DELINEATING DEERENCE TO AGENCY SCIENCE: DOCTRINE OR POLITICAL IDEOLOGY?

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Science plays an increasingly significant role in administrative decisions. In the face of mounting complexity, the judiciary struggles under its current methodology with how to pair the varying degrees of judicial review with an intricate labyrinth of agency decisions. Where science and policy commingle, the courts are least equipped. This Chapter profiles the Ninth Circuit’s recent review of agency science, closely examining four 2009 cases. Concluding that the standard of review is applied inconsistently based upon how the policy-science divide is articulated, the Chapter hypothesizes that political ideology heavily contributes to the outcome of each case. The Chapter tests this theory, providing a survey of environmental administrative review cases over the past two years, tracking both the voting patterns and political affiliation of each circuit judge. The results indicate identifiable ideological patterns in how a judge will review administrative decisions. Ultimately, this Chapter asserts that the judiciary must designate a predictable methodology for determining where to divide science from policy in an effort to reduce ideological influences and provide predictable results.

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I. INTRODUCTION

Judicial review legitimates the American administrative system.1 Most importantly, it provides reassurance to the public that administrative agencies are operating within the limits of their power delegated by Congress, appropriately navigating a myriad of statutory mandates.2 Yet discretion among agencies to complete Congress’s delegated tasks is essential for efficient and creative governance.3 Any model for judicial review must strike a careful balance between ensuring legitimacy through review and protecting flexibility and efficiency through agency deference.

In 1965, writing amidst a heated policy debate over federal regulatory agencies,4 Professor Louis Jaffe set forth three goals for a system of judicial review of administrative agencies: “comprehensiveness, simplicity, and predictability.”5 These goals are still relevant today. The ability of an agency to comprehend and predict the legality of its decisions is integral to efficient

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1 See Peter L. Strauss, Administrative Justice in the United States 335 (2002) (“The availability of judicial review is the necessary condition, psychologically if not logically, for a system of administrative power which purports to be legitimate, or legally valid.” (quoting Louis L. Jaffe, Judicial Control of Administrative Action 320 (1965))).

2 Jaffe, supra note 1, at 320. If agencies are given overly broad discretion, it 1) “raises serious questions concerning the compatibility of the administrative state with our basic system of democratic government”; 2) places constitutional and statutory rights in a vulnerable position if courts are unwilling to protect them; and 3) opens the door to abuse through “differential treatment of like cases.” 3 Richard J. Pierce, Jr., Administrative Law Treatise § 17.1, at 1564 (5th ed. 2010).

3 Jaffe, supra note 1, at 320, 321 n.2. Agencies not given enough discretion can produce absurd results, such as the case of the Food and Drug Administration, described in 3 Pierce, supra note 2, § 17.1, at 1560–62.

4 See 1 Pierce, supra note 2, § 1.5, at 18–24 (describing the historical development of administrative law from 1946–1970). Included in that time period was heavy lobbying by the American Bar Association to “judicialize” the regulatory process and intense debates over the validity of independent agencies. See 1 id. § 1.5, at 20.

5 Jaffe, supra note 1, at 152.
governance. If a court finds a particular agency action unlawful, presumably the agency can recalibrate its operations, striving to not exceed its newly defined legal bounds. However, if courts appear to fluctuate—upholding one administrative decision while vacating another decision on similar facts—then agencies will either devote their limited resources to preparing an extensive record in anticipation of litigation, or conversely, dedicate little time to their analyses, hoping to get a deferential panel. Such inconsistent judicial results are sometimes called the “lottery” effect. While a degree of individual variation is inevitable—no set of facts are identical and no body of judges can apply the law with precise uniformity—a high level of unpredictability in judicial review greatly impairs the honesty and integrity of governmental operation.

“Judicial review” assumes different forms for different situations. “Arbitrary and capricious review,” a standard set forth in the Administrative Procedure Act (APA), governs agency decisions in informal rulemaking. However, within that standard, the review of an agency’s determinations of fact differ from the review of an agency’s statutory interpretation or policy determinations. Because judges are experts in the law, not science or economics, they exact a more deferential standard of review to an agency’s factual determinations. Moreover, courts are especially deferential when reviewing agencies’ evaluations of technical matters and scientific data. Determining what constitutes a scientific “fact” is not always a simple task.

To illustrate, imagine conducting a risk assessment for an industrial waste management site. Setting the parameters of the study and selecting...
the modeling techniques are not only scientific design choices, they also involve policy choices and value systems.\textsuperscript{15} To determine what measures a waste management site should take to prevent adverse impacts to the groundwater supply, suppose the risk assessment models human exposure to groundwater contaminants due to inhalation during a shower.\textsuperscript{16} To model showering risks to human health, the assessment must set many parameters such as how long the shower will last, how high the water temperature is, the size of the shower enclosure, and the amount of air circulation.\textsuperscript{17} The value assigned to each parameter will change the output of the model, and thus the number of precautions which must be taken by the waste management company\textsuperscript{18} regulated under the Resource Conservation and Recovery Act (RCRA).\textsuperscript{19} The risk assessment must use, for example, toxicology studies for the chemical compound quinoline, conducted on rats in order to project what levels of exposure will have noticeable impacts on human health.\textsuperscript{20} The risk assessment will ultimately determine what level of risk is acceptable. Based on different standards of review, judges are often presented with this challenging inquiry: Are the choices over parameter settings, models, and acceptable risks considered scientific determinations or are they policy choices? If the decisions are policy choices, judges are free to examine the reasoning more closely to determine whether the agency is acting pursuant to Congress's articulated policies or whether the agency rationally interpreted those policies. These types of inquiries, where facts and policy mix, regularly occur in environmental regulation, where agencies must make decisions with uncertain outcomes or

\textsuperscript{15} See, e.g., id. at 7A-6, available at http://www.epa.gov/wastes/nonhaz/industrial/guide/pdf/chap7a.pdf (“Major assumptions, scientific judgments, and, to the extent possible, estimates of the uncertainties embodied in the assessment are also presented. Risk characterization is a key step in the ultimate decision-making process.”).

\textsuperscript{16} Id. at 7A-10 (describing inhalation during showering as one possible exposure route).


\textsuperscript{20} See ENVTL. PROTECTION AGENCY, supra note 18, at 18, available at http://www.epa.gov/waste/hazard/wastetypes/wasteid/petroref/chap5-7.pdf (describing EPA’s choice of model for inhalation during showering); id. at app. C-7 (indicating the different models’ prediction of quinoline emissions in appendix C); ENVTL. PROTECTION AGENCY, TOXICOLOGICAL REVIEW OF QUINOLINE 14–16, 22–23 (2001) (evaluating studies on quinoline’s toxic effects through ingestion).
conflicting science.\textsuperscript{21} Complicating matters, judges have not always answered such inquiries consistently.

In 2008, the United States Court of Appeals for the Ninth Circuit issued its often-cited en banc decision in \textit{Lands Council v. McNair}\textsuperscript{22} “to clarify some of [its] environmental jurisprudence with respect to [its] review of the actions of the United States Forest Service.”\textsuperscript{23} The en banc panel pointed to the errors it made in an earlier case, \textit{Ecology Center v. Austin},\textsuperscript{24} which imposed a requirement on the agency not found in any statute or regulation, and which “defied well-established law concerning the deference [the court] owe[s] to agencies and their methodological choices.”\textsuperscript{25} Overruling \textit{Ecology Center v. Austin}, the court declined “to act as a panel of scientists” that instructed the agency how it should conduct its scientific studies and would not “order[] the agency to explain every possible scientific uncertainty.”\textsuperscript{26} Of course, reference to the strong language in \textit{Lands Council} has not been limited to Forest Service actions—the case has been cited in review of decisions made by other federal agencies such as the Bureau of Land Management (BLM),\textsuperscript{27} the Environmental Protection Agency (EPA),\textsuperscript{28} the National Marine Fisheries Service (NMFS),\textsuperscript{29} the Fish and Wildlife Service (FWS),\textsuperscript{30} and the Minerals Management Service (MMS).\textsuperscript{31}

The Ninth Circuit has explained that its standard of review is more deferential in areas concerning an agency’s scientific or technical expertise.\textsuperscript{32} However, demonstrated in the pages to follow, an increased deferential demeanor towards “agency expertise” is dangerous without qualification or more guidance.\textsuperscript{33} Many scholars have identified agency tendencies to recast policy judgments as scientific findings to avoid public and judicial scrutiny of tough policy decisions.\textsuperscript{34} This tendency often leads to judicial

\begin{thebibliography}{99}

\bibitem{21} Examples of a mixture of science and policy in the environmental field include agency decisions on how to manage a forest for “diversity” or which technology constitutes the “best available control measures.” \textit{See infra} Part I.C.
\bibitem{22} \textit{Lands Council v. McNair}, 537 F.3d 981 (9th Cir. 2008) (en banc).
\bibitem{23} \textit{Id.} at 984.
\bibitem{24} \textit{Ecology Center v. Austin}, 430 F.3d 1057 (9th Cir. 2005).
\bibitem{25} \textit{Lands Council}, 537 F.3d at 991.
\bibitem{26} \textit{Id.} at 988.
\bibitem{27} \textit{E.g.,} Ctr. for Biological Diversity v. U.S. Dep’t of Interior (\textit{CBD v. DOI}), 581 F.3d 1063, 1077, 1090 (9th Cir. 2009) (Tallman, J., dissenting).
\bibitem{28} \textit{E.g.,} Nw. Coal. for Alternatives to Pesticides v. U.S. Envtl. Protection Agency, 544 F.3d 1043, 1053, 1054 n.1, 1060 (9th Cir. 2008) (Ikuta, J., dissenting).
\bibitem{29} \textit{E.g.,} Trout Unlimited v. Lohn, 559 F.3d 946, 958–59, 961 (9th Cir. 2009).
\bibitem{30} \textit{E.g.,} Tucson Herpetological Soc’y v. Salazar, 566 F.3d 870, 875 (9th Cir. 2009).
\bibitem{31} \textit{E.g.,} Alaska Wilderness League v. Kempthorne, 548 F.3d 815, 835 (9th Cir. 2008) (Bea, J., dissenting), vacated, 559 F.3d 916 (9th Cir. 2009), \emph{and dismissed as moot}, 571 F.3d 859, 860 (9th Cir. 2009).
\bibitem{32} \textit{Lands Council}, 537 F.3d 981, 993 (9th Cir. 2008) (en banc) (quoting Selkirk Conservation Alliance v. Forsgren, 336 F.3d 944, 954 (9th Cir. 2003)); Ctr. for Biological Diversity v. Kempthorne, 588 F.3d 701, 707 (9th Cir. 2009) (quoting Envtl. Def. Ctr. v. U.S. Envtl. Protection Agency, 344 F.3d 832, 869 (9th Cir. 2003)).
\bibitem{33} \textit{See infra} Parts II–III.
\bibitem{34} \textit{See, e.g.,} Holly Doremus, \textit{Listing Decisions under the Endangered Species Act: Why Better Science Isn’t Always Better Policy}, 75 WASH. U. L.Q. 1029, 1064 (1997); Holly Doremus &
misunderstanding, where courts perceive agency findings as scientific fact and apply a more deferential standard of review. The Ninth Circuit’s arbitrary and capricious standard of review has proven rather malleable. Depending upon the skill of the advocates and the scientific training of the judges, a Ninth Circuit panel might characterize the case as one involving complex scientific determinations, to which it should defer, or as one involving policy choices, giving the court a little more leeway to scrutinize the agency’s rationale. Lands Council’s “clarification” has not proven itself very useful in recent cases where Ninth Circuit panels continue to fluctuate over how to appropriately define the scope of its review, unsure of which agency determinations are scientific and which involve policy.

The rationale and outcome of recent Ninth Circuit agency review cases indicate a pattern: not one governed by legal doctrine, but by political ideology. The Ninth Circuit’s current standard of review for alleged arbitrary agency action performs the following inquiry: Is the court asked to examine an agency’s scientific and technical findings? If so, the court must


35 See Wagner, supra note 6, at 1664–65.

36 Compare Tucson Herpetological Soc’y, 566 F.3d 870, 879 (9th Cir. 2009) (holding that, although evidence of the lizard’s population level was limited and inconclusive, “[t]he studies [relied on by the Secretary] do not lead to the conclusion that the lizard persists in a substantial portion of its range, and therefore cannot support the Secretary’s conclusion”), and CBD v. DOI, 581 F.3d 1063, 1071 (9th Cir. 2009) (invalidating BLM’s decision to exchange land with a mining company because of an assumption that “fatally undermined the analysis” in the agency’s decisional document) with Latino Issues Forum v. U.S. Envtl. Protection Agency, 558 F.3d 936, 947–48 (9th Cir. 2009) (upholding the menu-option approach the EPA selected to comply with the “best available science” required by the Clean Air Act); and *Ecology Ctr. v. Castaneda*, 574 F.3d 652, 660–65 (9th Cir. 2009) (upholding the Forest Service’s explanation of its modeling choice for determining old growth species population). These cases are discussed in detail *infra* Part II.

37 537 F.3d at 984 (“We took this case en banc to clarify some of our environmental jurisprudence with respect to our review of the actions of the United States Forest Service.”).

38 See *infra* Parts II–III.

39 Not to be confused with political philosophy, a political ideology is a collection of ideas that have an ethical set of ideals, principles, and doctrines explaining how a society should work and offers some blueprint for a certain social order. Brent S. Steel et al., *Ideology and Scientific Credibility: Environmental Policy in the American Pacific Northwest*, 15 Pub. Understanding of Sci. 481, 482 (2006). A political ideology largely concerns itself with how to allocate power and the ends to which it should be used. *Id.* Political ideologies have two dimensions—goals and methods: 1) how society should function or be organized, and 2) the most appropriate way to achieve this goal. *See id.*
extend greater deference than awarded to non-scientific agency judgments.\textsuperscript{40} This inquiry skips an integral step. As an antecedent, the court should also ask: Which components of an agency’s scientific and technical findings implicate policy choices? Do the agency’s findings of uncertain, unknowable, or future events use principles consistent with the controlling statutory goal or policy? Has the agency articulated how it interprets the applicable statutory policy as it relates to the implementation under question?\textsuperscript{41} Without this procedural step to guide judges of the Ninth Circuit through agency decisions, the outcome will largely be determined by panel composition, creating inconsistent precedent.\textsuperscript{42} Using the Ninth Circuit’s malleable standard of arbitrariness review, judicial opinions deciding whether or not to ultimately affirm or vacate agency decision making will be governed by the individual policy preferences of each judge. This paper sets out to demonstrate first that individual political ideologies greatly influence recent environmental decisions. In doing so, Part II.A provides a general background on deference to administrative decisions, followed by Part II.B, which elaborates on decisions involving science or technical expertise. Part II.C closely examines four recent environmental cases coupled with Part III’s broader survey, spanning from \textit{Lands Council} to present, to demonstrate first that the decisions lack a consistent level of deference to agency expertise and second, that they exhibit a pattern of ideological voting. Lastly, Part IV asserts that this trend will continue until courts are able to design a functional legal doctrine that eliminates some of the ambiguities of the deferential standard of review. Such a doctrine must include an analytical step-by-step procedure to aid judges in determining the scope and depth of judicial review. Ultimately, this paper proposes that, amidst evaluations of agency actions, courts must exert more effort to discern policy from science to reach a more predictable uniform standard to test agency decision making.

II. THE PREDICAMENT: A MIXTURE OF POLICY AND SCIENCE

Many scholars have identified the tendency for certain agencies to demonstrate decision making rationale in complex scientific terms, obscuring policy choices such as which methodology to use and how to define certain parameters.\textsuperscript{43} Despite its prevalence as an academic subject,

\textsuperscript{40} See Ctr. for Biological Diversity v. Kempthorne, 588 F.3d 701, 707 (9th Cir. 2009) (quoting Envtl. Def. Ctr. v. U.S. Envtl. Protection Agency, 344 F.3d 832, 869 (9th Cir. 2003)).

\textsuperscript{41} For example, in \textit{Lead Indus. Ass’n v. Envtl. Protection Agency}, 647 F.2d 1130 (D.C. Cir. 1976), \textit{cert. denied}, 449 U.S. 1042 (1980), the D.C. Circuit Court of Appeals upheld EPA’s decision to use the precautionary principle while setting air quality standards, finding that it was consistent “with both the [Clean Air] Act’s precautionary and preventative orientation and the nature of the Administrator’s statutory responsibilities.” \textit{Id} at 1155.

\textsuperscript{42} See infra Part II.B.

\textsuperscript{43} Recall the example given in the introduction describing the policy choices when assessing risks to human populations from chemical inhalation during showers. See also Adam Babich, \textit{Too Much Science in Environmental Law}, 28 COLUM. J. ENVTL. L. 119, 160–166 (2003); Doremus, \textit{supra} note 34, at 1065; Doremus & Tarlock, \textit{supra} note 34, at 17; Huffman, \textit{supra} note
little effort has been expended to reform this tendency. This could be partially due to several factors. Agencies are already overburdened\textsuperscript{44} and Congress has assigned them difficult or impossible tasks\textsuperscript{45} that remain unresolved politically.\textsuperscript{46} Moreover, the 111th Congress does not appear to be in a good position to tackle the problem as it is preoccupied with monumental topics such as climate change, the federal deficit, and health care reform.\textsuperscript{47}

\textbf{A. Background: Judicial Deference to Agency Rulemaking}

Courts have a limited supervisory function.\textsuperscript{48} Superficially, review of administrative rulemaking decisions\textsuperscript{49} presents judges with a deceptively simple question: Did the agency consider relevant factors in making its decision or was there a clear error of judgment?\textsuperscript{50} The APA acts as a backstop for the administrative branch, providing courts with authority to vacate agency rulemaking that is “arbitrary, capricious, an abuse of

\begin{itemize}
  \item 34, at 351; Adrian Vermeule, \textit{The Parliament of Experts}, 58 DUKE L. J. 2231, 2235–39 (2009);
  \item Wagner, \textit{supra} note 6, 1622–27 (describing the policy judgments involved in answering what concentration of formaldehyde in drinking water causes a 1 x 10\textsuperscript{-6} risk of cancer); Clark, \textit{supra} note 34, at 330.
  \item 44 See, e.g., Eric Biber, \textit{Too Many Things to Do: How to Deal with the Dysfunctions of Multiple-Goal Agencies}, 33 HARV. ENVTL. L. REV. 1 (2009); see also \textit{Part I} (discussing the various parameter and modeling choices in assessing risks to human populations from inhaling hazardous and nonhazardous chemicals in the shower).
  \item 45 Some have argued that the Endangered Species Act provides the fish and wildlife agencies with a conflicting mandate. See, e.g., Doug Karpa, \textit{Loose Cannons: The Supreme Court Guns for the Endangered Species Act in National Association of Home Builders v. Defenders of Wildlife}, 35 ECOLOGY L.Q. 291, 308 (2008). By requiring that agencies use the “best available science,” 16 U.S.C. § 1533(b)(1)(A) (2006), the statute creates an implication that decisions will be purely scientific. Yet the statute also uses undefined terms such as “recovery,” which may require agencies to answer political questions before they can answer scientific ones.
  \item 49 This excludes judicial review of administrative adjudication, which imposes a different standard of review. \textit{See} Administrative Procedure Act, 5 U.S.C. § 706 (2006).
discretion, or otherwise not in accordance with the law. The Ninth Circuit defines arbitrariness review of fact-finding and agency judgments as “narrow and deferential.”

[The court] will overturn a decision as “arbitrary and capricious” when the agency (1) relied on a factor that Congress did not intend it to consider; (2) failed to consider an important factor or aspect of the problem; (3) failed to articulate a rational connection between the facts found and the conclusions made; (4) supported the decision with a rationale that runs counter to the evidence or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise; or (5) made a clear error in judgment.

However, the court is not allowed to “substitute its judgment for that of the agency.” Moreover, “[s]uch deference is especially warranted when ‘reviewing the agency's technical analysis and judgments, based on an evaluation of complex scientific data within the agency’s technical expertise.’” The level of judicial review thus differs depending upon whether the court is asked to examine a factual determination or a legal or policy determination: factual determinations receive less judicial scrutiny and are more likely to be upheld. Circuit Judge Pregerson recently offered a more articulate description of the court’s role in judicial review, distinguishing between depth and scope:

Although the ultimate scope may be narrow, the depth must be sufficient for us [the court] to be able to comprehend the agency’s handling of the evidence cited or relied upon. The purpose of this in-depth review is to educate ourselves so that we can properly perform our reviewing function: . . . to ascertain whether the agency’s actions were complete, reasoned, and adequately explained. The mere fact that an agency is operating in a field of its expertise does not excuse us from our customary review responsibilities.

A judge’s responsibility is limited to deciphering the agency’s rationale in the administrative record and ensuring that it meets statutory standards raised by the plaintiffs. Judge Pregerson identifies the occasional

52 Humane Soc’y of U.S. v. Gutierrez, 558 F.3d 896, 897 (9th Cir. 2009).
54 Earth Island Inst. v. U.S. Forest Serv., 442 F.3d 1147, 1156 (9th Cir. 2006). See also Lands Council, 537 F.3d 981, 987 (9th Cir. 2008) (en banc).
56 See id.
57 Nw. Coal. for Alternatives to Pesticides, 544 F.3d 1043, 1052 n.7 (9th Cir. 2008) (responding to objections made in the dissent by Circuit Judge Ikuta).
58 See Latino Issues Forum, 558 F.3d 936, 941 (9th Cir. 2009) (explaining that in the absence of more specific statutory direction the court must apply "the general standard of review for agency actions set forth in the [APA]" ).
misunderstanding of the Ninth Circuit’s standard of review: that operating in a technical area does not automatically require a stamp of approval.\footnote{59} If a court is unable to identify or comprehend the agency’s explanation of its conclusions or chosen policies, the court will likely remand for a more thorough explanation.\footnote{60} Similarly, if the record does not support the agency’s asserted rationale, its decision will not hold up to judicial scrutiny.\footnote{61} Express agency rationale is integral in ensuring legally defensible decisions.\footnote{62} By invalidating agency actions for failure to provide a sufficient rationale, courts prompt agencies to recalibrate the scope and depth of their future analyses. Judicial review changes agency behavior. An agency’s express analysis of its decisions both assures the agency that it is meeting its statutory mandates and assists courts in reviewing substantive compliance with those mandates.

Some commentators have explained the administrative record as analogous to a judicial opinion.\footnote{63} Where judges are required to “give a ‘reasoned elaboration’ for their actions according to norms of consistent, neutral and candid decisional processes,” their individual motivations can be kept at bay.\footnote{64} Using this analogy, agency discretion is legitimized by requiring agencies to give a thorough explanation, articulating how they have met their statutory duties.\footnote{65} Any relaxation of such a requirement undermines our representative form of government because agencies would be allowed to form decisions without explaining their rationale and how their choice furthers a particular legislative policy.\footnote{66}

\footnote{59}\hspace{1em}See id. ("[C]ourts must carefully review the record to ensure that agency decisions are founded on a reasoned evaluation of the relevant factors, and may not rubber-stamp . . . administrative decisions that they deem inconsistent with a statutory mandate or that frustrate the congressional policy underlying a statute . . . ." (alteration in original) (quoting Friends of Yosemite Valley v. Norton, 348 F.3d 780, 793 (9th Cir. 2003))).

\footnote{60}\hspace{1em}See Wagner, supra note 6, at 1714. Judicial comprehensibility is different than creating lay person understanding and easier for an agency to achieve. Cf. id. at 1656. In her article, Professor Wagner notes that “[w]hile the APA mandates a process for public involvement, it provides almost no protections to ensure that agencies will explain the substantive bases for highly complex or technical rulemakings in a way that the lay public can readily understand and challenge.” Id. (footnote omitted).


\footnote{62} See, e.g., Nw. Coal. for Alternatives to Pesticides, 544 F.3d at 1052–53 n.7.

\footnote{63} See, e.g., Shapiro & Levy, supra note 51, at 412; Patricia M. Wald, The “New Administrative Law”—with the Same Old Judges in it?, 1991 DUKE L.J. 647, 650 (1991) ("[T]he nature of judging requires a bona fide attempt at a reasoned rationale as a critical part of the integrity of both the agency and court decisionmaking processes . . . .").

\footnote{64} Shapiro & Levy, supra note 51, at 412.

\footnote{65} See id; see also Sierra Club v. Costle, 657 F.2d 298, 400–01 (D.C. Cir. 1981) (“Under our system of government, the very legitimacy of general policymaking by unelected administrators depends in no small part upon the openness, accessibility, and amenability of these officials to the needs and ideas of the public from whom their ultimate authority derives, and upon whom their commands must fall.” (footnote omitted)).

\footnote{66} JAFFE, supra note 1, at 320–21. For a critique of requirements imposed on agencies to explain the basis of their decisions, see Wagner, supra note 6, at 1661–64. Of course, this begs a more fundamental question: what is “the appropriate role of democratic values in administrative
B. Scientific Expertise

Science presents courts with a unique predicament. From interests of efficiency to a lack of confidence, the Ninth Circuit distinguishes legal questions from factual or technical questions in informal rulemaking, awarding a strong level of deference to the latter.\textsuperscript{67} Congress often tasks agencies with answering complex questions, such as how to manage a forest for “diversity”\textsuperscript{68} or what level of human risk is acceptable in pesticide use.\textsuperscript{69} To answer these questions, agencies synthesize large amounts of potentially conflicting information, and then draw conclusions from this massive record.\textsuperscript{70} Moreover, agencies are asked to make findings where, as is inherent in science, absolute certainty does not exist. These conclusions may be based upon unproven assumptions, inconclusive evidence, or assertions impossible to prove.\textsuperscript{71} It is to these conclusions that courts regularly defer. However, policy choices often commingle with highly complex factual determinations within a chosen scientific methodology or experiment design. Scholars have identified some agencies’ tendency to craft these policy choices within the scientific discourse to both avoid public accountability and ensure less judicial scrutiny.\textsuperscript{72} Coined as the “science charade” by Professor Wendy Wagner,\textsuperscript{73} these policy choices are disguised as scientific expertise and provide the rationale for agency decisions. This is particularly common in environmental and natural resource regulation, a field replete with uncertainties and controversial management decisions.\textsuperscript{74} Although rare, some courts have boldly rummaged through the scientific terminology and data to sort out the policy choices disguised within.\textsuperscript{75} As the Court of Appeals for the District of Columbia observed, at “the frontiers of scientific knowledge,” with little available data to make fully informed factual determinations, agencies must “depend to a greater extent upon policy judgments and less upon purely factual analysis . . . . [P]olicy choices of this sort are not susceptible to the same type of verification or refutation by reference to the record as are some factual questions.”\textsuperscript{76} However, the

\textsuperscript{67} Cal. ex rel. Lockyer v. U.S. Dep’t of Agric., 575 F.3d 999, 1011 (9th Cir. 2009).
\textsuperscript{68} See Ecology Ctr. v. Castaneda, 574 F.3d 652, 656 (9th Cir. 2009).
\textsuperscript{69} See Nw. Coal. for Alternatives to Pesticides, 544 F.3d 1043, 1052 (9th Cir. 2008).
\textsuperscript{71} See 1 PIERCE, supra note 2, § 7.5, at 630.
\textsuperscript{72} See, e.g., Doremus & Tarlock, supra note 34, at 3 (“Typically, the disputes are fundamentally about how incomplete data are interpreted and applied, rather than about what the data are or how they have been gathered. Agency judgments, in other words, are the real issue.”); Huffman, supra note 34, at 354; Wagner, supra note 6, at 1617.
\textsuperscript{73} Wagner, supra note 6, at 1617.
\textsuperscript{74} Nie, supra note 46, at 260.
\textsuperscript{75} See Wagner, supra note 6, at 1665 n.188.
\textsuperscript{76} Indus. Union Dep’t v. Hodgson, 499 F.2d 467, 474–75 (D.C. Cir. 1974) (discussing the court’s review of the Secretary of Labor’s standards on atmospheric concentrations of asbestos
vast majority of courts feel inadequate to deal with the complex questions at hand. “Judges are acutely aware that they lack specialized scientific expertise, and therefore are not well qualified to oversee the exercise of scientific judgment.”

Gathering empirical data for model inputs may typify scientific findings, but the methods of collection and models are often based on assumptions and speculations with meaningful policy components. Most nonscientists perceive this bundle of research as a single component, blind to its layers of value judgments.

Professor Wagner argues that courts are exacerbating the “science charade” by 1) insisting that the agency produce a large record, 2) exercising a more deferential standard of review for inquiries at “the frontiers of science,” and 3) producing inconsistent or “lottery” results, where courts fluctuate between upholding and remanding similar agency analysis. Is the Ninth Circuit producing lottery results? The following sections answer affirmatively, based on both an empirical survey and a close look at a few exemplary cases. Because of the way these policy decisions are bundled and presented to the public and to the courts during litigation, courts continue to struggle with the level of deference to accord scientific determinations by agencies.

While judges may not have specialized scientific expertise, a limited understanding is not a reason to completely defer to agencies. After all, judges are an intelligent collection of people who have devoted their careers to studying complex problems with specific sets of facts. Some level of review is essential to ensure the agencies are complying with their mandates and are not mangling scientific results to produce certain outcomes. As one United States Court of Appeals for the Seventh Circuit judge observed, “Agencies must be accountable. If they are never subject to levels of judicial review higher than that of complete deference, even when they act manipulatively, a world of government without accountability not contemplated by the Supreme Court in Chevron or Congress in the

in the industrial workplace); see also Shapiro & Levy, supra note 51, at 394–95. Shaprio and Levy note that:

Because the authority of any institution rests ultimately on a popular belief in its legitimacy, political power must be held and exercised in accordance with a nation’s laws, traditions, customs and values. Moreover, the affirmation of liberal values is all the more necessary because of growing doubts about the Progressives’ assumption that social problems can be solved by the bureaucracy through application of scientific principles in a neutral fashion. In fact, administrative actions normally involve policy choices by bureaucrats who are subject to a variety of self-interested motivations and political pressures. When administrators respond to these influences, they often serve special interests of the industries they regulate rather than the purposes for which their agencies were created.

Id. (footnotes omitted); cf Leventhal, supra note 48, at 533–34 (quoting Radio Corp. of Am. v. United States, 341 U.S. 412, 426 (1951) (Frankfurter, J., dubitante)).

77 Doremus & Tarlock, supra note 34, at 18 (citing Int’l Harvester Co. v. Ruckelshaus, 478 F.2d 615, 650–51 (D.C. Cir. 1973) (Bazelon, C.J., concurring)).

78 Clark, supra note 34, at 331.

79 Wagner, supra note 6, at 1661–67.
Administrative Procedure Act is created. Without reviewing the substance of agency decisions, “there is no check to prevent an agency from serving the purely private interests of special interest groups at the expense of the broader public interests the agency is supposed to serve.” An absence of meaningful review promotes public distrust of agencies, allows agency motivations to go unchecked, and has serious consequences for our constitutional values, such as due process and equal protection. If agencies, responsible for implementing Congress’s legislative will, do not do so in a faithful manner, there is little redress for citizens. Complete deference undermines our democratic model of government and would reduce judicial review “to its symbolic element and the legitimation of administrative government will be more myth than reality.”

On the other hand, undergoing an independent analysis of administrative decisions exceeds the appropriate judicial role. The United States Supreme Court has recognized the importance of maintaining a balance of governance and has drawn limits to review. Creating requirements for the agency beyond those required by Congress is not for the courts. Federal judges are not elected, do not directly represent the will

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82 Id. at 390 (citing R. Dahl, Democracy in the United States: Promise and Performance 357 (1972)); Songer et al., supra note 48, at 18 (“Discretion has its dark side . . . [it] enables and even invites officials to overreach, to discriminate invidiously, to subordinate public interests to private ones . . . and to tyrannize over the citizenry.” (alteration in original) (quoting Peter H. Schuck, Foundations of Administrative Law 155 (1994))); id. at 18 (“[J]udicial review is seen as a ‘check on lawlessness, a check on administrative agents making choices based on convenient personal or political preferences without substantial concern for matters of inconvenient principle.’” (quoting Glen O. Robinson, American Bureaucracy: Public Choice and Public Law 181 (1991))).
83 Suppose Congress required an agency to weigh economics and environmental harm equally before executing certain actions, yet the agency consistently skewed this requirement in favor of economic interests. If judicial review were not available in this situation, a citizen’s only redress would be to go back to Congress and request an amendment. Assuming the citizen’s story was compelling enough to gain majority votes in both the House of Representatives and the Senate, an amendment might not even solve the problem if the agency had already demonstrated a tendency to skew congressional mandates. Absent Congress dissolving the agency, restricting funding, or replacing its administrator, there would be little recourse.
84 Shapiro & Levy, supra note 51, at 305.
85 Id. at 301, tbl.1 (practical necessity and efficiency).
86 See, e.g., Chevron, 467 U.S. 837, 844 (1984) (“[A] court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency.”); V. Yankee Nuclear Power Corp. v. Natural Res. Def. Council (Vermont Yankee), 435 U.S. 519, 524 (1978) (“Agencies are free to grant additional procedural rights in the exercise of their discretion, but reviewing courts are generally not free to impose them if the agencies have not chosen to grant them.”); Citizens to Preserve Overton Park, 401 U.S. 402, 416 (1971) (“Although this inquiry into the facts is to be searching and careful, the ultimate standard of review is a narrow one. The court is not empowered to substitute its judgment for that of the agency.”).
87 Vermont Yankee, 435 U.S. at 524.
of the people, and should not legislate. But divisions between the executive, legislative, and judicial branches will never be black and white. And with the case of judicial deference to administrative decisions, the court is the last meaningful check on these agencies, which are also unelected. Somewhere in this gray area, judicial review must come to a rest. Before the Ninth Circuit, judicial review still appears quite restless.

C. The Ninth Circuit After Lands Council

Despite Lands Council’s “clarification,” the arbitrariness standard of review remains a difficult standard to predict. Since its en banc decision, the Ninth Circuit continues to waiver over which agency judgments deserve special deference. No clear judicial review doctrine emerged from Lands Council. The case merely reaffirmed an old maxim that it was not the place of the courts to create requirements beyond those provided by Congress. Yet it is the court’s role to articulate constitutional requirements and to interpret statutory language. What depth of an explanation will the court require of agencies when making decisions that involve scientific determinations? Because Lands Council failed to answer this question,

\[88\] Ethyl Corp. v. Envtl. Prot. Agency, 541 F.2d 1, 67 (D.C. Cir. 1976) (Bazelon, C.J. concurring) (“It is true that, where, as here, a panel has reached the result of invalidating agency action by undue involvement in the uncertainties of the typical informal rulemaking record, the court en banc will be tempted to justify its affirmation of the agency by confronting the panel on its own terms. But this is a temptation which, if not resisted, will not only impose severe strains upon the energies and resources of the court but also compound the error of the panel in making legislative policy determinations alien to its true function.”).

\[89\] See Morrison v. Olson, 487 U.S. 654, 693–94 (1988). Morrison is regularly included in constitutional law case books to illustrate the court’s functional approach in discerning between the appropriate operations of the three branches of government. See, e.g., ERWIN CHEMERINSKY, CONSTITUTIONAL LAW 367–69 (3d ed. 2009); see also Pub. Citizen v. U.S. Dep’t of Justice, 491 U.S. 440, 487 (1989) (Kennedy, J., concurring) (describing how each of the three branches will never entirely be separate or distinct).

\[90\] See Lands Council, 537 F.3d 981, 991 (9th Cir. 2008) (en banc) (“[T]here is no legal basis to conclude that the NFMA requires an on-site analysis where there is a reasonable scientific basis to uphold the legitimacy of modeling. NFMA does not impose this substantive requirement, and it cannot be derived from the procedural parameters of NEPA.” (quoting Ecology Ct. v. Austin, 430 F.3d 1057, 1073 (9th Cir. 2005) (McKeown, J., dissenting))); see also Vermont Yankee, 435 U.S. at 523–24 (holding that the Administrative Procedure Act is both the floor and ceiling for agency procedures—it is not the place for the courts to assign additional procedures); Keith G. Bauerle, The Ninth Circuit’s “Clarifications” in Lands Council v. McNair: Much Ado About Nothing?, 2 GOLDEN GATE U. ENVTL. L.J. 203, 254 (2009) (arguing that Lands Council did not actually change deference in the Ninth Circuit, but rather “only contributed to the circuit’s ongoing dialog over the breadth and depth of that scrutiny”).

\[91\] E.g., Indus. Union Dep’t v. Am. Petroleum Inst. (The Benzene Case), 448 U.S 607, 662 (1980) (holding that the Secretary of Labor had exceeded his standard-setting authority by not showing that new limits on benzene exposure were reasonably necessary or appropriate for employee health and safety); see THE FEDERALIST NO. 78, at 512 (Alexander Hamilton) (John Harvard Library ed., 2009) (“The interpretation of the laws is the proper and peculiar province of the courts. A constitution is, in fact, and must be regarded by the judges, as a fundamental law. It therefore belongs to them to ascertain its meaning, as well as the meaning of any particular act proceeding from the legislative body.”).
judges have resorted to expressing their own policy preferences using the existing malleable standard of review and flexible definitions of what constitutes "science." Currently, therefore, a policy battle plays out in the Ninth Circuit.

1. When Are Agencies Given Deference?

Every year, the Ninth Circuit hears many environmental cases, and the last two years were not out of the ordinary. Two exemplary cases from 2009 in which the court deferred to agency expertise and upheld agency rulemaking on environmental issues are described below. The following sections examine how the court treated the science-policy mixture.

a. Ecology Center v. Castaneda\(^{92}\)

Ecology Center and WildWest Institute (collectively WildWest) challenged the approval by the United States Forest Service (Forest Service) of nine timber sale and restoration projects in Montana’s Kootenai National Forest (KNF).\(^{93}\) WildWest alleged violations of the National Forest Management Act (NFMA),\(^{94}\) the National Environmental Policy Act (NEPA),\(^{95}\) and Forest Service regulations.\(^{96}\) Before the Ninth Circuit, WildWest argued that the Forest Service’s timber sale approval did not ensure continued viable populations of the pileated woodpecker and that the measure of old-growth habitat as a proxy for the viability of old-growth dependent species, such as the pileated woodpecker, was improper.\(^{97}\)

NFMA requires the Forest Service to complete individual forest plans that must “provide for diversity of plant and animal communities based on the suitability and capacity of the specific land area.”\(^{98}\) To meet NFMA’s diversity requirement, the forest plan requires the agency to measure “[p]opulation levels of old-growth dependent species” in order to “[m]aintain viable population[s] of old-growth dependent species.”\(^{99}\) Instead of going out to count exactly how many and what kind of species inhabit a particular forest, the Forest Service selects the most sensitive species and monitors its population levels.\(^{100}\) This technique assumes that management strategies beneficial for that indicator species are also beneficial for all other species of that forest type. Due to the difficulties in counting or predicting population levels of elusive species, the Forest Service employs what is

\(^{92}\) 574 F.3d 652 (9th Cir. 2009).

\(^{93}\) Id. at 655.


\(^{97}\) Ecology Center, 574 F.3d at 663–64.


\(^{99}\) Ecology Center, 574 F.3d at 663 (alteration in original).

\(^{100}\) Clark, supra note 34, at 331–32.
called the proxy-on-proxy approach.\footnote{See id.} Instead of trying to count an individual indicator species, the Forest Service identifies which habitat qualities are beneficial to that species, monitors its management areas for those qualities, and projects the likely number of species living in that area based on observed forest features.\footnote{Id.} This modeling approach makes several assumptions and executes a particular chosen policy, one not necessarily discernable by the public.\footnote{See id. at 332–33 (describing the political choices embedded within the proxy-on-proxy model).} The chosen policy is one that values inexpensive monitoring and risks greater predictive errors as to which management characteristics are beneficial to a greater number of species.\footnote{Id.}

In Ecology Center, the Ninth Circuit upheld the Forest Service’s explanation of its modeling choice and refused to require the agency to “respond to every single scientific study or comment.”\footnote{Ecology Center, 574 F.3d 652, 668 (9th Cir. 2009).} First, the court stated that any general challenge to the proxy-on-proxy approach was “foreclosed” by Ninth Circuit case law, citing Lands Council and indicating that the approach was “eminently reasonable.”\footnote{Id. at 664 (citing Lands Council, 517 F.3d 981, 996 (9th Cir. 2008)). But cf. Native Ecosystems Council v. Tidwell, 599 F.3d 926 (9th Cir. 2010) (holding that the Forest Service use of the proxy-on-proxy approach was inappropriate under the circumstances).} The court stated that it would not invalidate the Forest Service’s specific monitoring technique unless the agency “failed to accurately identify and measure the relevant habitat.”\footnote{Ecology Center, 574 F.3d at 664. The court distinguished the present facts from those in Lands Council v. Powell, where “the Forest Service’s database, its ‘main tool for old growth calculation,’ contained data that was fifteen years old, inaccurate, and insufficient on many variables.” Id. at 665 (citing Lands Council v. Powell, 395 F.3d 1019, 1036 (9th Cir. 2005)).} Here, the court did not see any defects; instead, the Forest Service provided “detailed data on the location, condition, and amount of old growth habitat in the affected areas.”\footnote{Id. at 665.} When the Forest Service “concluded that although the nine projects may affect old-growth species, they do not threaten species viability,” the court deferred, stating that “[t]his is the sort of scientific prediction to which we give great deference to the agency.”\footnote{Id. at 663–64.} It based its reasoning on the fact that the agency had “described both the quantity and quality of habitat that is necessary to sustain a viable population of the pileated woodpecker and ha[d] explained its methodology for measuring old-growth habitat,”\footnote{Id. at 663 (citing Native Ecosystems Council v. U.S. Forest Serv., 428 F.3d 1233, 1250 (9th Cir. 2005)).} despite the fact that the Forest Service did not specifically address effects on the pileated woodpecker in one of the challenged projects.\footnote{Id. at 663–64.} Overall, the arguments in Ecology Center largely mirrored those in Lands Council, and the court was unwilling to distinguish the two cases.
Taking a step back, *Ecology Center* provides a great example of the science-policy mixture and one of the many responses courts have to scientific challenges. Measuring diversity and population viability presents a scientific question: how to develop a methodology and produce a population count with maximum accuracy. For example, the study could ask how many pileated woodpeckers must inhabit 2000 acres for the population to be the most stable over a ten year period with a 95% confidence level. But selecting among a variety of models and defining the terms “population viability” and “stability” are policy choices. How many woodpeckers constitute a “viable population”? Are 200 woodpeckers viable even if their population is at a 50% risk of extinction should a large disturbance occur? Also, what is the appropriate area to measure viability—should the Forest Service evaluate viability over 1000 acres or 2,200,000 acres? Had the court separated the policy choice from the agency’s viability determination, the court would have asked whether the Forest Service explained how much risk it was willing to accept in its population viability analysis and why its methodology was an appropriate policy for managing the KNF under NFMA. Once that was established, the court could defer to the agency’s scientific determinations, such as calculating the exact threshold population under the chosen methodology. Ultimately, the same conclusion may have been reached under this set of facts, where the KNF management plan required the use of management indicator species.\(^\text{112}\) However, adding an extra step to the court’s analysis would send a signal to the agency as to what sort of explanation the court is looking for.

\(b\). Latino Issues Forum v. United States Environmental Protection Agency\(^\text{113}\)

Latino Issues Forum sued EPA for approving a revision to the state implementation plan (SIP) under the Clean Air Act (CAA)\(^\text{114}\) for San Joaquin Valley, California—an area experiencing severe air quality issues.\(^\text{115}\) The San Joaquin Valley's SIP revision provided a menu of options for controlling particulate matter pollution from agricultural sources. These options were an effort to comply with the statute's requirement to assure that the “best available control measures” are implemented for an area with “serious” air impairment.\(^\text{116}\) The Ninth Circuit panel consisted of Circuit Judges J. Clifford Wallace and Susan P. Graber, with Circuit Judge Sidney R. Thomas writing a concurrence.\(^\text{117}\) Setting the stage for its analysis, the court cited its deferential standard of review of agency action on matters “requir[ing] a high level of technical expertise”\(^\text{118}\) and “at the frontiers of science.”\(^\text{119}\) The

\(^{112}\) See *id.* at 663–65.

\(^{113}\) 558 F.3d 936 (9th Cir. 2009).


\(^{115}\) *Latino Issues Forum*, 558 F.3d at 939–40.


\(^{117}\) *Latino Issues Forum*, 558 F.3d at 938, 949.

\(^{118}\) *Id.* at 941 (quoting Sierra Club v. U.S. Envtl. Prot. Agency, 346 F.3d 955, 961 (9th Cir. 2003)).

\(^{119}\) *Id.* at 941 (quoting Forest Guardians v. U.S. Forest Serv., 329 F.3d 1089, 1099 (9th Cir. 2003)).
court relied on its previous decision in *Vigil v. Leavitt*, which upheld the “menu’ approach to emission control as satisfying the statute’s “best available control measures.” In response to a challenge on the substance of the SIP revision, the court found that the CAA did not require EPA to explain the “the actual control effectiveness of the various options.”

Circuit Judge Thomas concurred, agreeing that the case was governed by its earlier decision in *Vigil*, but if unconstrained, he “[d]id not believe that EPA’s *Vigil*-approved regime draws any distinction—much less a principled one—between the ‘best available control measures’ to be used in areas of ‘serious’ pollution and the ‘reasonably available control measures’ required in areas of ‘moderate’ pollution.” Based on this criticism, the concurrence would find that EPA failed to comply with the statutory requirements.

Again, with agencies delegated the difficult task of quantifying words like “best available” and “reasonably available,” it makes sense to offer them some judicial deference to their decisions. Based upon the statutory language, EPA was required to determine which measures constitute the best available control measures. Put another way, EPA had to decide how much control effectiveness could qualify as “best available” under the CAA. Are regions with severe air impairment required to use the most effective control, the top 5%, or the top 50%? This is a policy determination because EPA is asked to assign a numeric value to a semantic term. “Best” implies a value judgment, one that can be assisted by, but cannot be answered by scientific data. Yet instead of acknowledging the policy preference inherent in its decision, EPA pronounced its decision as a scientific concept and, as demonstrated here, was able to obtain a favorable judicial outcome.

EPA professes that a list of control measures will be sufficient as the “best available,” yet does not articulate their effectiveness. The rationale in *Latino Issues Forum* demonstrates the court’s reluctance to step in and require explanations for every component of the agency’s rationale, but it potentially misses an opportunity to realign EPA to its statutory mission.

2. When is Agency Analysis Remanded?

While many feared that *Lands Council* signaled the end to successful challenges to agency science, the Ninth Circuit demonstrated in 2009 that

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120 381 F.3d 826 (9th Cir. 2004) (unanimous decision by Circuit Judges Graber, Wardlaw, and Bybee).
121 *Latino Issues Forum*, 558 F.3d at 949 (Thomas, J., concurring); see id. at 949–47 (majority opinion).
122 Id. at 948.
123 Id. at 949 (Thomas, J., concurring).
124 Id.
126 See infra Part II.C.3.
it was still willing to apply careful scrutiny. Two cases are provided below where agency analysis was remanded. Each case also contains a particularly emotional dissent, illustrating the conflict among individual judges on the appropriate standard of review for administrative decisions.

a. Center for Biological Diversity v. United States Department of Interior (CBD v. DOI)

Despite cries for deference from the dissent, the Ninth Circuit invalidated the decision by the United States Bureau of Land Management (BLM) to exchange land with a mining company because of an assumption that “fatally undermined the analysis in” the agency’s decisional document, as mandated by the National Environmental Policy Act (NEPA). Two judges in the panel, Circuit Judges Dorothy W. Nelson and William A. Fletcher, found that BLM’s final environmental impact statement (FEIS) was flawed because it disregarded the fact that the General Mining Act of 1872 (Mining Law) would apply in one alternative but not in another. If the land remained in the public domain, the Mining Law required BLM’s approval of a “Mining Plan of Operation” (MPO) prepared by the applicant for each individual project. By assuming that the corporation did not have a disincentive to mine because of the extensive planning requirements required by statute, BLM overlooked a key component of the situation before it. The court also held that, because the assumption permeated throughout the agency’s analysis, its public interest determination under the Federal Land Policy and Management Act (FLPMA) was also flawed.

In 1994, in an effort to expand its mining operations, Asarco, LLC proposed a land exchange with BLM. The proposed exchange would convey 10,976 acres (selected lands) in fee simple to Asarco in exchange for 7,300 acres (offered lands) to BLM. The majority of selected lands were full estates; the rest were held as “split estates,” where the United States owned the mineral estate and Asarco owned the surface. If the exchange

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128 Recall the excerpt from Judge Pregerson where he distinguished between depth and scope in administrative review, noting that merely operating in its field of expertise was not enough to require unbridled judicial deference. See supra Part II.A.
129 581 F.3d 1063 (9th Cir. 2009).
130 The dissent compared its decision in Lands Council to a canary in a coal mine: “short but meaningful.” Id. at 1077 (Tallman, J., dissenting).
131 Id. at 1071 (majority opinion).
134 CBD v. DOI, 581 F.3d at 1065.
135 See id. at 1065.
136 Id. at 1073–74.
138 CBD v. DOI, 581 F.3d at 1075.
139 Id. at 1066.
140 The 10,976 acres are divided among thirty-one parcels of public land. Id.
141 Id.
142 Id.
occurred, Asarco would own the selected lands in fee simple and would no longer be required to submit an MPO for use of public lands.\footnote{A Mining Plan of Operations is only required for mining conducted on public lands. \textit{Id.} at 1065.}

After consulting with federal, state, and local agencies and other interested parties, BLM published a Draft Environmental Impact Statement (DEIS) in 1998 and opened the document for public comment.\footnote{\textit{Id.} at 1067–68.} Among the sixty-one comment letters received by BLM, a comment submitted by EPA criticized BLM’s analysis as having inadequate alternatives and insufficient information on the impacts to the geology, geochemistry, hydrology, and biological resources of the selected lands.\footnote{\textit{Id.}} In 1999, BLM released the FEIS with only minor changes from its DEIS.\footnote{\textit{Id.} (quoting the FEIS).} In the alternatives analysis, the FEIS stated that the “foreseeable uses of the selected lands are mining-related uses and are expected to occur under all alternatives,” including the no action alternative.\footnote{\textit{Id.} (quoting the FEIS).} In a statement that would later come back to haunt BLM, the agency’s FEIS provided that uses of the selected lands “are assumed to be the same for all alternatives.”\footnote{\textit{Id.}} Following the FEIS, BLM issued its Record of Decision (ROD) in 2000,\footnote{Notice of Availability for the Ray Land Exchange/Plan Amendment Record of Decision, 65 Fed. Reg. 31013, 31013 (May 15, 2000).} which amended two Resource Management Plans (RMPs) and approved the land exchange.\footnote{\textit{Id.}} The ROD concluded that under FLPMA, no harm to the public would result.\footnote{FLPMA prohibits land exchanges unless the “public interest will be served.” Federal Land Policy and Management Act of 1976, 43 U.S.C. § 1716(a) (2006).} EPA, the Federal Bureau of Indian Affairs, and the Sierra Club objected to the ROD, largely based on the agency’s mining use assumption.\footnote{CBD v. DOI, 581 F.3d at 1069. BLM did not respond to this objection, and instead referred to the FEIS General Response section 7.4.5 and 7.4.6 which only answered part of the question. \textit{Id.}} Plaintiffs filed an administrative appeal with the Interior Board of Land Appeals (IBLA) in 2001, requesting a stay of the land exchange. Reaching the Ninth Circuit in 2009, the majority reversed the lower court’s holding and remanded BLM’s analysis for making a fatal assumption on probable mining uses both before and after the exchange.\footnote{\textit{Id.}}

Circuit Judge Richard C. Tallman dissented.\footnote{\textit{Id.} (Tallman, J., dissenting).} He derided the majority for not giving BLM the appropriate level of deference and for finding a single linchpin to undermine the entire complex agency action.\footnote{\textit{Id.} at 1078.} In its analysis of the NEPA claim, the dissent described the majority as making “a series of fundamental missteps.”\footnote{\textit{Id.}} First, Judge Tallman argued that the court adopted a misguided view of the record by believing that BLM naïvely assumed that
mining levels would remain the same.\textsuperscript{157} Second, he believed the majority made an appellate finding of fact that Asarco and BLM have detailed information on mining plans following the land exchange.\textsuperscript{158} Third, the majority impermissibly added a procedural hurdle to land exchange approvals,\textsuperscript{159} requiring landowners to engage in the MPO process. The dissent reads BLM’s assumption as not believing that mining levels would be the “same,” but rather as an acknowledgment that mining activities in general would likely occur on the selected lands irrespective of any exchange.\textsuperscript{160} Believing that the majority took several statements in the record out of context and created improper hypotheticals,\textsuperscript{161} the dissent describes that, timing aside, “the ultimate mining-related activities would be substantially similar and in turn result in comparable environmental impacts.”\textsuperscript{162} Judge Tallman did not view the MPO process as creating significantly different results if the land remained in the public domain.\textsuperscript{163} Concluding his criticism of the majority’s analysis of the NEPA claim, Judge Tallman reiterated the deference owed to an agency’s scientific and technical expertise.\textsuperscript{164}

The dissent also disagreed with the majority’s arbitrary and capricious finding under FLPMA.\textsuperscript{165} Judge Tallman believed that the majority was unreasonably fixated on the faulty “additional rationale” listed among other advantages of the exchange, which stated that “BLM consider[ed] the continuation of mining as the foreseeable use” regardless of whether the exchange occurred or not.\textsuperscript{166} Relying on Lands Council,\textsuperscript{167} he posited that the majority overstepped its bounds in finding the entire land exchange was arbitrary and capricious based on a supplemental rationale for BLM’s public interest finding—the FEIS articulated other reasons to support BLM’s finding—not just its assumption that land uses would not change substantially.\textsuperscript{168}

\textsuperscript{157} Id.
\textsuperscript{158} Id.
\textsuperscript{159} Id. at 1085 (“[W]e are not free to ‘impose upon the agency [our] own notion of which procedures are ‘best’ or more likely to further some vague, undefined public good.’” (second alteration in original) (quoting Churchill County v. Norton, 276 F.3d 1060, 1072 (9th Cir. 2001))).
\textsuperscript{160} Id. at 1082–83.
\textsuperscript{161} Id. at 1083 (citing Weinberger v. Catholic Action of Haw./Peace Educ. Project, 454 U.S. 139 (1981)) (reversing a Ninth Circuit decision that required the Navy to prepare an EIS based on hypothetical assumptions on a facility’s ability to store nuclear weapons).
\textsuperscript{162} Id.
\textsuperscript{163} Id at 1083–84 (citing 43 C.F.R. § 3809.411(d)(3)) (allowing BLM to disapprove an MPO only if the proposed operation “would result in unnecessary or undue degradation of public lands”).
\textsuperscript{164} Id. at 1088 (citing Lands Council, 537 F.3d 981, 992 (9th Cir. 2008)).
\textsuperscript{165} Id.
\textsuperscript{166} Id. at 1088; id. at 1075 (majority opinion) (“The ROD listed no disadvantages of conveying the selected lands into Asarco’s private ownership. The ROD stated, ‘An additional rationale for approving the land exchange is that the BLM considers the continuation of mining as the foreseeable use of most of the selected federal lands whether the exchange occurs or not.’” (Quoting the BLM Record of Decision)).
\textsuperscript{167} Id. at 1088–89 (Tallman, J., dissenting).
CBD v. DOI fits one of the paradigms described in *Motor Vehicle Manufacturers Ass’n v. State Farm* where the agency “failed to consider an important aspect of the problem.” Here, the court invalidated BLM’s findings because the agency failed to consider an important practical impact of applicable regulatory requirements and assumed that the environmental impacts would remain the same, regardless of ownership. Judge Tallman seems to prefer an expansive definition of technical expertise, where an agency is engaged in an overall complex action that includes smaller, yet integral, judgments. By focusing on BLM’s assumptions about environmental impacts as a “technical” determination rather than an assessment of the legal differences governing the land, pre- and post-exchange, the dissent is able to apply a more deferential standard. Judge Tallman misdirected his attention to the sheer volume of the record and the length of time BLM had spent on this land exchange, which can act to create a superficially scientific or technical appearance. As a result, this dangerous over-generalization of “technical expertise” avoids the less deferential standard of review as to what the regulatory framework entailed and what assumptions the agency could make regarding environmental impacts.

b. Tucson Herpetological Society v. Salazar

In an effort to protect a unique lizard population in the Southwestern United States, environmental organizations challenged the Secretary of the Interior’s decision to withdraw a proposed listing under the Endangered Species Act (ESA). The ESA requires the Secretary to list a species as “endangered” if it “is in danger of extinction throughout all or a significant portion of its range.” A species is threatened if it is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” A listing determination must be made by the Secretary of the Interior “solely on the basis of the best scientific and commercial data available to him.” To make such a determination, the Secretary must first “quantify the lizard’s historical range in order to establish a ‘temporal baseline,’ and then to determine whether the lost habitat, measured against that baseline, amounts to a ‘significant portion’ of the species’ overall range.”

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168 463 U.S. 29 (1983) (listing several scenarios where a court could review an agency’s substantive judgments).
169  Id. at 43.
170 566 F.3d 870 (9th Cir. 2009).
171 Plaintiffs to the suit were the Tucson Herpetological Society, Defenders of Wildlife, the Center for Biological Diversity, the Horned Lizard Conservation Society, Sierra Club, Wendy Hodges, and Francis Allan Muth.  Id. at 870.
174  Id. § 1532(20).
175  Id. § 1533(b)(1)(A).
176  Tucson Herpetological Soc’y, 566 F.3d at 875–76 (employing the two-part test from Defenders of Wildlife v. Norton, 258 F.3d 1136, 1145 (9th Cir. 2001)).
In 1993, the agency first proposed to list the flat-tailed horned lizard (*Phrynosoma mcallii*) as a threatened species due to noticeable population declines.\(^{177}\) Yet, in response to litigation, the Secretary withdrew the proposed listing in 1997 based on the Flat-Tailed Horned Lizard Conservation Agreement that aimed to reduce threats to the species and maintain its ecosystem.\(^{178}\) This decision drew another lawsuit, which was remanded by the Ninth Circuit to the agency in 2001.\(^{179}\) In 2003, the Secretary, after further analysis, again opted to withdraw the proposed listing.\(^{180}\) Plaintiffs sued and the decision was remanded because it “assumed without explanation that large swaths of lost habitat were of no significance at all.”\(^{181}\) After another remand, the Secretary again in 2006 withdrew the listing proposal and wound up back in court.\(^{182}\)

In 2009, the court remanded the Secretary’s analysis for the fourth time.\(^{183}\) The Ninth Circuit held that, although evidence of the lizard’s population level was limited and inconclusive, “*[t]he studies do not lead to the conclusion that the lizard persists in a substantial portion of its range, and therefore cannot support the Secretary’s conclusion.*”\(^{184}\) The court questioned the Secretary’s rationale: where evidence is underdeveloped, “the Secretary cannot reasonably infer that the absence of evidence of population decline equates to evidence of persistence.”\(^{185}\) After close examination, the court found that the studies did not conclude that there were no signs of decline, but rather only provided a baseline, stating that more data collection was necessary.\(^{186}\) It appears that the court was able to discern the Secretary’s statutory burden and to identify which scientific findings would fulfill such a responsibility. Here, while a lack of evidence of persistence would not alone require a listing, the minimal evidence possibly pointing to no decline was insufficient to support the Secretary’s listing withdrawal. Not surprisingly, the dissent expressed exhaustion. Circuit Judge Noonan characterized the case as “turn[ing] on what measures are necessary to keep this unknown population in existence” and thought the guessing game was best left to the “government umpire.”\(^{187}\) The dissent explained that the decision makers and participants all wished to “see the fair application of the broad legislation,” but pointed out that judges were asked to supervise in a scientific matter to which they lacked expertise and familiarity.\(^{188}\) When faced with a lack of information, Judge Noonan saw the agency best fit to make the decision on how to proceed.

\(^{177}\) See id. at 873–74.

\(^{178}\) Id. at 874.

\(^{179}\) See [Defenders of Wildlife v. Norton](https://www.loc.gov/item/2005638924/) at 874.

\(^{179}\) See [Tucson Herpetological Soc’y](https://www.loc.gov/item/2005638924/) at 874–875.

\(^{180}\) Id. at 875 (internal quotations omitted) (describing history of lizard listing decisions).

\(^{181}\) Id.

\(^{182}\) Id. at 882.

\(^{183}\) Id. at 879.

\(^{184}\) Id. at 870.

\(^{185}\) Id.

\(^{186}\) Id.

\(^{187}\) Id. at 882–83 (Noonan, J., dissenting).

\(^{188}\) Id. at 882.
3. Can These Cases Be Reconciled?

Both CBD v. DOI and Tucson Herpetological Society were litigated against a backdrop of many years and hours of agency planning and complex studies. BLM began designing the land exchange in the 1990s, and FWS had been contemplating listing the flat-tailed horned lizard since the Clinton Administration. Despite the sheer volume of the two agency records, the court remanded the agencies’ decisions. In contrast, the court upheld the agencies’ analyses in Ecology Center and Latino Issues Forum. Each case purported to apply the arbitrary and capricious standard of review. However, within the contours of that standard, the Ninth Circuit judges appear to disagree on how to define the inquiry, deciding differently which agency judgments qualify as scientific and technical expertise and which judgments involve policy.

First, Ecology Center and Latino Issues Forum are useful for their facts, demonstrating how different policy and science questions can commingle in agency rulemaking and how complex the inquiry before the court can become. The concurrence in Latino Issues Forum questioned EPA’s compliance with the Clean Air Act’s “best available control measures” standard, yet ultimately affirmed the agency’s rule under controlling precedent. However, the concurrence’s closing remark indicates that the agency presented its statutory construction and policy to the court as scientifically complex and deserving of a more deferential standard. Citing Plato, the Oklahoma Dust Bowl, and midcentury manuals, Judge Thomas disagreed with the agency’s assertion: “To rationalize the lack of any basic dust control standards by arguing that agriculture is just too complicated to regulate defies reality and common sense.”

The two cases also articulate another factor at play as judges struggle with the standard of review and the question of which judgments merit heightened deference. The outcomes of Ecology Center and Latino Issues Forum were guided by controlling precedent, dissuading judges from remanding agency analyses. In Ecology Center, Lands Council proved difficult to distinguish, and the court held that the Forest Service’s proxy-on-proxy approach was conceptually valid even though the court identified a scenario when the agency applying the proxy-on-proxy approach could exceed the protections of deference: when the data was “old, inaccurate, and insufficient on many variables.” Similarly, in Latino Issues Forum, the court felt compelled by its earlier holding in Vigil to allow lists of control technologies to meet the “best available control measures” standard.

190 See Tucson Herpetological Soc’y, 566 F.3d at 883; CBD v. DOI, 581 F.3d 1063, 1076 (9th Cir. 2009).
191 Latino Issues Forum, 558 F.3d 936, 950 (9th Cir. 2009).
192 Id.
193 Ecology Center, 574 F.3d 652, 665 (9th Cir. 2009) (citing Lands Council v. Powell, 395 F.3d 1019, 1036 (9th Cir. 2005)).
194 Latino Issues Forum, 558 F.3d at 948.
These cases demonstrate that judges remain in pursuit of one of Professor Jaffe’s three goals, predictability, through a desire to align cases with precedent.\(^{195}\) However, precedent’s influential role also reinforces the risks at stake in omitting a more careful science-policy analysis earlier in the process. Under Vigil and now Latino Issues Forum, areas in serious air impairment can propose plans that provide a list of control technologies without demonstrating their effectiveness and still meet the “best available control measures” standard set forth in the CAA. The Forest Service can manage a forest for diversity under NFMA by maintaining qualities suitable for one identified species known to inhabit the area. Had the precedent, now binding on Latino Issues Forum and Ecology Center, incorporated a judicial analysis exerting a concerted effort at separating science from policy, these cases may have been different. Another interesting, more cynical component for further consideration is whether the precedent merely acted as a means to a policy end—the panel may have also been able to distinguish the cases without much effort.\(^{196}\)

Of course, the internal conflicts between judges in CBD v. DOI and Tucson Herpetological Society are the most telling. Each case contains dissenting opinions that highlight the fundamental disagreement: how to articulate the standard of review and which judgments deserve special deference. In CBD v. DOI’s dissent, Circuit Judge Tallman opined that the court owed deference to agency expertise, even when the agency’s oversight missed a regulatory impact in its alternatives analysis.\(^{197}\) The dissent applied a much broader deferential standard to judgments that are questionably technical or scientific. In Tucson Herpetological Society, the court held that the agency had not met its evidentiary burden to support its finding that the species persisted in a significant portion of its range, holding that studies the agency used to support its decision were insufficient.\(^{198}\) The dissent recognized the complexities and impracticalities of counting desert lizards and believed the Ninth Circuit’s science deference standard extended to such seemingly impossible tasks.\(^{199}\) From these two cases, the disagreement between judges becomes apparent: what is the scope of an agency’s scientific and technical expertise? In CBD v. DOI, the panel disagreed over whether assumptions over environmental impacts could be articulated as within BLM’s technical expertise and thus owed more deference.\(^{200}\) In Tucson Herpetological Society, the panel was in conflict over what degree of deference should be applied to the Secretary of the Interior’s decision

\(^{195}\) JAFFE, supra note 1, at 152.

\(^{196}\) DAVID E. KLEIN, MAKING LAW IN THE UNITED STATES COURTS OF APPEALS 15 (2002) (“Finally, as Llewellyn . . . explains and illustrates, the judge who wishes to distinguish an apparently controlling precedent can often do so without much strain.” (citing KARL LLEWELLYN, THE BRAMBLE BUSH (1951))); see TERRI JENNINGS PERETTI, IN DEFENSE OF A POLITICAL COURT 36–73 (1999) (providing a summary of the different theories on how politics influence judging).

\(^{197}\) CBD v. DOI, 581 F.3d 1063, 1077 (9th Cir. 2009) (Tallman, J., dissenting).

\(^{198}\) Nelson Herpetological Soc’y, 566 F.3d 870, 879 (9th Cir. 2009).

\(^{199}\) Id. at 883 (Noonan, J. dissenting).

\(^{200}\) CBD v. DOI, 581 F.3d at 1077, id. (Tallman, J., dissenting).
supported by insufficient and inconclusive evidence. How do the conflicts between the majority and dissenting opinions in these four cases inform our understanding of the Ninth Circuit’s arbitrariness standard of review?

Each of these cases cited Lands Council for the proposition that elevated deference is owed to an agency’s scientific and technical expertise, yet the application of that standard of review seems inconsistent. In Latino Issues Forum, the court upheld EPA’s analysis of what constituted the “best available control measures” when it provided a list of emission controls, some of which had not been demonstrated to be particularly effective. In contrast, Tucson Herpetological Society held that the Secretary of the Interior had not provided enough evidence that the lizard “persist[ed] throughout most of the species’ current range.” The Ninth Circuit is requiring the Secretary of the Interior to further justify its long-deliberated conclusion, while simultaneously acquiescing to EPA’s inarticulate and haphazard examples of “best available control measures.” These cases can only be reconciled by viewing the arbitrary and capricious standard of review as existing as a blunt tool, ill-suited as a whole to perform more precise surgical incisions into the science-policy mixture. The arbitrariness standard of review is susceptible to manipulation when each panel is free to select from a divergent array of cases in support of a particular desired policy outcome. The problem lies not necessarily in how the standard of review itself is generally articulated, but rather in how judges define the subject matter of agency judgments and apply the standard to each case. Neither Lands Council, nor any other Ninth Circuit case, has set forth guidelines as to how to delineate when an agency judgment is within its scientific or technical expertise and when the agency is within the legal or policy realm.

In the four cases examined above, the judges differed as to when deference to agency expertise was appropriate. This can be explained in two ways. Judges may differ as to their understanding of how far scientific and technical expertise reach into agency decision making, failing to reach a consensus on how to systematically define the scope of review. Such an explanation assumes that judges with more advanced education or training in scientific fields would more accurately discern the limitations of science in supporting agency decision making. Such an education would allow the judge to make more articulate distinctions between science and policy. The second explanation is that judges may, in the absence of more definitive guidelines or scientific understanding, shape their inquiry to produce an individually preferred policy outcome. And indeed, by factoring in panel composition and political affiliations, a pattern emerges that lends support to this second explanation, describing trends among current Ninth Circuit decisions.

201 Tucson, 566 F.3d at 879; id. at 882–83 (Noonan, J., dissenting).
202 CBD v. DOI, 558 F.3d 936, 949 (9th Cir. 2009).
203 Tucson, 566 F.3d at 879.
III. THE IMPERFECTION: POLITICAL IDEOLOGY

Courts operate on two parallel fields. First, they view the case before them under legal constraints. Second, they are acutely aware of the policy battle being played out before them, where an interest group chooses to litigate not necessarily because it cares intimately about the agency’s procedures, but because it seeks the best possible policy outcome, at least from its own perspective. Judges who agree with the plaintiff’s rendition of the policy imperative will have a personal incentive to seek out a doctrinal basis to review the agency decision. For example, a judge might believe that the federal government should actively regulate pollution from agricultural production but also that courts should defer to the manner in which Congress or administrative agencies choose to do so. Depending upon how the standard of review is articulated, that judge may find a way to vacate an administrative rule. A malleable standard of review embodies intense policy consequences because it allows a judge the flexibility to align the outcome of the case to his ideological preferences. To illustrate, imagine EPA has promulgated a relatively lax regulation on pesticide pollution and the panel of judges believes that the agency should design more protective standards. If the standard of review for agency expertise provides no clear boundaries, the panel can cite to cases remanding agency analysis and send EPA back to the regulatory drawing table. Conversely, if EPA had promulgated regulations that will implement a policy the judges agree with, they can simply find that the court is not “a panel of scientists.”

205 Id.
206 Id.
208 The example was adapted from the explanation given in Christopher L. Eisgruber, The Next Justice: Repairing the Supreme Court Appointments Process 99 (2007) (“A judge might, for example, believe that the government is obligated to redress the effects of historical discrimination against racial minorities, but also that courts should defer to Congress and the president about how to achieve that goal.”).
209 Vacating an administrative rule is not just limited to those judges preferring greater environmental protection. It can also occur when the agency makes a decision to offer more environmental protection and the judge disagrees, preferring less intrusion.
210 In Judicial Politics in the D.C. Circuit Court, Christopher P. Banks states:

“[The] ideological dynamics underlying the court’s decision to defer has profound dimensions. By deferring to an agency, the court acknowledges that it is suitable for agencies to make policy and related legal judgments about congressional intent which is, most times, unclear at best with ambiguous statutes. Conversely by not deferring the court denies an agency’s delegated authority to make what it believes is the superior policy choice under the circumstances. Therefore, ideological considerations—as expressed through the attitudes and biases of judges, the politics of the judicial selection process, and the external political environment—combine to impact judicial deference since the decision retaining or relinquishing judicial power to bureaucrats strikes at the very core of the judicial function in a constitutional democracy.”

211 See Lands Council, 537 F.3d 981, 988 (9th Cir. 2008).
and affirm EPA’s rule, perhaps citing similar cases as precedent. Admittedly, this is a somewhat cynical version of the judicial process—there are a lot of constraints on judges, including the integrity of their careers and their genuine desire to provide just and fair results. However, political scientists and legal scholars agree, individual opinions cannot be quarantined from application of the law.\(^\text{212}\) As objective as statutes and regulations purport to be, no intricate framework of legal doctrines can completely remove the individual and prevent judges from making decisions that correlate to their policy preferences.\(^\text{213}\) The true question is how to best minimize the influence of individual policy preferences on judicial opinions and produce consistent results.

**A. The Relationship Between Legal Doctrine and the Individual**

Two prevalent theories have surfaced for describing this relationship between the individual and the law in judicial decision making.\(^\text{214}\) The first theory proposes that a judge’s individual preferences are *constrained* by legal doctrine: “Judges’ decisions are a function of what they prefer to do, tempered by what they think they ought to do, but constrained by what they perceive is feasible to do.”\(^\text{215}\) This theory assumes that a judge’s primary goal is to shape public policy. A second and more plausible theory portrays the individual judge as operating under a set of goals, including consistent application of legal doctrines.\(^\text{216}\) Based on one author’s analysis under this theory, common goals among federal circuit court judges include at least one of the following:

- Promote policies consistent with their policy preferences
- Reach decisions that are legally sound
- Maintain coherence and consistency in the federal law
- Limit the time spent deciding any one case

\(^\text{212}\) See Richard A. Posner, *The Federal Courts: Crisis and Reform* 3 (1985) (“[I]f to resolve the dispute the court must create a new rule or modify an old one, that is law creation. Judges defending themselves from accusations of judicial activism sometimes say they do not make law, they only apply it. It is true that in our system judges are not supposed to and generally do not make new law with the same freedom that legislatures can and do, they are, in Oliver Wendell Holmes’s phrase, ‘confined from molar to molecular motions.’ The qualification is important, but the fact remains that judges make and do not just find and apply, law.”).  
\(^\text{213}\) Klein, supra note 196, at 14–15 (recounting past scholarly studies on judicial behavior).  
\(^\text{214}\) Klein, supra note 196, at 10–12 (describing the two different theories developed to explain judicial behavior and rejecting the scholarly argument that judges wish to create policy but are constrained by the legal framework).  
\(^\text{216}\) Klein, supra note 196, at 11–12.  
\(^\text{217}\) Id. at 11.
The rationale behind this theory lies in the simple fact that people who become judges work very hard to attain their seat on the bench and wish to gain respect from their peers and further advance their careers. It also “seems highly likely that at least some judges find the search for good answers to legal questions intrinsically rewarding.” It is “the challenge of reaching decisions supported by legal reasoning [that] actually attracts judges to their profession.” Applying the law as they best understand it in an impartial manner is no doubt an important goal in judging. While a distinction between the goal and constraint theories is not integral to the following analysis, it is on the “goals theory” that this paper proceeds.

Many empirical studies of judicial voting patterns have been conducted and indeed demonstrate that judges will, in certain contexts, vote according to their policy preferences or ideological beliefs. A very recent and comprehensive study found that federal appellate judges were divided according to political party affiliation on issues concerning NEPA, EPA regulations, NLRB rulings, and FCC regulations. Less polarized results were found in other areas of law. Describing the results from their empirical studies of the federal judiciary, Sunstein et al. found that, contrary to popular perception, appellate judges were not politically divided on issues involving criminal appeals, federalism, takings, punitive damages, and standing. The authors stated that there were two possible explanations: binding law and bipartisan consensus among the judges. When the law has sufficient clarity to exclude or reduce ideological disagreements, the result is “a product of the discipline that the law imposes.”

The policy tug-of-war advancing in the Ninth Circuit this year is the product of an imperfect standard of review, or more specifically, an inarticulate, inconsistent understanding of what qualifies as scientific expertise. A judge will not seek to further accomplish one of her goals (applying the rule of law consistently) if that goal is unattainable as a result of a nebulous scientific understanding and a morass of tangled rationales for a deferential standard of review. Absent a more articulate and established rationale or procedure for determining the appropriate scope of review, judges will opt to further other goals such as efficient use of time, or the production of results aligned to their own personal ideology or policy

218 Id. at 10, 12.
219 Id. at 12.
220 Id.; see also RICHARD A. POSNER, OVERCOMING LAW 131 (1995) (“The pleasure of judging is bound up with compliance with certain self-limiting rules that define the ‘game’ of judging.”).
222 SUNSTEIN ET AL., supra note 221, at 28–30, 34, 37–38.
223 Id. at 60.
224 Id.
225 Id.
226 Id.
preferences. The predominance of these goals explains the survey results described below in Part III.B. Because the level of deference to agency expertise is easily manipulated in the Ninth Circuit, judges can instead apply their policy preferences to resolve the case before them, achieving an outcome that caters to their individual desires.\footnote{The same conclusion arises from the constraint theory. If there are insufficient guidelines and procedures for determining agency deference, judges are no longer constrained by legal doctrine and their political ideologies come to the forefront of their analyses.}

**B. Survey of Recent Environmental Cases**

While many empirical studies have been conducted on voting patterns of both the Federal Courts of Appeals and the United States Supreme Court, none has focused solely on the Ninth Circuit since *Lands Council* was decided. For this paper, I conducted a survey of recent environmental appellate cases following *Lands Council*, noting panel composition and outcome.\footnote{The survey is not as sophisticated and comprehensive as others—it does not span over many years or topics. See generally SUNSTEIN ET AL., supra note 221; Revesz, supra note 221. However, the results in this short survey are dramatic and demonstrate trends similar to those described in more thorough studies. An effort was made to avoid methodological shortfalls in this type of survey. See Revesz, supra note 221, at 1771 (noting “flaws in two prominent approaches to the study of the impact of ideology of judicial votes”). Professor Revesz concludes that studies that are limited to cases with dissents exaggerate the findings, concluding that there are large ideological schisms. Id. “Such studies, however, focus on small, highly biased samples, likely to contain cases of above-average difficulty.” Id. Other studies that include a “large proportion of unanimous decisions in cases decided by judges of different ideologies” do not consider panel composition effects, when one Democratic appointee sits with two Republican appointees or vice versa. Id. at 1771–1772. This Ninth Circuit survey includes reported and unreported opinions in any instance where the court was asked to review agency decision making.}

The survey was limited to include only those where the plaintiff was pursuing greater environmental protection.\footnote{Cases where the plaintiff was pursuing less environmental regulation, or those where the case did not sufficiently involve environmental issues were excluded. See Fishermen’s Finest, Inc. v. Locke, 593 F.3d 886 (9th Cir. 2010) (challenging NOAA’s pacific cod allocation); Sierra Forest Prods., Inc. v. Kempthorne, No. 08-16721, 2010 WL 55566 (9th Cir. 2010) (industry challenge to ESA listing); Pac. Nw. Generating Coop. v. Bonneville Power Admin., 580 F.3d 828 (9th Cir. 2009), amended and superseded by 596 F.3d 1065 (9th Cir. 2010) (challenging BPA’s electricity contracts); Oberdorfer v. Bureau of Land Mgmt., 343 F. App’x 243 (9th Cir. 2009) (challenging Bureau of Land Management’s denial of right-of-way application); Sea Hawk Seafoods, Inc. v. Locke, 568 F.3d 757 (9th Cir. 2009) (industry challenge under the American Fisheries Act and the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801–1883 (2006)); Home Builders Ass’n of N. Cal. v. U.S. Fish & Wildlife Serv., 321 F. App’x 704 (9th Cir. 2009) (upholding Fish and Wildlife Service’s listing decision); Amalgamated Sugar Co. v. Vilsack, 563 F.3d 822 (9th Cir. 2009) (challenging beet sugar marketing allocation); Silver Dollar Grazing Ass’n v. U.S. Fish & Wildlife Serv., No. 07-35612, 2009 WL 166924 (9th Cir. 2009) (industry’s NEPA challenge regarding sage grouse). While the agencies involved in these excluded cases deal with natural resources, the plaintiffs were litigating over other matters than greater protection of the environment.} Cases were gathered through a search on Lexis Nexis and Westlaw databases, limited to cases
within the Ninth Circuit and following July 2, 2008.\textsuperscript{230} Despite the different stakes involved, the survey includes opinions deciding petitions for stays pending appeal, motions for preliminary injunctions, and motions for summary judgment. While the survey is restricted to cases concerning environmental laws, the analysis could and has been expanded to other areas of practice, noting similarities and differences in ideological voting patterns across a range of topics.\textsuperscript{231}

\textsuperscript{230} Restricted to Ninth Circuit decisions, cases were gathered by two searches: 1) shepardizing \textit{Lands Council} and 2) performing a search for cases issued after June 2008, containing the word “agency,” and excluding the word “immigration.” Only those cases from the search results that involved challenges to environmental regulation were selected. Although several cases had plaintiffs advocating for more environmental protection, they were excluded because the court did not reach the question of whether the agency’s decision was arbitrary or not, by, for instance, dismissing the case on jurisdictional grounds. See United Farm Workers v. Envtl. Prot. Agency, 592 F.3d 1080 (9th Cir. 2010) (lack of jurisdiction under FIFRA); Hells Canyon Pres. Council v. U.S. Forest Serv., 593 F.3d 923 (9th Cir. 2010) (lack of standing and statute of limitations tolled); Glasser v. Nat’l Marine Fisheries Serv., No. 08-35764, 2009 WL 5184208 (9th Cir. 2009) (plaintiff lacked standing to challenge incidental take permit under ESA); Levine v. Vilsack, 587 F.3d 986 (9th Cir. 2009) (lack of standing to challenge USDA’s interpretive rule); Ctr. for Biological Diversity v. U.S. Dep’t of Hous. & Urban Dev., No. 08-16400, 2009 WL 4912502 (9th Cir. 2009) (housing loan too tenuous to subject to NEPA or ESA); Rosemere Neighborhood Ass’n v. U.S. Envtl. Prot. Agency, 581 F.3d 1169 (9th Cir. 2009) (voluntary cessation exception to mootness applied to plaintiff’s challenge); Cal. Trout v. Fed. Energy Regulatory Comm’n, 572 F.3d 1003 (9th Cir. 2009) (interpretation of procedural rules for intervention); St. John’s Organic Farm v. Gen. County Mosquito Abatement Dist., 574 F.3d 1054 (9th Cir. 2009) (attorney’s fees); Or. Natural Desert Ass’n v. Locke, 572 F.3d 610 (9th Cir. 2009) (FOIA request); Ecology Ctr. v. Tidwell, 328 F. App’x 305 (9th Cir. 2009) (lack of standing); Sierra Club v. U.S. Envtl. Prot. Agency, 339 F. App’x 678 (9th Cir. 2009) (attorney’s fees); Citizens for Better Forestry v. U.S. Dep’t of Agric., 567 F.3d 1128 (9th Cir. 2009) (attorney’s fees); Or. Natural Desert Ass’n v. U.S. Forest Serv., 303 F. App’x 517 (9th Cir. 2008) (whether plaintiff’s claims were renewable under NFMA); Or. Natural Desert Ass’n v. U.S. Forest Serv., 550 F.3d 778 (9th Cir. 2008) (stare decisis); Nw. Envtl. Advocates v. U.S. Envtl. Prot. Agency, 531 F.3d 1006 (9th Cir. 2008) (holding that EPA’s regulations were ultra vires under APA § 706(2)(C)); Ctr. for Biological Diversity v. Marina Point Dev. Co., 566 F.3d 794 (9th Cir. 2009) (notice of intent to sue under CWA); El Comite Para El Bienestar de Earlimart v. Warmerdam, 539 F.3d 1062 (9th Cir. 2008) (lack of jurisdiction for CAA claim); Physicians Comm. for Responsible Medicine v. U.S. Envtl. Prot. Agency, 292 F. App’x 543 (9th Cir. 2008) (lack of standing); Natural Res. Def. Council v. U.S. Envtl. Prot. Agency, 542 F.3d 1236 (9th Cir. 2008) (de novo review of district court’s interpretation of the CWA); Amer. Bird Conservancy v. Fed. Commc’ns Comm’n, 545 F.3d 1190 (9th Cir. 2008) (subject matter jurisdiction); Salmon Spawning & Recovery Alliance v. Gutierrez, 545 F.3d 1220 (9th Cir. 2008) (lack of standing).

\textsuperscript{231} See, e.g., SUNSTEIN ET AL., supra note 221, at 17–18. The authors divide judicial decisions into different topical categories, noting that some areas of law are more volatile than others. \textit{Id.} at 17. The categories examined are:

- Abortion, capital punishment, the Americans with Disabilities Act (ADA), criminal appeals, takings the Contracts Clause, affirmative action, racial discrimination cases . . . under . . . the Civil Rights Act of 1964, sex discrimination, campaign finance, sexual harassment, cases in which plaintiffs sought to pierce the corporate veil, the National Environmental Policy Act (NEPA), gay and lesbian rights, congressional abrogation of state sovereign immunity, First Amendment challenges to commercial advertising restrictions, challenges to punitive damages awards, constitutional and statutory challenges to obscenity rulings, challenges to environmental regulations, challenges to Federal Communications Commission (FCC) rulings, challenges to National Labor
Table 1 provides a comprehensive list of all cases selected from the search results and supplies limited details, including the statutes at issue, panel composition, and voting differences. The last names of the judges are provided, and are in bold to indicate who authored the opinion. Per curiam and memorandum opinions do not have a named author. The first three cases listed in Table 1 were issued prior to and heavily scrutinized by *Lands Council*, and are included only to provide context and to discern if there was a noticeable shift in the voting behavior of those particular judges. The three pre-*Lands Council* cases were not, however, included in the final voting trend count, presented in Tables 2 and 3. With a cursory look at Table 1, it is difficult to identify precisely when policy preferences took control and when the facts clearly pointed to agency arbitrariness or nonarbitrariness. However, despite such preliminary attention to details, the results produced below in Tables 2 and 3 clearly indicate policy preference voting in recent environmental cases. Other empirical studies also confirm these results.\(^{232}\)

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Relations Board (NLRB) rulings, racial segregation cases, standing to bring suit in federal court, and federalism challenges to congressional enactments under the Commerce Clause.

*Id.* at 17–18 (footnotes omitted). On agency deference, considering NEPA analyses, NLRB and FCC rulings, and EPA rulemaking, the authors’ empirical data shows a distinct difference between voting patterns in relation to individual judges’ political affiliation. The most dramatic variance was found in NEPA cases. *See id.* at 26–27 fig.2-2.

232 *See, e.g.,* *id.* at 26–27; KLEIN, supra note 196, at 15 (conducting an empirical study of the U.S. Court of Appeals and asserting that “circuit judges frequently encounter cases where their policy preferences are likely to come into play and where the costs of heeding them are acceptable”). *See also id.* at 14 (“It is now established almost beyond doubt that justices’ policy preferences frequently drive their voting decisions.”).
Table 1: Panel Composition and Voting Patterns in Recent Cases

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<td>307 F. App’x 49 (9th Cir. 2009)</td>
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<td>558 F. 3d 1036 (9th Cir. 2009)</td>
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<td>Rymer</td>
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<td>Ecology Center v. Castaneda</td>
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<td>Tallman</td>
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<td>574 F. 3d 652 (9th Cir. 2009)</td>
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<td>Reavley (5th)</td>
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<td>(mem.)</td>
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<td>Cal. ex rel. Lockyer v. USDA</td>
<td>NEPA/ESA</td>
<td>Beezer</td>
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<td>575 F. 3d 999 (9th Cir. 2009)</td>
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<td>Sierra Forest Legacy v. Rey</td>
<td>NEPA</td>
<td>Fisher</td>
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<td>577 F. 3d 1015 (9th Cir. 2009)</td>
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240 This case superseded Sierra Forest Legacy v. Rey, 526 F. 3d 1228 (9th Cir. 2008).
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<td>Salmon Spawning &amp; Recovery Alliance v. NOAA</td>
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<td>North Slope Borough v. MMS</td>
<td>NEPA</td>
<td>Farris Thompson Rawlinson</td>
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<td>Ctr. for Biological Diversity v. Dep't of Interior</td>
<td>NEPA FLPMA</td>
<td>D. Nelson W. Fletcher Tallman</td>
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<td>Swan View Coalition v. Barbourotes</td>
<td>ESA</td>
<td>Silverman Ikuta</td>
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<td>Alliance for Wild Rockies v. USFS</td>
<td>NFMA ESA</td>
<td>Pregerson Rymer Graber</td>
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<td>EPCA</td>
<td>Canby Wardlaw Trager (E.D. NY)</td>
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<td>Nat’l Parks &amp; Conservation Ass’n v. BLM</td>
<td>FLPMA NEPA</td>
<td>Pregerson Paez Trott</td>
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<td>Ctr. for Biological Diversity v. Kempthorne</td>
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<td>Farris Thompson Rawlinson</td>
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<td>S. Fork Band Council of W. Shoshone v. U.S. Dep’t of Interior</td>
<td>FLPMA NEPA</td>
<td>Schroeder Tashima Berzon</td>
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<td>River Runners for Wilderness v. Martin</td>
<td>NEPA</td>
<td>Hug B. Fletcher Hawkins</td>
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<td>Native Ecosystems Council v. Tidwell</td>
<td>NEPA</td>
<td>W. Fletcher Rawlinson Mosman (D. Or.)</td>
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<td>MacClarence v. EPA</td>
<td>CAA</td>
<td>Paez Rawlinson Collins (D. Ariz.)</td>
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243 This case superseded River Runners for Wilderness v. Martin, 574 F.3d 723 (9th Cir. 2009).
Table 1 provides a recent voting history and a picture of each judge’s voting tendency. Tables 2 and 3 more clearly show Ninth Circuit judges’ individual voting patterns in environmental matters. The following tables separate judges into two categories, based upon the political party of the U.S. President responsible for appointing them. Although somewhat of a crude way to express individual judge’s policy preferences and ideology, it has repeatedly been used in other studies. The darker the judges’ corresponding boxes, the more often they voted to defer to the agency’s decision making. The asterisks indicate where a judge voted sometimes for a remand and sometimes to defer. Such variations are also coded in shades of gray.

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246 Miles & Sunstein, supra note 221, at 813 (“[T]he political party of the appointing president is a fairly good predictor of how a judge will vote in cases involving arbitrariness review . . . .”).
### Ninth Circuit Judge's Voting Patterns and Party Affiliation

#### Table 2: Republican Appointed Judges

<table>
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<tr>
<th>NINTH CIRCUIT JUDGES</th>
<th>APPOINTED BY:</th>
<th>AGENCY DEFERENCE</th>
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<tr>
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<td>O'Scannlain</td>
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<td>Bea</td>
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<td>N.R. Smith</td>
<td>GW Bush</td>
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<td>Noonan</td>
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<td>Trott</td>
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<td>T. Nelson</td>
<td>GHW Bush</td>
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<td>Thompson</td>
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<td>Callahan</td>
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<td>Bybee</td>
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<tr>
<td>Fernandez</td>
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<tr>
<td>Leavy</td>
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#### Table 3: Democrat Appointed Judges

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<th>NINTH CIRCUIT JUDGES</th>
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<td>Preger son</td>
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<td>Reinhardt</td>
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<td>Hawkins</td>
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<td>Wardlaw</td>
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<td>Boocheever</td>
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Excluding votes from judges sitting by designation from other circuits or district courts, the survey counted 44 cases and 137 votes since July 2, 2008 (See Table 1). Of those 137 votes, Republican-appointed judges voted 55 times, or 40% (See Table 2). Democrat-appointed judges voted the remaining 82 times, or 59% (See Table 3). Collectively, Republican-appointed judges have found agency decision making to be arbitrary only 7 times since 2008, 12.7% of their total 55 votes. In comparison, Democrat-appointed judges voted to hold agency decision making arbitrary 48.8% of the time, 40 times out of 82 votes. Moreover, a closer look at the individual judges indicate personal tendencies. For example, Reagan appointee, Circuit Judge O'Scannlain has voted to defer on every occasion when he heard a challenge to an agency’s decision by a plaintiff seeking greater environmental
protection. Contrast that with Circuit Judges Reinhardt and Dorothy W. Nelson, both Carter appointees, who consistently voted to remand agency analysis in favor of greater environmental protection. These results present a rather stark difference between party affiliation. Democrat-appointed judges appear to prefer greater environmental protection, voting in favor of plaintiffs who bring regulatory challenges before the Ninth Circuit. These results indicate that the Ninth Circuit votes in a manner that correlates with individual political ideology, producing preferred outcomes.247

To be sure, it is worthwhile to consider other possible explanations for and caveats to these results. The survey intentionally excluded cases where industry groups brought claims as plaintiffs against administrative agencies.248 Thus, the key inquiry is whether the survey results indicate a philosophical split249 or an outcome-driven, ideological split among judges. If it is a philosophical split, one would expect to see Republican affiliated judges voting to uphold agency decisions, regardless of any implemented policy, and conversely, expect to see Democrat appointees continuing their more active role. If the voting tendencies are driven by policy outcome, then one would expect to see Democrat-appointed judges deferring to more protective agency decisions, while Republican-appointed judges vote to remand those decisions.

Many of the Ninth Circuit’s recent cases involved challenges to administrative decisions formulated during the Bush Administration, which many have characterized as pro-business, exhibiting less concern over environmental regulation.250 With that in mind, there are not many recent cases in the Ninth Circuit where industry groups have brought administrative challenges.251 Moreover, based on the Ninth Circuit’s

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247 See SHIPAN, supra note 204, at 37 (suggesting that judges’ ultimate interest is outcome).
248 See supra note 229 (listing cases that were excluded where plaintiffs were advocating for less environmental protection).
249 “Philosophy” is used here to describe how judges view the proper roles for the three branches of government. A judge may disagree with a particular policy but may hold to his or her philosophical understanding of the appropriate judicial role. Others have defined political ideology more broadly to include this procedural component. See EISGRUBER, supra note 207, at 99; Brent S. Steel et al., Ideology and Scientific Credibility: Environmental Policy in the American Pacific Northwest, 15 PUB. UNDERSTANDING OF SCI. 481, 482 (2006).
251 See supra note 229 (listing cases).
perceived liberal reputation, many industry plaintiffs may choose to file their suits in other circuits. Home Builders Association of Northern California v. United States Fish and Wildlife Service provides one such example. The Home Builders Association filed its case in the District of Columbia, challenging the U.S. Fish and Wildlife Service’s decision to list the central California tiger salamander (Ambystoma californiense) as “threatened” under the ESA. Only when the environmental organization Center for Biological Diversity intervened in the suit and moved to transfer venue did the case reach the Ninth Circuit. Subsequently, the district and appellate courts upheld the agency’s listing determination. It is likely that many industry plaintiffs believe it a better strategy to file their suits elsewhere.

Although there is not a lot to draw from in the pool of Ninth Circuit cases since Lands Council in which a plaintiff advocated for less environmental regulation, a few cases provide some support for an outcome-driven explanation. Amalgamated Sugar Co. v. Vilsack gives insight into the tendencies of Republican appointees. Under the arbitrariness review standard, a panel of Republican-appointed judges voted to remand the United States Department of Agriculture’s allocation of beet sugar marketing when it was challenged by a corporate interest. The Ninth Circuit reversed the district court, holding that it erred in deferring to the agency’s interpretation of the statutory term “processor.” The judges demonstrated that they did not strictly adhere to a deferential standard. Although not involving an environmental dispute, this case supports an inference that deference may not be tied to a judicial philosophy over the proper role of the court, but rather to policy preferences. At the other end of the spectrum, two


253 529 F. Supp. 2d 1110 (N.D. Cal. 2007), affirmed by 321 F. App’x 704 (9th Cir. 2009).

254 Id. at 1114.

255 Home Builders Ass’n of N. Cal., 321 F. App’x 704 (9th Cir. 2009).

256 Ultimately, the case may have had the same outcome in the D.C. Circuit. See generally Broscheid, supra note 252 (using data from the Clinton Administration and finding that the Ninth Circuit is not any more liberal than other circuits).

257 563 F.3d 822 (9th Cir. 2009). The court held that the terms of the Agricultural Adjustment Act were unambiguous and the district court erred by deferring to the U.S. Department of Agriculture’s definition of “processor.” Id. at 825.

258 Circuit Judges Wallace, Trott, and N.R. Smith decided the case. See id. at 824.

259 Id. at 836.

260 Id. at 831.

261 See id. at 833. Of course, it would be completely meaningless if judges strictly deferred to all administrative decisions, effectively reading administrative review out of the APA. See supra notes 80–89 and accompanying text. No judge, irrespective of party affiliation, would blindly defer to all administrative decisions.
recent cases suggest that Democrat-appointed judges seek policy outcomes and do not adhere to a pro-active philosophy. Circuit Judges W. Fletcher and Schroeder deferred to the administrative agency, despite exhibiting tough review standards in their voting records over the past two years, found in Table 3. Although of limited value, both cases lend support to an outcome-driven explanation of the survey results.

Perhaps the strongest form of support comes from other, more expansive empirical studies, where scholars have found that judges will, depending upon the topic, vote according to policy outcomes. Spanning multiple administrations, those studies have found that judges are not married to an idea of judicial activism or administrative deference, but rather flex their judicial muscle when the implemented policy conflicts with their own ideology. Such a party-line divide, discussed above in Part III, is consistent with these other studies and, as analyzed in Part II, demonstrates that the Ninth Circuit’s standard of review lacks sufficient guidance to produce reliable, impartial results. Based upon voting records and the recorded disagreements within recent opinions, Ninth Circuit judges have demonstrated that the extent of deference to “agency expertise” is anything but resolved.

C. How Other Courts Have Treated Agency Expertise

The Ninth Circuit is not alone. Arbitrariness review of administrative decision making is just as perplexing in other circuits. Many have documented judges in the United States Court of Appeals for the District of Columbia Circuit voting according to their policy preferences, exhibiting similar fluctuations in their opinions based on panel composition. Other circuits have been less studied. However, Pierce provides a sample of cases

262 See Sierra Forest Prods., Inc., 361 F. App’x 701 (9th Cir. 2010) (mem.); Oberdorfer, 343 F. App’x 243 (9th Cir. 2009).
263 See Sierra Forest Prods., Inc., 361 F. App’x at 792 (9th Cir. 2010) (Along with Circuit Judges Schroeder and Callahan, District Judge Lynn, sitting by designation from the Northern District of Texas, voted to uphold the Fish and Wildlife Service’s distinct population segment listing); Oberdorfer, 343 F. App’x 243–44 (9th Cir. 2009) (Circuit Judges W. Fletcher, Bea, and Ikuta voting to defer to BLM’s denial of plaintiff’s right-of-way application for a communication tower).
264 It is difficult with only a two year survey to develop decisive data indicating either a philosophical split or an ideological one. A survey spanning two administrations—one Republican and one Democratic—might be of the best value to make this distinction.
265 See supra note 221 and accompanying text (citing four empirical studies of judicial voting patterns). See also BANKS, supra note 210.
266 See source cited supra note 221.
267 Several studies have been conducted spanning all of the federal Courts of Appeals. See generally SUNSTEIN, supra note 221; Cross & Tiller, supra note 221. These studies demonstrate that other circuits beside the Ninth Circuit exhibit ideological voting. See also Andreas Broscheid, supra note 252, at 7–8 (using data from the Clinton administration, finding that the Ninth Circuit is not any more liberal than other circuits).
spanning most circuits and how they have treated scientific uncertainty.  

He describes inconsistencies similar to the Ninth Circuit, with some panels deferring to agency expertise and others do not, seemingly uncontrolled by the facts before the court.

Moreover, confusion is not limited to the Courts of Appeals. Recently, the United States Supreme Court decided Federal Communications Commission v. Fox Television Stations, Inc., which held that no heightened standard of review was required when an agency made a policy change in the way it adjudicates. Discussion surrounding the recent Supreme Court case touches on some of the recurring issues in judicial review of agency decisions. Scott Keller criticizes the Supreme Court for failing to provide guidance to lower courts, instead merely providing an example of when courts exceed the bounds of judicial review. Keller notes that, “because the majority did not establish a doctrine underlying APA arbitrary and capricious review . . . , lower courts may still have difficulties in applying” the standard. Instead, “[t]he Supreme Court and lower courts may very well have to articulate a comprehensive, thorough doctrine for APA arbitrary and capricious review before courts stop using their policy preferences to invalidate agency rulemaking.” Fox Television Stations, Inc. demonstrates

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270 1 PIERCE, supra note 2, § 7.5, at 643–44.


272 Id. at 1810(holding that the APA does not require more searching review when the agency is making a policy change in the way it adjudicates).


274 Id at 457.

275 Id. Others have suggested a similar solution, calling for the Supreme Court to establish a doctrinal basis, or underlying constitutional limits for judicial review of administrative decisions. See generally Frank B. Cross, Shattering the Fragile Case for Judicial Review of Rulemaking, 85 VA. L. REV. 1243 (1999) (arguing for constitutional review of administrative rulemaking); Shapiro & Levy, supra note 51 (describing how the Court has not explained the doctrinal basis of its rationalist judicial review model).

276 Keller, supra note 273, at 457.
that the Ninth Circuit is not the only court fumbling with judicial review of agency decision making—The Supreme Court is, too.

D. Implications of Ideological Voting and a Proposed Remedy

Ideological voting has implications for the public, litigating parties, agencies, and the judicial branch. Voting according to policy preferences reduces public respect for the judicial branch of government and confidence that judges are administering the law evenhandedly. “[I]f all-Democratic panels show dramatically different voting patterns from all-Republican panels, there is reason to believe that similarly situated litigants are not being treated similarly, in a way that has serious consequences for regulatory policy and even the rule of law.”277 It also has implications for agency conduct during rulemaking.278 In his empirical study of the D.C. Circuit’s voting patterns, Professor Revesz suggests that if agencies believed that the fate of their analysis was largely determined by panel composition rather than based on the quality of agency reasoning, they would be less inclined to provide a thorough explanation of the basis and purpose of their regulations.279

One scholar has described a paradigm of policy creation in natural resource management whereby policy responsibility shifts through the branches of government before finally coming to a rest in the judiciary.280 First, Congress provides vague or ambiguous mandates, leaving the administrative agency to try to address unfinished policy issues. For example, in CBD v. DOI, the agency was required to find that the land exchange was in the “public interest.”281 Similarly, in Tucson Herpetological Society, FWS had to observe a decline in a “significant portion” of the species range.282 And again, was the Forest Service managing for “diversity” in Ecology Center?283 Vague statutory provisions have a lot of policy flexibility, and Congress relies on already overburdened agencies to work out these kinks. Because of the practical hurdles of reaching a majority of votes among 100 senators and 435 congressmen and women and the difficulty of asking them to accept political responsibility and agree on well-written, effective legislation, Congress has little ability to provide more substantive guidelines to agencies.284 Having been delegated incomplete

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277 Miles & Sunstein, supra note 221, at 767.
278 See Revesz, supra, note 221, at 1769.
279 Id. at 1770. Professor Revesz also notes that the alternative could occur, where agencies would expend greater efforts to ensure the court would validate its analysis, but would only devote attention to those areas it believed would receive the most ideological scrutiny. Id.
284 Cf. Chevron, 467 U.S. 837, 865–66 (1983) (“While agencies are not directly accountable to the people, the Chief Executive is, and it is entirely appropriate for this political branch of the
policy, administrative agencies are often sued.\textsuperscript{285} Courts are then left to “implicitly or explicitly answer the political questions avoided by Congress.”\textsuperscript{286} Lastly, the public responds to the judiciary’s action, either by praising the judges for taking corrective action or delivering sharp criticism for being too activist.\textsuperscript{287}

Judges should not be making policy decisions; protecting themselves from intense political debates ensures the integrity of the judiciary.\textsuperscript{288} For the judiciary, the problem is amplified when agencies attempt to avoid accountability over controversial issues by disguising policy choices amidst science and technical expertise.\textsuperscript{289} At one level, policy disguised within scientific analyses makes it easiest for the court to dodge the policy question. Using a broader brush, the court can holistically view the entire agency analysis as within the realm of an agency’s scientific and technical expertise and offer a more deferential standard of review.\textsuperscript{290} Using the elevated deferential standard for scientific and technical determinations, the panel has the freedom to define which judgments are “scientific” and which are “nonscientific.” A judge may define science broadly to defer to the embedded policy questions, or a judge may define it narrowly and remand the agency’s analysis for unsupported assumptions.\textsuperscript{291} However, at a foundational level, the democratic model demands more honesty and public input—at some point in the administrative rulemaking process, the public must be confronted with these policy calls.\textsuperscript{292} While Congress or administrative agencies should be answering these tough policy questions, the judiciary has several tools at its disposal to promote clarity, develop

\begin{quote}
Government to make such policy choices—resolving the competing interests which Congress either inadvertently did not resolve, or intentionally left to be resolved by the agency charged with the administration of the statute in light of everyday realities.”). But see David Schoenbrod, Power Without Responsibility: How Congress Abuses the People Through Delegation 14 (1993) (“[D]elegation undercut\(^{293}\)s democracy, undoes the Constitution’s most comprehensive protection of liberty, and ultimately makes government less effective in achieving the popular purposes of regulatory statutes.”).
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\textsuperscript{285} Nie, supra note 46, at 260.
\textsuperscript{286} Id.
\textsuperscript{287} Id.
\textsuperscript{288} Alain A. Levasseur, Legitimacy of Judges, 50 AMER. J. COMP. L. 43, 49–50 (Supp. 2002). For example, many have questioned the U.S. Supreme Court’s wisdom in adjudicating Bush v. Gore, 531 U.S. 98 (2000), largely viewed as undermining the legitimacy of the Supreme Court. See generally Alan M. Dershowitz, Supreme Injustice: How the High Court Hijacked Election 2000 (2001); Michael Herz, The Supreme Court in Real Time: Haste, Waste, and Bush v. Gore, 35 AKRON L. REV. 185, 203–04 (2002) (suggesting the decision was undermined by the rapid pace of the decision); David E. Marion, Judicial Faithfulness or Wandering Indulgence? Original Intentions and the History of Marbury v. Madison, 57 ALA. L. REV. 1041, 1070 (2006) (referring to Justice Marshall’s belief that judicial powers should be limited).
\textsuperscript{289} See Wagner, supra note 6, at 1640–44.
\textsuperscript{290} This was seen in Circuit Judge Tallman’s approach to BLM’s proposed land exchange in CBD v. DOI, 581 F.3d 1063, 1081 (9th Cir. 2009).
\textsuperscript{291} See id. at 1071.
\textsuperscript{292} Of course, the true crux of this inquiry is determining what sort of democratic model we are striving for. By litigating, special interests and advocacy organizations distort the public debate on an agency’s policy decisions. See Lee Epstein, Courts and Interest Groups, in The Courts: A Critical Assessment (1991).
consistency, and avoid ideological voting. Ultimately, through targeted and strategic self-regulation, judges may, in turn, be able to cultivate an administrative or congressional response.

Instead of merely citing to the standard of review for an agency’s scientific and technical determinations, the Ninth Circuit could take a series of analytical steps, visibly articulated in its judicial opinions. First, the court could identify which scientific or technical facts integrate judgments, i.e., separate the fact collection from fact interpretation. Second, it could identify those judgments that impact or directly relate to the agency’s statutory mandate. Third, for those related judgments, the court could ask: Does the agency articulate how its judgments fulfill or are consistent with its specific mandates?

Recall the example in Part I of the new industrial waste management facility risk assessment. Suppose, before the corporation could construct its new facility, it must acquire a permit from EPA, assuring that the facility will not contaminate the groundwater supply or pose a danger to human health or the environment. EPA approves the permit and the project is scheduled to go forward. A local environmental group sues, alleging EPA’s action was arbitrary by failing to examine all of the relevant data. A court faced with this suit would implement the science-policy procedure as follows: First, the court would immediately recognize that any time there is a risk assessment, there are policy questions involved. Embedded within the document, the assessment either explicitly or implicitly answers how much risk is acceptable. The court could look to the methodology and identify how the scope of the analysis was narrowed. For example, did it consider different data sets, or is the agency relying on one short term exposure study conducted on rats? Second, the court would identify which judgments relate to the agency’s statutory mandate. Here, EPA is required to ensure against environmental contamination and public endangerment. Determining how much risk is acceptable directly relates to protecting public health. Ensuring against detrimental impacts to public health and the environment implies precaution. Based on those findings, the court would then look closely at EPA’s record for a theme or an explanation of how the agency took a cautious approach to its measurement and evaluation of certain risks. For example, the court would examine whether EPA, when extrapolating exposure level results from rat studies to their very real human subjects, took a conservative approach, skewing the data in favor of over-protection, rather than under-protection. Or, as the other example in Part I might have been resolved, the court would find EPA was consistent with its cautionary mandate when the agency determined that, despite unavailable data, it estimated the average area of a shower at a conservatively small two square feet, thus calculating elevated chemical exposures.

This step-by-step analysis would of course not preclude all human imperfection. Nor would a judge be able to distinguish science from policy.

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293 See JAFFE, supra note 1, at 586–89.
to a minute detail. The goal of this procedural approach is to design a method that provides more substantive, express guidance to the court in the hopes of reducing individual policy preferences. At first glance, this type of procedure appears as if it might adversely affect the size of the administrative record. If judges began to more closely comb through agency records for embedded policy judgments, agencies might respond by creating more thorough administrative documentation. However, as others have suggested, the impacts of this altered judicial analysis cannot be any more burdensome than current fluctuations in how courts apply the standards of review. If administrative agencies were forthcoming with their policy determinations, they would no longer need to exert energy in creating a science charade. Moreover, agencies may avert litigation altogether, saving time and resources. If the policy decisions were set forward administratively, supported by a brief rationale and faced with more predictable judicial outcomes, then special interest groups may no longer find the judiciary as a viable venue for a policy debate.

IV. THE ASPIRATION: CONSISTENCY

Absent legislative action, the Ninth Circuit’s ideological voting will continue to influence the outcome of administrative review cases until judges both develop an ability to discern science from policy and articulate a protocol to step judges through their analyses of the science-policy mixture. Once that is accomplished, judicial review will be a robust process, less susceptible to ideological voting, and produce more predictable results.

While the courts cannot prescribe additional procedures, they can open their own analyses and make a concerted effort to separate science from policy. Almost fifteen years ago, Professor Wagner suggested a similar

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295 Cf. Wagner, supra note 6, at 1718–19 (suggesting that judges could be trained to be more adept at identifying policy judgments within science). But see Stephen Breyer, Judicial Review of Questions of Law and Policy, 38 ADMIN. L. REV. 363, 388–90 (1986) (arguing that judges do not have the time or capacity to make such a distinction within agency judgments).

296 Cf. Shapiro & Levy, supra note 51, at 409 (“If courts can reverse erroneous decisions only by ordering additional procedures, review becomes little more than a series of agency decisions, followed by judicial remands for additional procedures.”).

297 See Wagner, supra note 6, at 1666; see supra Part I (discussing the effect on administrative agencies from “lottery” results).

298 See Wagner, supra note 6, at 1631–32.

299 See id.

300 Cf. Thomas & Sienkiewicz, supra note 280, at 66–67 (arguing that courts have made matters worse in the relationship of science and democracy). But see StrausS, supra note 1, at 337 (attributing fluctuation in the application of judicial review to “human failings” rather than “empty doctrine”).

301 See Wagner, supra note 6, at 1716 (“Many prominent scholars . . . concur that more predictable judicial review would have a net positive impact on the pace of agency rulemakings.” (citing, among others, Administrative Conference of the United States, Recommendation 93–4, Improving the Environment for Agency Rulemaking 4, 8 (Dec. 9, 1993), excerpted in 50 Fed. Reg. 4669 app. at 4669 (1994))).

solution for reform of judicial review. She suggested that once courts began exerting energy distinguishing science from policy, they might find their review of agency decision making less daunting. By sifting out scientific terminology, judges would be able to reach “the underlying importance of nonscientific factors in selecting among equally plausible models, curves, and methodologies.” Only then will judges be able to ensure their impartiality, legitimizing the judiciary in the eyes of the public.

The challenge should not be so intimidating. As Professor Wagner suggests, federal appellate judges could attend training courses to sharpen their skills in understanding the values integrated into agency science. For example, the Natural Resources Law Institute at Lewis & Clark Law School offers a week-long intensive training seminar for judges on environmental law. Such a program could be expanded to educate federal judges on various statutes’ scientific standards, the scientific process, and which answers science simply cannot provide. Certainly, some administrative disputes will contain a more straightforward application of this science-policy review than others. The statutory schemes governing the Forest Service, the National Marine Fisheries Service, and the Fish and Wildlife Service present the most difficulty, as these agencies are given aspirational mandates that cannot be fulfilled by science. The problem for these agencies may be so severe that legislation stripping some of the unattainable statutory provisions and replacing them with more realistic demands from scientific fields may ultimately be necessary. Nevertheless, the need to develop a comprehensible, consistent judicial review process is great—agencies

303 Wagner, supra note 6, at 1718–19.
304 Id. Wagner also notes that the overall time commitment may not exceed the current expenditures due to “delays associated with additional scientific research, extended scientific peer review, convoluted public comments that blur science and policy, and slow and costly legal challenges.” Id. at 1716.
305 Id. at 1718.
306 Id. See also Clark, supra note 34, at 348 (suggesting judges should make an effort to distinguish science from policy but dismissing this option based on the assumption that Lands Council did in fact change agency deference in the Ninth Circuit).
308 In suggesting training on administrative science, the potential for political influence arises. These science training seminars should not be run by organizations affiliated with a particular political party because of the possibility of skewing the analysis in favor of one type of constituent over another. Compare Foundation for Research on Economics & the Environment, About FREE, http://www.free-eco.org/about.php (last visited July 11, 2010) (describing itself as educational institution that provides training to decision makers on how free market economics can solve many environmental problems), with SourceWatch, Foundation for Research on Economics and the Environment, http://www.sourcewatch.org/index.php?title=Foundation_for_Research_on_Economics_and_the_Environment (last visited July 11, 2010) (disclosing that the Foundation’s corporate funding has come from ExxonMobil, General Electric, Shell, and General Motors).
309 See generally Nie, supra note 46.
310 See id. at 260.
depend upon courts in a unique arrangement to help make the rulemaking process as efficient and legally defensible as possible while maintaining the proper balance of powers.

Much as an agency is expected to step through its analysis to ensure it meets its legal mandates, courts should develop a protocol to assist judges in working through technical components and deciphering where the embedded policy lies. By disentangling science from policy, judges could feel confident that their opinions are legally grounded when deferring to the agency’s expertise on scientific matters.\textsuperscript{311} While there is no silver bullet for solving the problems created by the way judges wield the arbitrary and capricious standard of review,\textsuperscript{312} courts certainly have opportunities to take matters into their own hands while remaining true to their constitutional limits.\textsuperscript{313} By constraining themselves within legal analytical procedures, judges can produce predictable and comprehensive results. Their competing goals will once again achieve a more impartial balance.\textsuperscript{314}

\textsuperscript{311} Although proposing that agencies, instead of courts, should articulate the policies contained within administrative decisions, Professor Edley identified three benefits of such a separation: 1) "the agency will feel less pressure to contrive answers within the science paradigm" and more readily survive hard-look review; 2) the courts and the public would be able to assess more accurately when the agency has met its evidentiary burden; and 3) by declaring its express policy rationale to Congress and the public, the agency would align its decision with the electoral process and any judicial intervention might be viewed as political. Edley, supra note 34, at 577.

\textsuperscript{312} Other options exist for resolving judicial deference to scientific decisions. Some have called for the courts to articulate an underlying constitutional theory justifying judicial review, in the hopes that it will then define the process of such review. E.g. Shapiro & Levy, supra note 51, at 440. Judicial control of administrative agencies may finally find its limits once a theory is adopted—one was articulated in Shapiro & Levy—as to how this massive bureaucratic component of our government fits within the constitutional framework and furthers our collective understanding of democracy. Others suggest that courts should start applying the Daubert test to agencies’ use of science. Patricia Smith King, Applying Daubert to the “Hard Look” Requirement of NEPA: Scientific Evidence Before the Forest Service in Sierra Club v. Marita, 2 WIS. ENVT. L.J. 147 (1995); Erin Madden, Seeing the Science for the Trees: Employing Daubert Standards to Assess the Adequacy of National Forest Management Under the National Forest Management Act, 18 J. ENVTL. L. & LITIG. 321 (2003). The test was set out in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), which held that expert testimony must not only be relevant, but reliable. Id. at 597. Unfortunately, this sort of drastic maneuver is only possible by an Act of Congress or possibly the U.S. Supreme Court. It is unlikely that any Court of Appeals would be able to craft such a dramatic change in the law. More recently, some have called for legislative solutions. Wagner, supra note 6, at 1703; Clark, supra note 34, at 550.

\textsuperscript{313} See, e.g., Chevron, 467 U.S. 837, 844 (1984) ("[A] court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency."); Vermont Yankee, 435 U.S. 519, 524 (1978) ("Agencies are free to grant additional procedural rights in the exercise of their discretion, but reviewing courts are generally not free to impose them if the agencies have not chosen to grant them.").

\textsuperscript{314} See KLEIN, supra note 196, at 11.