see Adrian Vermeule, *Local and Global Knowledge in the Administrative State*, in *LAW, LIBERTY AND STATE: OAKESHOTT, HAYEK AND SCHMITT ON THE RULE OF LAW* 295 (David Dyzenhaus & Thomas Poole eds., 2015).

200. OFFICE OF MGMT. & BUDGET, OMB CIRCULAR A-4, REGULATORY ANALYSIS 2-3 (2003). For a comprehensive and persuasive defense of professional judgment in regulatory analysis, see Coates, *supra* note 53.

with generalist reviewers.²⁰¹ Unable to convey the real, albeit tacit, grounds for decision to the reviewers at acceptable cost, agencies will tend to substitute articulable reasons for their real reasons. The articulable reasons will fit the agency's behavior less well than the true, tacit grounds of decision; the result will be a kind of distortion in the process of agency reason-giving, a distortion arising from the limitations of the reviewers. This is law's answer to the Heisenberg effect: the act of observing an agency's reasoning, through hard look review, changes the nature of the agency's reasoning itself.

The distortion induced by the effect is a cost, insofar as the goal of the review system is to ensure that agencies act based on expertise. If the system places some positive independent value on publicly communicable reasons, then that distortion may or may not be a price worth paying; but one should at least be clear that a price is in fact being paid. All we aim to establish here is that a system of review that is oblivious to the phenomenon of tacit expertise will produce false positives. It will falsely code some agency decisions as cases of genuinely arbitrary decisionmaking, when in fact the agency is acting on the basis of genuine expertise. To call such decisions unreasoned is merely to underscore the limitations of the reviewers, not the reviewed.

b. *The Pretext Problem and Some Rules of Thumb*

Let us make the preceding intuitions somewhat more systematic. We have underscored the existence of cases in which judicial recognition of tacit expertise would allow agencies to act on the basis of reasons they have but do not give. This is, of course, only one side of the ledger. The other side is the problem of pretext. Judicial recognition of tacit expertise implies the possibility that agencies may claim to have tacit reasons that do not actually exist. The Type I error is judicial failure to recognize tacit expertise when it does exist, resulting in erroneous invalidation of agency action; the Type II error is to deferring to nonexistent tacit expertise, resulting in erroneous validation of agency action.

The overall picture may be sketched this way. An agency might have good or bad reasons (somehow defined) for a decision and the giving of reasons to judges might generate good or bad effects, depending on the case. Consider four possibilities:

- (1) The agency has bad reasons (however defined) for its decision and requiring the agency to offer a rational account of its decisionmaking catches the bad reasons, allowing the court to strike down the agency action as arbitrary.
- (2) The agency has bad reasons but can articulate a plausible pretext, so arbitrariness review fails to stop the action, notwithstanding the reason-giving requirement.
- (3) The agency has good reasons and honestly articulates them. Here, the requirement of reason-giving does not fix a problem because there is

201. Cf. Jennifer Nou, *Agency Self-Insulation Under Presidential Review*, 126 HARV. L. REV. 1755 (2013) (exploring how agencies may act strategically to avoid presidential review).

no problem to fix, but it nonetheless imposes some costs perhaps modest, perhaps extensive, because tacit expertise has to be represented to generalist judges.

- (4) The agency has good reasons for its decision, but those reasons are grounded in tacit expertise, and are too costly to communicate as such. A requirement of reason-giving makes it more likely a court will wrongly strike down the action as arbitrary because the agency must articulate a false reason for a policy or imperfectly convey the real reason for a policy.

Thick rationality review, requiring agencies not only to have reasons but to explain them to the satisfaction of generalist judges, does well in case (1), but does poorly in cases (2), (3) and (4). For the reasons noted above, we suggest that case (4) is plausibly quite common. After all, the motivating assumption for most of administrative law is information asymmetry.²⁰² If Congress or courts could easily learn all the agency knows, the information asymmetry problem would recede, and agencies wouldn't really be necessary at all. If it is implausible that tacit expertise can always or even usually be communicated to a reviewing court at reasonable cost, then thick rationality review is likely to make matters worse, not better.

However, we need not establish, and do not claim to know—which review procedure is best overall. Our minimum point for present purposes is merely that both the Type I error and the Type II error exist, and both are costly. Administrative law's approach to judicial review should take both errors into account in an optimizing calculus, minimizing the total costs of the two types. The challenge would be for law to develop principles, standards, or rules of thumb that would allow courts to sort between cases where agencies are more or less likely to possess genuine tacit expertise. How exactly this should work is a topic for another paper; tacit expertise is an idea that deserves more extended treatment than we can give it here. We will limit ourselves to a brief preliminary sketch of some rules of thumb for reviewing courts.

To be clear, these rules of thumb are just indirect proxies, and will thus be necessarily imperfect. They are proxies because courts cannot, by definition, directly observe the state of agencies' tacit expertise to decide whether a particular claim of tacit expertise is plausible. If such direct observation were possible, the whole problem would disappear. All courts will be able to develop imperfect sorting principles that help them to decide whether the Type I or Type II error is more likely in the given case at hand.

Statistical versus experiential questions. The main proxy must always be the nature of the issue at hand. Recall Hayek's distinction between local knowledge of "circumstances of time and place," on the one hand, and general knowledge that can be expressed in statistical form for transmission to a central authority, on the other.²⁰³ Some agency decisions turn on statistical

202. See *supra* Section II.A.5.c.

203. See *supra* text accompanying note 198.

facts—generalized legislative facts, subject to measurement and methodological contestation. Other agency decisions turn on localized knowledge acquired through experience with a particular industry or with particular actors within the industry, whether individuals or firms. At a certain point, the United States stopped conducting live tests of new forms of nuclear weaponry, and turned to statistical modeling of the likely effects of (hypothetical) detonations.²⁰⁴ Whatever its larger merits, the downside of this approach was that only veteran engineers had personal experience with test detonations, and only they could answer critical questions about how new weapons were likely to work in practice, as opposed to within equations.²⁰⁵ So too, problems of industrial hygiene involve experience-based best practices, on which abstract economic expertise gets little purchase.²⁰⁶ Tacit expertise is more or less likely to arise in different contexts, and courts should be sensitive, above all, to the type of issue before them.

Character and traits. A special type of local knowledge—but a ubiquitous type—is knowledge about the character and traits of individuals (and perhaps of firms, although there is a separate and interesting question about whether firms have a character). Agencies must often make judgments based at least in part on the character of particular people—CEOs, for example—with whom they interact. Over time, officials in agencies will come to understand, in a quasi-intuitive way, who is to be trusted and who is not. As an example of this thick practical knowledge, consider agency staff who possess the savvy, born of experience, to discern which automobile executives are

204. Donald MacKenzie & Graham Spinardi, *Tacit Knowledge and the Uninvention of Nuclear Weapons*, in *KNOWING MACHINES: ESSAYS ON TECHNICAL CHANGE* 215, 256 (Donald MacKenzie ed., 1996).

205. Donald MacKenzie, *Moving Toward Disinvention*, *BULL. ATOMIC SCIENTISTS*, Sept.–Oct. 1996, at 4, 4:

Testing made designers' competence visible. In heated design reviews at the labs, those whose opinions really counted were the "test-seasoned" designers. They had shown that they knew when computer models could be relied upon, and when they could not. So they were fit people to judge neophytes' proposals. . . . [Veteran designers] warned us repeatedly of the dangers of reliance on simulations and laboratory tests alone. "You start to believe your calculations, and young folks really believe them if the old timers have left," said one. "People start to believe the codes are absolutely true, to lose touch with reality," said another. . . . One key issue is the distinction between explicit and tacit knowledge. Explicit knowledge is knowledge that can be written down and preserved in diagrams, documents, and computer files. Tacit knowledge is the motor skills, intuition, "common sense," and judgment that cannot be transmitted in words or equations alone. Both are vital in scientific and technical endeavor. Few of us would wish to come under the knife of a surgeon who possessed only explicit knowledge. The history of nuclear weaponry is of repeated discovery that explicit knowledge alone is not enough. . . . The ultimate value of nuclear testing to weapons designers was that it served as a check of the quality of the tacit knowledge they, and those who built the weapons, brought to their task. . . . Knowledge of the physics that makes nuclear weapons possible is humanity's permanent inheritance. But that is not true of the assembled, partially tacit, largely engineering-based skills that make nuclear weapons technological realities rather than drawing-board concepts.

See also MacKenzie & Spinardi, *supra* note 204, at 215–58.

206. MCGARITY, *supra* note 93, at 281.

bluffing about the capabilities of their firms and about the costs to those firms of various regulatory outcomes.²⁰⁷ Such knowledge will often be costly or downright impossible to document, in any convincing way, for a third party, such as a court exercising judicial review. But it is a real form of knowledge nonetheless.

Agency reputation. Finally, the pretext problem is self-limiting, because agencies that constantly base their decisions on (putatively) nontransmissible tacit expertise will encounter increasing skepticism from reviewing courts over time. Notwithstanding the theoretical uniformity of standards of review, the D.C. Circuit sees a steady stream of decisions from a recurrent set of the same agencies.²⁰⁸ Some agencies have credibility established over many years; others suffer from the opposite problem. Just as certain advocates get more credibility and perhaps the benefit of the doubt during oral argument, some agencies do as well. When this occurs, what appears to be the a robust form of arbitrariness review is rather a form of escalating review, in which the intensity of judicial investigation grows over time as an agency repeatedly declines to articulate justifications for its decisions, beyond an appeal to tacit expertise.

* * *

We do not claim to have done justice to the formidably complex, yet indispensable, idea of tacit expertise. All we have attempted to do here is to sketch some basic issues and possible lines of analysis, in order to open up new questions for another time. For purposes of rationality review, all we need establish is our minimum point: courts should take into account not only the risk of pretext, but the countervailing risk that agencies have tacit, experiential reasons for action that they cannot explain to generalist judges (at least not at acceptable cost).

B. *Agency Rationality: A Positive Formulation*

So far we have been relentlessly negative. To some degree, negativity is inherent in the nature of our project, indeed the very point of our project; our principal claim is that there is and should be *less* to rationality review than some judges and commentators seem to think. Nonetheless, it is incumbent on us to articulate a positive formulation of agency rationality and rationality review, in order to offer an alternative to the hard look approach we reject.

In our positive formulation, the best interpretation of section 706(2)(A), and of rationality review, is simple indeed: agencies must act based on reasons. In this simple conception, the aim of section 706(2)(A) is to exclude agency action that rests on no reasons whatsoever, at any order of analysis—the core meaning of “arbitrary and capricious.” The key difference between our conception and the hard look conception is that the former, unlike the

207. This example was helpfully suggested by Lisa Heinzerling (personal communication).

208. See Miles & Sunstein, *supra* note 42, at 796–97.

latter, takes account of nonideal constraints on agency decisionmaking. It recognizes that limits of time, information, and resources may give agencies good second-order reasons to act inaccurately, nonrationally, or arbitrarily, in a first-order sense. In a particularly naive version of rationality review—a version that nonetheless appears with some frequency in judicial opinions, usually in an implicit form—agencies must have fully specified first-order reasons for their choices, reasons that justify their choices relative to all competitors, in light of the statutory policy goals.²⁰⁹

Our conception opens up space for agencies to act based on reasons at a second-or-higher order. Such reasons may, for example, justify a policy that seems acceptable, but might well be worse than other possible policies in the feasible set (for satisficing); justify acting when taking some action or other is necessary or desirable, even when no particular action is sufficiently justified (a rationally arbitrary decision); justify a policy under a decision rule that can predictably be expected to misfire, producing arbitrary results, in some set of cases (the mean-variance tradeoff and the speed-accuracy tradeoff). In all these cases, agencies rightly depart from the simplistic benchmark under which rationality requires choosing the best option within the (known) feasible set. By parallel, arbitrariness review must also depart from the simplistic idea that courts should require agencies to explain, in a first-order sense, why their chosen policies represent the best choice from the (known) feasible set.

Reasonableness and rationality. We have described this approach as a thin theory of agency rationality, because agencies who act in the ways we have described are emphatically acting rationally at the second-or-higher order. The nonrationality or arationality of their behavior, at the first order, is in the service of rational strategies for coping with environments in which ordinary first-order rationality runs out or misfires. It is worth mentioning, however, a different description of the problem that some find congenial, and that works equally well for our purposes.

On this alternative description, we might distinguish *reasonable* agency action from fully *rational* agency action. When agencies bump up against the limitations of rational choice, as when they (arbitrarily) pick an aspiration level in order to satisfice under uncertainty, they are acting reasonably, even if not rationally. When the canons of rational choice prove indeterminate or ambiguous, and fail to prescribe a unique choice under conditions of uncertainty, the limits of rationality are reached. It does not follow, however, that chaotic or capricious decisionmaking is the only alternative. Rather it is possible to decide reasonably, even when rationality has exhausted its force. For many large decisions at the individual level—where to go to college, what profession to pursue, whom to marry—rational choice is impotent or inapposite, yet it is still possible to approach the decision more or less reasonably. Many of the decisions that agencies face have exactly this quality: the stakes are high, the consequences of the alternatives are shrouded in uncertainty, and the decision is either a one-time event, or at least will not

209. See *supra* text accompanying notes 3–7.

be frequently repeated, so that no strong process of learning through trial and error is possible.

In this framework, our thesis holds that for purposes of interpreting section 706(2)(A), “arbitrary and capricious” action is *unreasoned* agency action. Just as an individual may have excellent reasons to make a decision that cannot be fully justified in rational terms, so too an agency may have excellent reasons to adopt a decision-procedure (like satisficing) that is justifiable by reasons, but yields ultimately nonrational choices in particular cases. Judges who appreciate the limits of rationality, and the dilemmas that face reasonable agencies who must act subject to those limits, should interpret the APA’s rejection of arbitrary decisionmaking in ways that take account of these concerns.

C. *Nonjudicial Review*

So far we have mentioned two different types of reviewers: generalist judges, on the one hand, and technocrats in the Office of Information and Regulatory Affairs, on the other. Our focus is on judges, and on judicial review for rationality under section 706(2)(A), rather than OIRA review under relevant statutes and executive orders. For completeness, however, it is worth asking which, if any, of our claims apply only to judicial review, and which apply in the intraexecutive setting as well.

Some of our points are not sensitive to the identity of the reviewer. We suggest that the ideal of rational decisionmaking by agencies, rightly understood, is more capacious and forgiving than is often assumed. We counsel tolerance of noncomparative policy evaluation and satisficing under uncertainty; of rationally arbitrary decisionmaking under uncertainty; of tradeoffs that compromise simple accuracy, such as mean-variance tradeoffs and speed-accuracy tradeoffs; tolerance for agency discretion to decide which factors are relevant to the goals of statutory policy; and tolerance for agencies who possess tacit expertise acquired through experience, and who thus have reasons they cannot necessarily explain.

The problem of tacit expertise is worth underscoring in this setting. That problem lies at the heart of the debate over the relationship between front line agencies, on the one hand, and OIRA, on the other. In the latest round of this debate, Lisa Heinzerling, a former counsel and assistant administrator at the Environmental Protection Agency, observes that generalist economists at OIRA fail to understand the nature of the problems line agencies face.²¹⁰ The OIRA reviewers, often newly minted Ph.D.s without training or experience in the substance of the issues they confront, are prone to focus on the most easily observable and quantifiable components of the

210. See 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, 355–56 (2014).

problems, to the neglect of less-observable components that line officers know from long experience to be critical.²¹¹

The tempting response to this problem is to simply call for vertical communication: whatever local complexities line agencies perceive can simply be communicated upwards, and be folded into the process of regulatory analysis.²¹² But things are not so simple. The OIRA reviewers, on the one hand, and the line agency officers, on the other, deploy two different and potentially incompatible forms of knowledge. The former deploy explicit, general, abstract, verbalized, and even quantified knowledge, the sort of knowledge obtained in a Ph.D. program. The latter deploy local, experiential, how-to knowledge accumulated through long exposure to the specifics of ever-evolving problems in the field at hand. The 30-year-old economist fresh from the University of Chicago will sometimes be simply unable to evaluate, or perhaps even comprehend, the assumptions, intuitions, and decisionmaking framework of the 60-year-old EPA bureau chief who has, perhaps, been involved with the problems of coal ash or water-intake structures longer than the reviewer has been alive. Recall the earlier example—the question whether automobile executives are bluffing about the capabilities of their firms and about the costs to those firms of various regulatory outcomes. It is unclear whether such savvy can be explained, or how the OIRA line reviewer is supposed to assess it.

On a Hayekian perspective, it is hopeless to think all relevant information can be conveyed by line agencies to a centralized overseer like OIRA—a central planner for the executive branch.²¹³ Agencies learn by doing,²¹⁴ by understanding the “circumstances of time and place.”²¹⁵ The tacit practical knowledge of line agencies is a form of *métis*,²¹⁶ knowing-how rather than knowing-that, and will by the nature of the case be inaccessible to experts in OIRA—no matter how technically specialized—who have not themselves worked through the myriad complexities of implementing general statutory commands and policies. No amount of meetings between line agencies and OIRA personnel, or hiring of new OIRA personnel, will convey this tacit local knowledge to the center. Nor would it be worth the costs in any event.

211. This is a well-known problem in contract theory as well. When there are multiple tasks, agents may expend too much effort on the readily observable task precisely because that is the only observable action on which sanction and reward can be conditioned. See Bengt Holmstrom & Paul Milgrom, *Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design*, 7 J.L. ECON. & ORG. (SPECIAL ISSUE) 24, 27–28 (1991).

212. Cf. Cass R. Sunstein, *The Office of Information and Regulatory Affairs: Myths and Realities*, 126 HARV. L. REV. 1838, 1840–42, 1854–56 (2013) (arguing that OIRA should be elevated because of its information-sharing capacity).

213. See Vermeuele, *supra* note 199, at 297.

214. Cf. SEAN GAILMARD & JOHN W. PATTY, *LEARNING WHILE GOVERNING: EXPERTISE AND ACCOUNTABILITY IN THE EXECUTIVE BRANCH* (2012) (discussing expertise development and information acquisition in the executive branch).

215. See Hayek, *supra* note 198, at 521.

216. See JAMES C. SCOTT, *SEEING LIKE A STATE* 309–41 (1998).

So the point about tacit expertise applies to OIRA as much as to the courts. On the other hand, one of our central arguments does not apply to OIRA at all: the argument that courts may not require agencies to engage in quantified cost-benefit analysis, even presumptively (unless of course organic statutes clearly so require). That argument differs from the others on two counts: it is dependent on the substantive law, which is different for the courts and for OIRA, and it is dependent on an institutional conception of the judicial role, which is obviously sensitive to the identity of the reviewer. As for substantive law, the executive orders governing OIRA review of executive branch agencies sometimes require (at least as a procedural matter) quantified cost-benefit analysis insofar as feasible, unless special nonquantifiable factors are present.²¹⁷ We have argued that there is no such governing law for courts, however, and indeed that a global judicial requirement of (presumptive) quantified cost-benefit analysis would be inconsistent with Congress's highly variable approach to decisionmaking requirements in regulatory statutes.

As for the judicial role, we see quantified cost-benefit analysis as a particular, highly controversial decision-procedure. Under *Vermont Yankee* and more recently *Perez*, courts have no authority to foist such a procedure on agencies who otherwise possess legal discretion to adopt other decision-procedures, from the very large space of possibilities.²¹⁸ Clearly that point also does not apply to OIRA. As far as law goes, then, we have no quarrel with quantified cost-benefit analysis internal to the executive branch. As for practical impact, however, it is also true that an OIRA requirement of cost-benefit analysis, in a world where arbitrariness review does not itself require cost-benefit analysis for agencies, can sometimes create analytic and pragmatic awkwardness for agencies. In some settings, it means that agencies will give reasons in cost-benefit format that are not the actual reasons for the action, because the cost-benefit analysis was performed only to satisfy OIRA.²¹⁹

217. By their own terms, these executive orders are not judicially enforceable. See Exec. Order No. 12,866, 3 C.F.R. 638, 649 (1994), *reprinted in* 5 U.S.C. § 601 (2012)

Nothing in this Executive order shall affect any otherwise available judicial review of agency action. This Executive order is intended only to improve the internal management of the Federal Government and does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

Exec. Order No. 13,563, 3 C.F.R. 215, 217 (2012), *reprinted in* 5 U.S.C. § 601 (2012) (same); see also *Meyer v. Bush*, 981 F.2d 1288, 1296 n.8 (D.C. Cir. 1993) (“An Executive Order devoted solely to the internal management of the executive branch—and one which does not create any private rights—is not . . . subject to judicial review.”); *Michigan v. Thomas*, 805 F.2d 176, 187 (6th Cir. 1986) (“The Order was intended ‘to improve the internal management of the Federal government’ and not to confer rights judicially enforceable in private litigation.” (quoting Exec. Order No. 12,291, 3 C.F.R. 127 (1982))).

218. *Perez v. Mortg. Bankers Ass’n*, 135 S. Ct. 1199, 1207 (2015); *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council*, 435 U.S. 519, 524, 543–45 (1978).

219. See *Heinzerling*, *supra* note 210, at 349–58.

CONCLUSION: THE *Baltimore Gas* Era

State Farm and *Chevron* are said to be two of the pillars of administrative law. Many others before us have noted that they are in some tension, with *Chevron* ushering in an era of deferential review of agency legal interpretation and *State Farm* ushering in an era of robust judicial review of agency policymaking. The historical reality, however, is actually quite the contrary. *State Farm* did not usher in an era of aggressive hard look review. In the Supreme Court, agencies virtually never lose so-called hard look cases, and while the lower-court practice is more heterogeneous, and includes highly intrusive outliers, *State Farm* review in practice is not systematically hard look. It is time for the academic commentary to update.

As far as the law in action is concerned, we live in the era of *Baltimore Gas* review. *Baltimore Gas* made clear (1) that it is generally sufficient that an agency states the nature of its uncertainty—not that it resolve it; (2) that agencies are entitled to adopt any rational assumptions to cope with uncertainty, including highly optimistic assumptions, which are just as rational as highly pessimistic ones; and (3) that courts may not demand the impossible by requiring agencies to explain why they have chosen the assumptions they have, as opposed to other assumptions.²²⁰ *Baltimore Gas* review is in fact more consistent with Supreme Court practice in the past three decades than is *State Farm* (at least in its inflated form, as hard look review). When lower courts have strayed toward a thick form of rationality review, the Court has been quick to overrule.

Rightly understood, arbitrary and capricious review is thin. It does not require agencies to use cost-benefit analysis; it does not require the resolution of scientific uncertainty; it does not require that agencies pick the optimal policy, or the most accurate policy, or the best feasible policy, or anything of that sort. It simply requires that agencies act based on reasons. (As we have noted, there is a separate question whether agencies should be obliged to *give* reasons for their actions). The set of admissible reasons includes second-order or higher-order reasons for acting nonrationally or arbitrarily, as opposed to fully specified first-order reasons. Does this mean the end of judicial review of agency decisionmaking? Not in the slightest. The Administrative Procedure Act says that agency action may not be arbitrary and capricious, and we have proposed a straightforward interpretation of that command, requiring reasoned decisionmaking—an interpretation that is not larded with all the fat of current doctrine, and is thus more faithful to the Act's text.

Commentators often refer to arbitrariness, but no one ever discusses capriciousness. Perhaps caprice is a useful lens for understanding the narrow set of circumstances in which agency action should be set aside under 706(2)(A). On our account, an agency's decision must be upheld unless it is

220. See *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council*, 462 U.S. 87, 98–106 (1983).

based on nothing more than caprice, “a sudden, impulsive, and seemingly unmotivated notion or action.”²²¹

APPENDIX

Our aggregate statistics comprise a list of all Supreme Court merits decisions involving an arbitrary and capricious holding from 1983–2014. There are 65 cases total in our data, including *State Farm* itself. Four of the cases were technically decided before *State Farm*, but during the same Term (October Term 1982); an example is *Baltimore Gas*. The case list was generated by multiple independent Westlaw searches of “arbitrary and capricious” in the Supreme Court database(s). From that initial return, we exclude any habeas or criminal cases that did not involve an agency action and any pure constitutional challenges that did not involve an agency action.

Coding most of these cases is relatively straightforward. If the agency wins, the action was not arbitrary and capricious. If the agency loses, it was arbitrary and capricious. The agency win-rate, so to speak, is simply the number of wins divided by the total number of cases (wins and losses). Cases like *Judulang v. Holder*, in which *Chevron* Step Two analysis fuses with arbitrariness review,²²² are coded as simple losses for the agency on arbitrariness grounds, thereby biasing the count against our thesis.

A minor difficulty arises in the handful of cases in which an opinion relies on both statutory and arbitrariness analysis, in the alternative, to rule against the agency. In these cases, there are three methodological options: (1) count the case as arbitrary in the numerator and include it in the denominator; (2) count the case as not arbitrary in the numerator and count it in the denominator; or (3) count the case neither in the numerator nor the denominator. The first is the most conservative estimate for our analysis; the second, the most forgiving.

These three approaches produce aggregate arbitrariness loss-rates of (1) $8/64=0.125$; (2) $5/64=0.078$; (3) $8/61=0.131$. This choice, then produces a range of agency win-rates between 87 percent and 92 percent. The number of debatable coding decisions is so small as to make no difference. However specified, our basic point remains: agencies win the overwhelming majority of arbitrariness challenges in the Supreme Court. When a case clearly involves a mix of statutory and arbitrariness analysis and the agency loses, we note as much in the case list.

221. *Caprice*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/caprice> [http://perma.cc/UU4K-GFEU].

222. See *Judulang v. Holder*, 132 S. Ct. 476, 483 n.7 (2011) (stating that *Chevron* Step Two examines whether the agency interpretation is “arbitrary or capricious in substance” (quoting *Mayo Found. for Med. Educ. & Research v. United States*, 562 U.S. 44, 53 (2011))). For discussion and citations of the episodic fusion of *Chevron* Step Two with arbitrariness review, see Stephenson & Vermeule, *supra* note 141.

TABLE 1

Date	Case Name	Citation	Agency	Action, Guidelines, or Rule	Arbitrary?
1982	Burlington N. Inc. v. United States	459 U.S. 131	ICC	Rate setting by ICC	Not Arbitrary
1983	Am. Paper Inst. v. Am. Elec. Power Serv. Corp.	461 U.S. 402	FERC	Rate setting by FERC	Not Arbitrary
1983	Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.	462 U.S. 87	NRC	Notice & Comment rules governing Licensing Decisions	Not Arbitrary
1983	Heckler v. Campbell	461 U.S. 458	HHS	Benefits Denial based on Notice & Comment established rules	Not Arbitrary
1983	Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.	463 U.S. 29	NHTSA	Rescission of a rule	Arbitrary
1984	Chevron v. Nat. Res. Def. Council, Inc.	467 U.S. 837	EPA	Notice & Comment Rules	Not Arbitrary
1984	Heckler v. Ringer	466 U.S. 602	HHS	Rule	Not Arbitrary
1985	Bennett v. Ky. Dep't of Educ.	470 U.S. 656	Dep't of Educ.	Administrative Order	Not Arbitrary
1985	Heckler v. Chaney	470 U.S. 821	FDA	Decision not to undertake enforcement action	Not Arbitrary
1986	Atkins v. Rivera	477 U.S. 154	HHS	Notice & Comment Rules	Not Arbitrary
1986	Bowen v. Am. Hosp. Ass'n	476 U.S. 610	HHS	Notice & Comment Rules	Arbitrary
1986	Japan Whaling Ass'n v. Am. Cetacean Soc'y	478 U.S. 221	Sec. of Commerce	Certification by Sec. of Commerce	Not Arbitrary

1986	Lyng v. Payne	476 U.S. 926	Dep't. of Agric.	Loan denial	Not Arbitrary
1987	INS v. Cardoza-Fonseca	480 U.S. 421	INS	Deportation Proceeding by ALJ	Not Arbitrary
1987	Bowen v. Yuckert	482 U.S. 137	HHS	Notice & Comment Rules	Not Arbitrary
1988	Bowen v. Georgetown Univ. Hosp.	488 U.S. 204	HHS	Notice & Comment Rules	Outside Statutory Power & Arbitrary
1988	City of New York v. FCC	486 U.S. 57	FCC	Notice & Comment Rules	Not Arbitrary
1988	EEOC v. Commercial Office Prods. Co.	486 U.S. 107	EEOC	Enforcement of an administrative subpoena	Statutory & Arbitrary
1989	Marsh v. Or. Nat. Res. Council	490 U.S. 360	Sec. of Army	Construction decision of agency	Not Arbitrary
1989	Robertson v. Methow Valley Citizens Council	490 U.S. 332	Forest Service	Permit Decision	Not Arbitrary
1990	Pension Benefit Guar. Corp. v. LTV Corp.	496 U.S. 633	PBGC	Enforcement	Not Arbitrary
1990	Sullivan v. Everhart	494 U.S. 83	HHS	Notice & Comment Rules	Not Arbitrary
1990	Sullivan v. Zebley	493 U.S. 521	HHS	Adjudication	Arbitrary
1991	Am. Hosp. Ass'n v. NLRB	499 U.S. 606	NLRB	Enforcement of new rule	Not Arbitrary
1991	Mobil Oil Expl. & Producing Se. Inc. v. United Distribution Cos.	498 U.S. 211	FERC	Rate Setting by notice and comment	Not Arbitrary
1991	Rust v. Sullivan	500 U.S. 173	HHS	Notice & Comment Rules	Not Arbitrary
1992	Arkansas v. Oklahoma	503 U.S. 91	EPA	Permit Decision	Not Arbitrary

1992	INS v. Doherty	502 U.S. 314	Attorney General/D OJ	Denial of Motion to Reopen a Deportation Proceeding	Not Arbitrary
1992	United States v. Alaska	503 U.S. 569	Sec. of Army	Licensing Decision	Not Arbitrary
1993	Good Samaritan Hosp. v. Shalala	508 U.S. 402	HHS	Notice & Comment Rules	Not Arbitrary
1993	Reno v. Flores	507 U.S. 292	INS	Consent Decree regarding release of minors	Not Arbitrary
1994	ABF Freight Sys., Inc. v. NLRB	510 U.S. 317	NLRB	Enforcement Order	Not Arbitrary
1994	Thomas Jefferson Univ. v. Shalala	512 U.S. 504	HHS	Notice & Comment Rules	Not Arbitrary
1995	Shalala v. Guemsey Mem'l Hosp.	514 U.S. 87	HHS	Reimbursement Calculation	Not Arbitrary
1996	INS v. Yueh-Shao Yang	519 U.S. 26	BIA	ALJ Adjudication	Not Arbitrary
1996	Smiley v. Citibank (S.D.), N.A.	517 U.S. 735	Comptroller of Currency	Notice & Comment Rules	Not Arbitrary
1997	Glickman v. Wileman Bros. & Elliott, Inc.	521 U.S. 457	Dep't. of Agric.	Informal Rulemaking	Not Arbitrary
1997	United States v. O'Hagan	521 U.S. 642	SEC	Notice & Comment Rules	Not Arbitrary
1998	Allentown Mack Sales & Serv., Inc. v. NLRB	522 U.S. 359	NLRB	Enforcement Order	Not Arbitrary rule, but not properly applied
1998	Regions Hosp. v. Shalala	522 U.S. 448	HHS	Notice & Comment Rules	Not Arbitrary
1999	Dickinson v. Zurko	527 U.S. 150	PTO	PTO decision to deny patent application	Not Arbitrary

2001	U.S. Postal Serv. v. Gregory	534 U.S. 1	Merit Systems Protection Board	ALJ adjudication	Not Arbitrary
2002	Nat'l Cable & Telecomms. Ass'n, Inc. v. Gulf Power Co.	534 U.S. 327	FCC	Rate Setting by FCC	Not Arbitrary
2002	Ragsdale v. Wolverine World Wide, Inc.	535 U.S. 81	Dept of Labor	Notice & Comment Rules	Outside Statutory Power & Arbitrary
2002	United States v. Fior D'Italia, Inc.	536 U.S. 238	IRS	Income Tax guidelines	Not Arbitrary
2002	Verizon Comm'ns Inc. v. FCC	535 U.S. 467	FCC	Notice & Comment Rules	Not Arbitrary
2004	Alaska Dep't of Envtl. Conservation. v. EPA	540 U.S. 461	EPA	Enforcement Order	Not Arbitrary
2004	Dep't of Transp. v. Pub. Citizen	541 U.S. 752	Dep't of Transp.	Decision not to regulate	Not Arbitrary
2004	Household Credit Servs. v. Pfenning	541 U.S. 232	FRB	Notice & Comment Rules	Not Arbitrary
2004	Norton v. S. Utah Wilderness All.	542 U.S. 55	Dep't of Interior	Decision not to regulate	Not Arbitrary
2005	Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.	545 U.S. 967	FCC	Notice & Comment Rules	Not Arbitrary
2007	Massachusetts v. EPA	549 U.S. 497	EPA	Decision not to regulate	Arbitrary
2007	Nat'l Ass'n of Home Builders v. Defs. of Wildlife	551 U.S. 644	EPA	Permit Decision	Not Arbitrary
2008	Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1 Cty.	554 U.S. 527	FERC	Decision not to act	Arbitrary
2008	United States v. Eurodif S. A.	555 U.S. 305	Commerce Dep't	Enforcement	Not Arbitrary

2009	FCC v. Fox Television Stations, Inc.	556 U.S. 502	FCC	Enforcement Action	Not Arbitrary
2011	Douglas v. Indep. Living Ctr. of S. Cal., Inc.	132 S. Ct. 1204	CMS	Rate setting by CMS	Not Arbitrary
2011	Judulang v. Holder	132 S. Ct. 476	BIA	Deportation Proceeding by BIA	Arbitrary
2011	Mayo Found. for Med. Educ. & Research v. United States	131 S. Ct. 704	Treasury	Notice & Comment Rules	Not Arbitrary
2012	Astrue v. Capato	132 S. Ct. 2021	Social Security Admin.	Notice & Comment Rules	Not Arbitrary
2013	Sebelius v. Auburn Reg'l Med. Ctr.	133 S. Ct. 817	HHS	Notice & Comment Rules	Not Arbitrary
2014	EPA v. EME Homer City Generation	134 S. Ct. 1584	EPA	Notice & Comment Rules	Not Arbitrary