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Giving Voice to Rachel Carson: Putting Science into Environmental Law

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GIVING VOICE TO RACHEL CARSON: PUTTING SCIENCE INTO ENVIRONMENTAL LAW

WILLIAM H. RODGERS, JR.*

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I. INTRODUCTION

Certainly, the most pressing issue of modern times is to develop a body of environmental law (that includes climate change) that is highly responsive to science. Without demeaning the many distinctions between the exercise of science and the practice of law,¹ let me cut to the chase and declare that science is mostly about the “pursuit of truth” and law is mostly about “who wins.”

Anybody who doubts this proposition should examine the radical differences between the “Supreme Court of Science” in the United States and the Supreme Court of Law. The Supreme Court of Science, the National Research Council, is not even an “agency” of the United States.² It is a mad-cap collective of boards, councils, committees, and advisors. It has its own administrative structure, of course, but in behavior, output, and reputation, it does display a decidedly non-structured “pursuit-of-truth” personality.³

The Supreme Court of Law hardly could be more different. In its practices of secrecy, isolation, choice of cases, in-house politick-

* William H. Rodgers, Jr., Stimson Bullitt Professor of Environmental Law, University of Washington School of Law, Box 353020, 408 William H. Gates Hall, Seattle, WA 98195-3020 | (206) 543-5182 | whr@uw.edu. This article is dedicated to two “Rachel Carsons” whose sterling careers have been devoted to protecting the oceans—Donna R. Christie and Alison Rieser.

1. For the differences between science and law, see SHEILA JASANOFF, *SCIENCE AT THE BAR: LAW, SCIENCE, AND TECHNOLOGY IN AMERICA* (1995).

2. *Lombardo v. Handler*, 397 F. Supp. 792, 802 (D. D.C. 1975) (the author was an attorney in this case).

3. The National Research Council, often called colloquially “The Academy,” traces its origins to an executive order of President Abraham Lincoln. There are eloquent histories of this extraordinary organization. For a collection of these, see WILLIAM H. RODGERS, JR., *ENVIRONMENTAL LAW IN INDIAN COUNTRY* § 1:13, at 399-44 & 399 n.7 (2005). See also PHILIP M. BOFFEY, *THE BRAIN BANK OF AMERICA: AN INQUIRY INTO THE POLITICS OF SCIENCE* (1975), for an excellent introduction.

ing, and selection of members, this club is all about control.⁴ The discipline of the legal system is quite remarkable when compared to the non-discipline of the scientific system. Instantly, upon utterance, all courts must fall in line with the latest word or directive. The same is true for attorneys who as officers of the court must implement that which is said without objection, quibbling, or scorn.⁵

Of the two, the Supreme Court of Science and the Supreme Court of Law, the one that looks like the “clique of geniuses” at work in the *Planet of the Apes* is the Supreme Court of Law.⁶ They are “Keepers of the Word.”

Some years ago, I was reminded by my spouse that “sometimes there is no alternative other than to tell the truth.” I’m sure I found a better alternative on that occasion.

But the point is well taken. And it has been taken to heart by the environmental movement. From the earliest times of modern environmentalism, activists have been inspired by the quiet desperation inherent in the idea that “sometimes there is no alternative other than to tell the truth.” Beginning in 1967, the Environmental Defense Fund (EDF) began to challenge the status quo with an “advancement of science” campaign against the old Pesticides Regulation Division of the U.S. Department of Agriculture.⁷ This bureaucracy was not exactly at the “cutting edge” of environmental science,⁸ and it soon would expire in the customary way by being given a new name and a new home (the Environmental Protection Agency). But, meanwhile, the EDF strategy was to “give voice” to Rachel Carson in places that were tone-

4. Literature on the U.S. Supreme Court, of course, is enormous. For a recent valuable text, see MICHAEL ALLAN WOLF, *THE SUPREME COURT AND THE ENVIRONMENT: THE RELUCTANT PROTECTOR* (2012).

5. Having had a small taste of the discipline of law and a smaller taste of the discipline of a military organization (the U.S. Marine Corps), I hope there has been a book written comparing the two. If there has been, I have not read it. There is a book by WILLIAM IAN MILLER, *THE MYSTERY OF COURAGE* 341 (2000), with these index entries under “Law”—“punishing cowardice and misbehavior before the enemy,” “punishing looting and setting false alarms,” “punishing running away,” “punishing casting away arms,” “punishing failure to engage,” “failure to defend,” and “failure to rescue.” Could this be a short list of legal malpractice?

6. “They are Official Science,” [Zira, female Ape Captor of the protagonist] said. “You must have noticed this already and you’ll have plenty of opportunities to confirm it. They learn an enormous amount from books. They are all decorated. Some of them are looked upon as leading lights in a narrow specialized field that requires a good memory. Apart from that . . .” She made a gesture of contempt. PIERRE BOULLE, *PLANET OF THE APES* 128 (Del Rey Books 2001).

7. See generally William H. Rodgers, Jr., *The Environmental Laws of the 1970s: They Looked Good on Paper*, 12 VT. J. ENVTL. L. 1, 17-18 (2010) [hereinafter *Looked Good on Paper*].

8. See generally WILLIAM H. RODGERS, JR., *ENVIRONMENTAL LAW: PESTICIDES & TOXIC SUBSTANCES*, 3 ENVTL. L. (West) § 5:1 (2012).

deaf to her knowledge on the dreadful consequences of the worldwide dissemination of chlorinated hydrocarbon pesticides.⁹ Rachel Carson was a powerful, passionate, and qualified voice. Any lawyer would be proud to have her as an expert.

This tactical advantage of telling the truth quickly became a recognizable universal advantage that environmentalists strove to write into the “canonical”¹⁰ environmental laws of the 1970s. The National Environmental Policy Act was a near-miss in this regard.¹¹ Then the “best available science” clauses arrived in a great rush, beginning with twelve of them in the Marine Mammal Protection Act of 1972, eight more in the Endangered Species Act of 1973, and several more after that in laws that included the 1976 Magnuson Act that is now known as the Magnuson-Stevens Fishery Conservation and Management Act.¹²

Yet there was a dangerous backlash hiding within this general strategy of giving voice to Rachel Carson. It put her in grave jeopardy in a world that was not content to bow to the rule of “science” with no strings attached.

Predictably, a storm of law would attend the legislative choices to draw “best available science” into the service of advancing environmental policy. Questions might arise, for example, about the (1) Qualifications of Rachel Carson, (2) the Special Status of Purchased Science, (3) the Privileged Position of Defining Science, and (4) the Very Meaning of Science.

9. She cared passionately about the subject of how to maintain a sense of wonder and believed the war was won or lost in childhood. She hoped her book would inspire adults and children alike to experience the sensory and emotional in nature, and knew that if they did, they would have less appetite for those activities that threatened the living world.

Linda Lear, *Introduction to RACHEL CARSON, THE SENSE OF WONDER* 11 (Harper Collins 1998).

10. The term is invented by Todd S. Aagaard, *Environmental Law as a Legal Field: An Inquiry in Legal Taxonomy*, 95 CORNELL L. REV. 221, 281 (2010); see also Todd S. Aagaard, *Environmental Harms, Use Conflicts, and Neutral Baselines in Environmental Law*, 60 DUKE L.J. 1505 (2011).

11. 42 U.S.C. § 4332(2)(A) states that “all agencies . . . shall . . . utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man’s environment.”

I say a “near miss” because courts do not see within this language the clear direction—and enforceability—of a mandate to use the “best available science.” See *Friends of Endangered Species, Inc. v. Jantzen*, 760 F.2d 976, 986 (9th Cir. 1985) (noting that NEPA does not require courts to “decide whether an [EIS] is based on the best scientific methodology available”); see also *Lands Council v. McNair*, 537 F.3d 981, 1003 (9th Cir. 2008) (en banc), *abrogated on other grounds* by *Winter v. Nat’l Res. Def. Council* 55 U.S. 7 (2008).

12. *Looked Good on Paper*, *supra* note 7, at 18.

This law is revealing itself quickly in the nascent world of climate change. It is being defined importantly by the U.S. Supreme Court and, in particular, its strongest “corporatist” members.¹³

II. QUALIFICATIONS OF RACHEL CARSON

This threshold question of who gets to speak on a matter of science is already a well-washed topic in the law books, under the general heading of *Daubert*.¹⁴ Customarily, this “gatekeeping function” is in the good hands of U.S. federal district judges. But, frankly, I worry about it when I see that this rule encourages motions to strike the testimony of world-class scientists (not only the qualified but the “best qualified”) on crucial issues of climate change.¹⁵ This can be done apparently without hesitation, shame, or personal or professional repercussions. This chapter certainly is not closed.

III. THE SPECIAL STATUS OF PURCHASED SCIENCE

One might think that the sensitive question of who pays for the science figures significantly in its fate in court, and it does. In the extraordinary book by Thomas O. McGarity and Wendy E. Wagner, *Bending Science: How Special Interests Corrupt Public Health Research*,¹⁶ sources of funding figure importantly in a full range of corrupting strategies, including “Packaging Science” and “Spinning Science.”¹⁷ Indeed, one of the early defamation cases in the wake of the DDT wars focused on whether the man in question had been “paid to lie.”¹⁸

But have no doubt that giant corporations, such as Exxon-Mobil, insist on their science on vital matters such as climate

13. “Corporatist” is defined as “of or characteristic of a corporative state or its corporations.” WEBSTER’S NEW WORLD DICTIONARY OF THE ENGLISH LANGUAGE 409 (2d ed. 1983).

14. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993) (holding that “‘general acceptance’ is not a necessary precondition to the admissibility of scientific evidence under the Federal Rules of Evidence”).

15. See, e.g., *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295 (D. Vt. 2007) (denying *Daubert* motion to strike testimony of Dr. James Hansen), discussed in WILLIAM H. RODGERS JR. ET. AL., CLIMATE CHANGE: A READER 81-83 (2011) [hereinafter CLIMATE CHANGE: A READER].

16. (2008).

17. See *id.* chs. 8, (subtitled “The Art of Assembling an Expert Group to Advance a Favored Outcome”), 9 (subtitled “The Art of Manipulating Public Perceptions about Credible Science”).

18. See *Edwards v. Nat’l Audubon Soc’y, Inc.*, 556 F.2d 113 (2d Cir. 1977) (holding an unsuccessful suit by pro-DDT expert; the alleged defamation was a charge of “liars,” maybe not “paid,” so the N.Y. TIMES was not liable for reporting on the events.).

change¹⁹ or residual oil in the wake of the spill of the *Exxon Valdez*.²⁰ In one of the more ironic concessions to this fact, Justice Souter, in his opinion withdrawing punitive damages from the stricken fishermen in the wake of the Exxon spill, actually cited (but declined to rely upon in the interests of integrity!) a study of jury behavior paid for by Exxon that told us why this institution should be diminished in the interests of decisional fairness.²¹

IV. GIVING DEFERENCE TO CHARLATANS

In *Massachusetts v. EPA*,²² the Supreme Court stopped one vote short of giving deference on climate change to an agency that had become hopelessly politicized and completely wrong on the matter of science.²³ But the Court showed itself quite ready to use its own ignorance of science as an asset, only to act as a handicapper on which part of the bureaucracy to bet. It must be understood that the shield of deference is now an extremely valuable currency within an agency. Managers are anxious to appropriate this asset, especially if they can hide behind the constraints it entails.

Consider the deference that courts might have been inclined to extend to one Julie MacDonald, the former Deputy Assistant Secretary for Fish, Wildlife and Parks, at the United States Department of the Interior. The studies are in on this case,²⁴ and,

19. Mark, would you provide me a slide on the seventeen thousand scientists? [Lee Raymond, Chairman and Chief Executive, Exxon Mobil, 1993-2005] asked an aide.

A slide duly flashed on a wide screen. It depicted a petition organized by anti-Kyoto campaigners and signed by thousands of scientists. The idea was to demonstrate that many respectable scientists doubted key aspects of the I.P.C.C. consensus about the likelihood of human contributions to global warming. The petition's credibility had already been undermined by testimony presented to Congress demonstrating that its signatures included those of pop musicians such as the Spice Girls and James Brown. If Raymond knew about these problems, he did not care.

STEVE COLL, *PRIVATE EMPIRE: EXXONMOBIL AND AMERICAN POWER* 88 (2012).

20. *See id.* ch. 5.

21. Compare *CLIMATE CHANGE: A READER*, *supra* note 15, at 172-75 ("Adequacy of Compensation and the Role of Retribution"), with William H. Rodgers, Jr., *Punitive Decisionmaking*, 7 U. ST. THOMAS L.J. 89-94 (2009). Justice Souter will be aghast when he reads of the calculating ends to which ExxonMobil would go to undermine punitive awards. *See COLL*, *supra* note 19, at 312-14.

22. 549 U.S. 497 (2007).

23. *See id.* at 534-35; *see also CLIMATE CHANGE: A READER*, *supra* note 15, at 60-71.

24. *See generally* OFFICE OF INSPECTOR GENERAL, U.S. DEP'T OF INTERIOR, REPORT OF INVESTIGATION: JULIE MACDONALD, DEPUTY ASSISTANT SECRETARY, FISH, WILDLIFE AND PARKS (2007).

fortunately, the district judge who heard the case was not yet mesmerized by the doctrine of deference to the unnamed and the unknowable.

In *Western Watersheds Project v. Fish and Wildlife Service*, B. Lynn Winmill, Chief District Judge, Idaho, upheld a challenge to a Fish and Wildlife Service's rejection of a petition to list the greater sage-grouse under the Endangered Species Act.²⁵ Judge Winmill wrote:

[T]he FWS decision was tainted by the inexcusable conduct of one of its own executives. Julie MacDonald, a Deputy Assistant Secretary who was neither a scientist nor a sage-grouse expert, had a well-documented history of intervening in the listing process to ensure that the "best science" supported a decision not to list the species. Her tactics included everything from editing scientific conclusions to intimidating FWS staffers. Her extensive involvement in the sage-grouse listing decision process taints the FWS's decision and requires a reconsideration without her involvement.²⁶

Judge Winmill elaborated:

What an odd process. Right at the moment where the "best science" was most needed, it was locked out of the room. The FWS argues that it cannot be compelled to cede control of a listing decision to experts. But the argument misses the mark. By excluding the experts from making even a recommendation, and then failing to document the experts' discussions (beyond their votes), the FWS cannot demonstrate that is [sic] applied the "best science."²⁷

Judge Winmill added, "MacDonald had extensive involvement in the sage-grouse listing decision, used her intimidation tactics in this case, and altered the 'best science' to fit a not-warranted decision."²⁸ Judge Winmill's decision in the sage-grouse listing case is a reminder of how important a vibrant judicial review is to the survival of the "best science" function. There are hundreds

25. 535 F. Supp. 2d 1173 (D. Idaho 2007); Holly Doremus, *Scientific and Political Integrity in Environmental Policy*, 86 TEX. L. REV. 1601, 1605 (2007-2008).

26. *W. Watersheds Project*, 535 F. Supp 2d at 1176.

27. *Id.* at 1185.

28. *Id.* at 1188; see also *Center for Biological Diversity v. U.S. Fish & Wildlife Serv.*, 2005 WL 2000928, at *15 (N.D. Cal 2005) (setting aside another "irregularity" occasioned by pressure from MacDonald "to reach an 'ordained outcome' regardless of the best science").

of cases raising “best science” issues, and all these matters are vulnerable to being extinguished by casual resort to an undeserved deference.²⁹

V. ECONOMICS IS NOT SCIENCE

If the interpretation of “best science” includes economics, then the entire enterprise would be subject to self-cancellation under some ill-defined balancing standard. People who appreciate this reality—and who would hope to see it implemented—would place any and all written insistences that economics is not a science on a closely held list of banned books. This kind of thought would not be cited, honored, or mentioned. High on this list would be the book by Robert Trivers, *The Folly of Fools: The Logic of Deceit and Self-Deception*.³⁰ Trivers addresses directly the question of whether economics is a science:

The short answer is no. Economics acts like a science and quacks like one—it has developed an impressive mathematical apparatus and awards itself a Nobel Prize each year—but it is not yet a science. It fails to ground itself in underlying knowledge (in this case, biology). This is curious on its face, because models of economic activity must inevitably be based on some notion of what an individual organism is up to. What are we trying to maximize? Here economists play a shell game. . . . [Economists] often implicitly assume . . . that market forces will naturally constrain the cost of deception in social and economic systems, but such a belief fails to correspond with what we know from daily life, much less biology more generally. Yet such is the detachment of this “science” from reality that these contradictions arouse notice only when the entire world is hurtling into an economic depression based on corporate greed wedded to false economic theory.

. . . .

29. *Cf.*, in this regard, *Citizens for Alternatives to Radioactive Dumping v. U.S. Dep’t of Energy*, 485 F.3d 1091 (10th Cir. 2007) (discussing a challenge to the Department of Energy’s Waste Isolation Pilot Project, a nuclear waste repository in southeastern New Mexico.) A qualified hydrologist described the agency characterization of the site as “a pattern of lies and deceptions designed to disguise the true hydrology of the . . . site.” *Id.* at 1095. This is heard by the court of appeals to be, at most, “a dispute among members of the scientific community.” *Id.* at 1099. *See also* Doremus, *supra* note 25, at 1641 (explaining that “[t]he key to enhancing political integrity is to enforce stronger role separation between career scientists, who should be encouraged and enabled to provide their best independent assessments of the facts, and political appointees, who should be required to take political responsibility for the choices they make among available policy options.”).

30. (2011).

Finally, when a science is a pretend science rather than the real thing, it also falls into sloppy and biased systems for evaluating the truth. Consider the following, a common occurrence during the past fifteen years. The World Bank advises developing countries to open their markets to foreign goods, let the markets rule, and slash the welfare state. When the program is implemented and fails, the diagnosis is simple: "Our advice was good but you failed to follow it closely enough." There is little risk of being falsified with this kind of procedure.³¹

Justice Antonin Scalia anticipated Trivers by writing in *Bennett v. Spear*,³² that economic concerns permeate the "best science" clauses.³³ Justice Scalia pronounced that good science must be good economics:

The *obvious* purpose of the requirement that each agency "use the best scientific and commercial data available" is to ensure that the ESA *not be implemented haphazardly, on the basis of speculation or surmise*. While this no doubt serves to advance the ESA's overall goal of species preservation, we think it readily apparent that another objective (if not indeed the primary one) *is to avoid needless economic dislocation produced by agency officials zealously but unintelligently pursuing their environmental objectives*. That economic consequences are an explicit concern of the ESA is evidenced by § 1536(h), which provides exemption from § 1536(a)(2)'s no-jeopardy mandate where there are no reasonable and prudent alternatives to the agency action and the benefits of the agency action clearly outweigh the benefits of any alternatives. We believe the "best scientific and commercial data" provision is similarly intended, at least in part, to prevent uneconomic (because erroneous) jeopardy determinations. Petitioners' claim that they are victims of such a mistake *is plainly within the zone of interests that the provision protects*.³⁴

31. *Id.* at 310-11, 313.

32. 520 U.S. 154 (1997).

33. *Id.* at 172, 176-77.

34. *Id.* at 176-77 (emphasis added). The Scalia opinion does not address the peculiar reference in this "best science" clause to "commercial data." See *id.* at 176.

This position has been challenged, even mocked, but not by any source that matters.³⁵ No other Justice has been moved to address this topic.

Thus, in ironic fashion, the rise of environmentalism has brought with it the rise of science in law. The rise of science has buoyed hopes and expectations for addressing the “pressure cooker” of climate change.³⁶ Yet, typical of the times, the largest obstacle to fulfillment of these higher ends is the strongest voice on today’s high court—a bullying, intimidating presence that has no discernible interest in the sweetest corners of science and no obvious commitment to its values. So far, the “best available science” has been shouted down, done away with by the snarling intemperance of the moment.

Can we do better? Almost certainly, we can. The district courts are doing much better.³⁷ In the longer run, the “pursuit of truth” is an odds-on favorite to defeat “the pursuit of advantage.” Lawyers have been attempting to fix the science now for several centuries, but they have come up short.

Rachel Carson will again have her day.

35. My personal parody of this position is:

The *obvious purpose* of the requirement that each agency “use the best scientific and commercial data available” is to ensure that the ESA *not be implemented on the basis of power politics and economic influence*. While this [clause] no doubt serves to advance the ESA’s overall goal of species preservation, we think it readily apparent that another objective (if not indeed the primary one) is *to improve the quality of decisionmaking, enhance public confidence, and import technical accuracy so that environmental decisionmaking is not derailed by zealous and misguided interference*. The confinement of economic objection to a rare and radically limited sidebar (§ 1536(h)) is definitive evidence that economic objection should not be smuggled in here under the implausible guise of a citizen suit. *We believe* the “best scientific and commercial data” provision is no way intended, neither in whole nor in part, to prevent uneconomic (because erroneous) jeopardy determinations. Petitioners’ claim that they are victims of such a mistake *is plainly without the zone of interests that the provision protects*.

William H. Rodgers, Jr., *NEPA’s Insatiable Optimism*, 39 ENVTL. L. REP. 10,618, 10,619 n.17 (2009).

36. See generally Cinnamon Carlarne, *Notes From a Climate Change Pressure-Cooker: Sub-Federal Attempts at Transformation Meet National Resistance in the USA*, 40 CONN. L. REV. 1351 (2008).

37. For one extraordinary account, see *Aquifer Guardians in Urban Areas v. Federal Highway Administration*, 779 F. Supp. 2d 542 (W.D. Tex. 2011).