

STATE FARM, SECRET SCIENCE AND THE ENVIRONMENTAL PROTECTION AGENCY'S POSTMODERN ATTACK ON AGENCY DECISION-MAKING

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I. INTRODUCTION

Science, as a method of understanding the world around us, has been recognized as playing a critical role in agency decision-making.¹ However, recent years have seen an increase in anti-science critiques, attacking the validity of academic science and the motivations of those involved.² Common criticisms accuse scientists of inserting their social biases, or otherwise altering research for political gain.³ These attacks echo postmodern arguments from the likes of Jean-Francois Lyotard, Jacques Derrida, and Andrew Ross during the “Science Wars” of the nineties.⁴

One of the manifestations of this anti-science sentiment is the rule proposed by Scott Pruitt and the Environmental Protection

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1. See 16 U.S.C. § 1533 (2018) (requiring that endangered species determinations be based on “the best scientific and commercial data available to [the Secretary]”); see also 42 U.S.C. § 7403 (2017) (requiring the Environmental Protection Agency to establish a national scientific research program to assist with the administration of the Clean Air Act); see also 40 C.F.R. § 1500.1(b) (2018) (stating that “[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing [National Environmental Policy Act]”).

2. See Shi-Ling Hsu, *The Accidental Postmodernists: A New Era of Skepticism in Environmental Policy*, 39 VT. L. REV. 27, 34–36, 57–62 (2014) [hereinafter *Accidental Postmodernists*] (outlining the basic postmodern philosophies of Jean-Francois Lyotard and Jacques Derrida, and how that philosophy has resurfaced in modern critiques of science in environmental law).

3. NAOMI ORESKES & ERIK M. CONWAY, *MERCHANTS OF DOUBT*, 144–45 (2011).

4. See Hsu, *Accidental Postmodernists*, *supra* note 2; see also SCIENCE WARS 1–12 (Andrew Ross ed. 1996) (summarizing postmodernist critiques in the context of the “Science Wars” that occurred throughout the 90s.)

Agency: “Strengthening Transparency in Regulatory Science”, colloquially known as the “Secret Science” rule.⁵ In the face of this attempt to remove science from agency decision-making, *State Farm* reasoned decision-making stands as an insurmountable bulwark against it.⁶ The nature of the reasoned decision-making standard elucidated in *State Farm*, which applies in situations of agency policy reversals, works to ensure that scientific evidence is used and considered in agency decision-making.⁷ *State Farm* stands for a principle of reasoned decision-making that has preserved the role of science in agency actions.⁸ Accordingly, *State Farm* will likely act as a rampart protecting agency decision-making from the anti-science motivations of the Environmental Protection Agency’s (EPA) proposed Secret Science rule.

This paper seeks to outline the relationship between the *State Farm* reasoned-decision-making standard and scientific evidence to evaluate how the EPA’s proposed Secret Science rule will fare under *State Farm* scrutiny. Part 1 will be a summary of the anti-science origins of the EPA’s proposed rule. Part 2 will describe the relationship between *State Farm* and scientific evidence. Part 3 will be an evaluation of *State Farm*’s applicability to the EPA’s proposed rule and a prediction on the results of that application.

II. “SECRET SCIENCE”

Titled “Strengthening Transparency in Regulatory Science”, the Environmental Protection Agency’s proposed rule would require that all scientific research pivotal to an action taken by the EPA have its underlying data made publicly available “in a manner sufficient for independent validation”.⁹ At first glance, the rule appears to be an admirable effort to increase the rigor of the EPA’s scientific decision making by emulating data-sharing protocols utilized in scientific peer-review.¹⁰ However, the rule mischaracterizes, or more likely exploits, the practicalities of scientific research in order to make well-supported scientific

5. See Strengthening Transparency in Regulatory Science, 83 Fed. Reg. 18768 (proposed Apr. 30, 2018) (to be codified at 40 C.F.R. pt. 30); see generally ORESKES & CONWAY, *supra* note 3; see generally JAMES HOGGAN WITH RICHARD LITTLEMORE, CLIMATE COVER-UP (Susan Folkin ed. 2009).

6. See *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983).

7. See *id.* at 41–43.

8. See *id.*

9. Strengthening Transparency in Regulatory Science, 83 Fed. Reg. at 18768.

10. See JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, <http://science.sciencemag.org/content/early/2018/04/30/science.aau0116> (last visited Dec. 13, 2018).

research unavailable to the EPA.¹¹ As it stands, the rule would do little more than seriously handicap the EPA's decision-making.

The deficiencies of the Secret Science rule are two-fold: first, making the data publicly available would not meaningfully increase the rigor with which these studies are judged, and second, the rule makes vast swaths of credible scientific research unavailable, hobbling agency decision-making.¹² This proposed rule would do little, if anything, to increase the robustness with which scientific research is reviewed. Editors of five leading scientific journals: *Cell*, *Nature*, *Science*, *Public Library of Science Journals*, and *Proceedings of the National Academy of Sciences* released a statement criticizing the rigidity of the rule in the face of the peer-review procedures already in place.¹³ The statement points out that multiple leading scientific journals have already enacted data-sharing policies between scientists to improve the strength of their peer-review processes.¹⁴

Furthermore, these transparency policies are supplementary to the already existing peer-review process in which independent labs review another's work to validate results.¹⁵ For example, the Harvard Six Cities study has already shared its data with other researchers, and had its results validated through replication.¹⁶ The very study that Secret Science's proponents are targeting¹⁷ provides a perfect example of the strength of scientific peer-review. It is a dubious assertion to say that the lay public would be able to meaningfully contribute to this process if only they had access to the highly technical scientific data. These lay contributions, if

11. Shi-Ling Hsu, *People and Science Collateral Damage in War on Regulations*, Apr. 24, 2018, <https://niskanencenter.org/blog/people-and-science-collateral-damage-in-war-on-regulations-part-x/> [hereinafter *People and Science*].

12. PUBLIC HEALTH, MEDICAL, ACADEMIC, AND SCIENTIFIC GROUPS OPPOSE EPA TRANSPARENCY RULE, <https://mcmprodaaas.s3.amazonaws.com/s3fs-public/EPA%20Transparency%20Rule%20FINAL.pdf?oNbdIjRo8Ick2LxdMeWaqWuYu4NM3unc> (last visited Dec. 13, 2018); JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10; Hsu, *People and Science*, *supra* note 11.

13. JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10.

14. *Id.*

15. UNIV. CAL. MUSEUM OF PALEONTOLOGY, *Scrutinizing Science: Peer Review, UNDERSTANDING SCIENCE*, https://undsci.berkeley.edu/article/howscienceworks_16 (last visited Dec. 13, 2018).

16. D. Krewski et. al., *Reanalysis of the Harvard Six Cities Study, Part I: Validation and Replication*, 17 *INHALATION TOXICOLOGY* 335, 335 (2008); Heather Mumford, *Center Receives Harvard Six Cities Study Research Data*, CENTER FOR THE HISTORY OF MEDICINE AT CONWAY LIBRARY, (June 4, 2018), <https://cms.www.countway.harvard.edu/wp/?p=14963>; HEALTH EFFECTS INSTITUTE, *Reanalysis of the Harvard Six Cities Study and the American Cancer Society Study of Particulate Air Pollution and Mortality at i-iv* (2006) <https://www.healtheffects.org/system/files/Reanalysis-Statement.pdf>.

17. Robinson Meyer, *Scott Pruitt's New Rule Could Completely Transform the EPA*, THE ATLANTIC, (Apr. 25, 2018), <https://www.theatlantic.com/science/archive/2018/04/how-the-epas-new-secret-science-rule/558878/>; Hsu, *People and Science*, *supra* note 11.

they would exist at all, are dismally minimal in comparison to the cost to agency decision-making that this rule would impose.¹⁸

By precluding the use of many credible research studies, make no mistake that the rule's cost on agency decision-making would be grave. In response to the proposed rule, a coalition of nearly seventy scientific, public health, academic and medical groups issued a statement lambasting the rule.¹⁹ Notable among these groups were the American Geophysical Union and the Geological Society of America, two natural science organizations who have historically been reticent to even dip their toe into the realm of politics.²⁰ The coalition argues that the rule would result in decisions based on "inadequate information" due to the exclusion of credible studies.²¹ As a result, the EPA would not allow the agency "to fulfill its mandate of protecting human health and the environment."²²

Once again, reference to the Harvard Six Cities study is illustrative. Despite the success of policies based on the study,²³ the EPA's proposed rule would prevent usage of this and similar studies to inform policy decisions. This is because federal law prevents a researcher from publishing confidential medical data without permission.²⁴ Getting permission would be an impossible task as many participants participated due to the explicit agreement that their data not be published.²⁵ Despite the language that the rule does not compel disclosure of confidential data, that is the exact data required for disclosure to be "in a manner sufficient for independent validation."²⁶ Thus, to bring the

18. See Elizabeth Anderson, *Democracy, Public Policy, and Lay Assessments of Scientific Testimony*, 8 EPISTEME 144, 144–46 (2011) (discussing the need to educate the lay public on second-order assessments of the reliability of information sources in light of the average person's inability to assess the merits of a scientific claim); see also John Moore, *Perspective: Does peer review mean the same to the public as it does to scientists?*, NATURE, (2006), <https://www.nature.com/nature/peerreview/debate/nature05009.html> (discussing the dangers of layperson interpretation of scientific research when that interpretation is done without the assistance of scientists).

19. PUBLIC HEALTH, MEDICAL, ACADEMIC, AND SCIENTIFIC GROUPS OPPOSE EPA TRANSPARENCY RULE, *supra* note 12.

20. Robinson Meyer, *Even Geologists Hate the EPA's New Science Rule*, THE ATLANTIC, (July 27, 2018), <https://www.theatlantic.com/science/archive/2018/07/scott-pruitts-secret-science-rule-could-still-become-law/565325/>.

21. PUBLIC HEALTH, MEDICAL, ACADEMIC, AND SCIENTIFIC GROUPS OPPOSE EPA TRANSPARENCY RULE, *supra* note 12.

22. *Id.*

23. Hsu, *People and Science*, *supra* note 11; see Andrew W. Correia et al., *Effect of Air Pollution Control on Life Expectancy in the United States*, 24 EPIDEMIOLOGY 23, 23 (2013).

24. Meyer, *supra* note 20; see also 45 C.F.R. § 164 (2018) (outlining federally mandated privacy and security requirements for private health information).

25. Hsu, *People and Science*, *supra* note 11.

26. Strengthening Transparency in Regulatory Science, 83 Fed. Reg. at 18771; Hsu, *People and Science*, *supra* note 11.

Harvard Six Cities study into compliance with the new rule, and be eligible for the EPA's usage, the researchers would have to violate federal law.²⁷

With the litany of criticisms levied at the rule, one has to ask: "How can anyone possibly think this is a good policy?" To understand the nature of the Secret Science rule, it is necessary to understand the lineage of postmodern anti-science dogma that has motivated its proposal. Any all-encompassing definition of postmodernism is bound to be inaccurate, it is enough to understand the movement as one that rejects metanarratives and broad statements of objective truth.²⁸ Science, as a field dedicated to seeking objective truths, has naturally become the target of postmodern critique.²⁹ Secret Science can best be understood as an attempt to infuse agency decision-making with these postmodern critiques.

The postmodern underpinnings of this rule can most readily be traced back to Jean-Francois Lyotard and Jacques Derrida.³⁰ Jean-Francois Lyotard heavily criticized the scientific method as "little more than a quest to confirm the correctness of hypotheses, which themselves are products of social structures and biases."³¹ Jacques Derrida assaulted the generalizability of scientific data, claiming that any observation or data could be open to multiple interpretations and that one's own biases dictated which interpretation was chosen.³² Both critiques help to explain the motivations of the Secret Science rule in the face of peer-review procedures already in place. Indeed, only when scientists are viewed as self-interested actors picking interpretations based on social biases for the purposes of confirming their own ideas does the current system appear inadequate. It is in the light of these postmodern critiques that the logic of the rule is made clear.

Secret Science's links to postmodernism go beyond a mere consistency of ideology. There is also a political history that links the Secret Science rule to these postmodern critiques. Although this story goes even farther back, it is relevant enough for our purposes to start with the tobacco industry's response to

27. Meyer, *supra* note 20; see also 45 C.F.R. § 164 (2018) (outlining federally mandated privacy and security requirements for private health information).

28. Hsu, *Accidental Postmodernists*, *supra* note 2, at 33–34.

29. See UNI. OF CALI. MUSEUM OF PALEONTOLOGY, *What is science?*, UNDERSTANDING SCIENCE, https://undsci.berkeley.edu/article/whatis-science_01 (last visited Apr. 19, 2019) (describing science as "a process of discovery that allows us to link isolated facts into coherent and comprehensive understandings of the natural world"); see also Hsu, *Accidental Postmodernists*, *supra* note 2, at 34–37; see e.g., Ross, *supra* note 4.

30. See Hsu, *Accidental Postmodernists*, *supra* note 2, at 34–36.

31. *Id.* at 34.

32. *Id.* at 36.

secondhand smoke concerns that came to a head in the nineties. In 1992, the EPA released a report outlining the harmful effects of secondhand smoke.³³ As a response, the tobacco industry adopted the approach of Fred Singer, in which it would attack science adverse to the industry as “junk” science.³⁴ Based on Singer’s approach, the industry circulated a handbook titled *Bad Science*. Within the handbook were sound-bite style “MESSAGES” that stated “[t]oo often science is manipulated to fulfill a political agenda,” that agencies manipulate science “to achieve a political goal,” and that the EPA’s report “allows political objectives to guide scientific research.”³⁵

As part of this postmodern assault on the EPA’s science, the tobacco industry also enlisted the efforts of Steven J. Milloy.³⁶ An employee of a lobbying firm hired by Philip Morris, Milloy began to brand science adverse to the industry as “junk science.”³⁷ He wrote for national publications and launched his own website to decry “faulty scientific data and analysis used to advance special and, often, hidden agendas.”³⁸ On the website he defines junk science by listing the types of individuals who would utilize junk science and the social ends that motivate them.³⁹ As Milloy puts it, agencies use junk science to increase their budgets and scientists use it to increase fame and fortune.⁴⁰

Singer and Milloy’s “critiques” of science mirror the postmodern critiques put forth by Lyotard and Derrida.⁴¹ Lyotard and Derrida focused their critiques on the influence of personal and social biases to attack the veracity of objective scientific claims.⁴² Singer and Milloy take these critiques and run with them, painting scientists and agencies as self-interested or politically motivated actors in order to attack research harmful to their employers’ interests. Devious political scientists appear to be the exact sort of postmodern boogymen that the EPA’s Secret Science rule is aimed at.

Other than the ideological similarities between Milloy’s attacks on science and the EPA’s proposed rule, he also represents the most direct political link between the rule and these postmodern

33. ORESKES & CONWAY, *supra* note 3, at 140.

34. *Id.* at 143.

35. *See id.* at 144–145.

36. *Id.* at 150.

37. *Id.* at 150–152.

38. *Id.*; *Junk science?*, JUNKSCIENCE.COM, <http://junksciencearchive.com/define.html> (last visited Dec. 13, 2018).

39. *Junk science?*, *supra* note 38.

40. *Id.*

41. *See* Hsu, *Accidental Postmodernists*, *supra* note 2, at 34, 36.

42. *Id.*

critiques.⁴³ In his role as a policy advisor for the Heartland Institute, another organization employed by the tobacco industry with its own anti-science history,⁴⁴ Milloy advocated heavily for the HONEST Act.⁴⁵ The HONEST Act was an act proposed by Texas representative Lamar Smith that is nearly identical to the rule proposed by the EPA.⁴⁶ Despite being killed in the legislature, Smith, Pruitt and company have revived the HONEST Act in the administrative realm in the form of “Secret Science”. Just as he threw his weight behind the HONEST Act, Milloy has also shown support for the EPA’s promulgated rule.⁴⁷ Through Milloy, we can trace the motivations behind the EPA’s Secret Science rule to the postmodern criticisms of Lyotard and Derrida.

Having laid out the implications and motivations behind Secret Science, the question remains as to whether “Secret Science” will survive judicial scrutiny. Is the judicial system amenable to the sorts of postmodern reasonings that support this rule? A dive into *State Farm* doctrine appears to answer that question with a negative.

III. STATE FARM AND SCIENTIFIC EVIDENCE

State Farm doctrine describes the standard for judicial review when an agency is found to make a reversal of policy.⁴⁸ In *State Farm*, the Court was faced with a challenge to the National Highway and Traffic Safety Association’s decision to rescind a promulgated rule requiring passive restraints in automobiles.⁴⁹ The Court, citing *Atchison, Topeka & Santa Fe Ry. Co. v. Wichita Bd. of Trade*, 412 U.S. 800, 807-808 (1973), noted that a settled course of agency action carries a presumption that the action is best for serving the policies entrusted to the agency. Based on this presumption, the Court justified its more searching review of NHTSA’s action, compared to the more deferential standard if it were reviewing an initial action by the agency.⁵⁰

43. See Meyer, *supra* note 17.

44. See HOGGAN, *supra* note 5.

45. See Meyer, *supra* note 17.

46. See HONEST Act, H.R. 1430, 115th Cong. (2017); see also Strengthening Transparency in Regulatory Science, 83 Fed. Reg.; see also Meyer *supra* note 17.

47. Meyer, *supra* note 17.

48. Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29 (1983).

49. *Id.* at 34.

50. *Id.* at 41–43. The standard is not heightened compared to review of an initial agency action per the decision in *FCC v. Fox TV Stations, Inc.*, 556 U.S. 502 (2009), but must rebut the aforementioned presumptions that are not present when reviewing an initial agency action.

When applying *State Farm*, the court must first decide if there has been a reversal of policy sufficient to trigger the review.⁵¹ To review an agency reversal of policy, a court must determine if the agency considered the relevant factors and whether there has been a clear error of judgment.⁵² The Court in *State Farm* expanded on this test by explaining:

Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.⁵³

If a court has found that any of the above situations have occurred, *State Farm* dictates that the reversal of policy is ruled arbitrary and capricious.⁵⁴ In addition, there is no requirement that the agency's reasoning be *better* than the old reasoning, only that the requirements of *State Farm* are satisfied.⁵⁵

There are two main characteristics of *State Farm* that work to ensure science is utilized in agency decision-making: (1) It is triggered by significant policy reversals, and (2) the nature of the *State Farm* inquiry itself.⁵⁶ Because *State Farm* doctrine is triggered by a significant policy reversal, the doctrine comes into play when evidentiary concerns are most critical.⁵⁷ When it is triggered, the nature of the *State Farm* inquiry restricts judges from inadvertently engaging in the normative judgements that can accompany evaluation of agency decision-making while ensuring that credible scientific evidence has been utilized.

51. *See id.*

52. *Id.* at 43.

53. *Id.*

54. *Id.*

55. *FCC v. Fox TV Stations, Inc.*, 556 U.S. 502, 516 (2009).

56. *See* David H. Becker, *Changing Direction in Administrative Agency Rulemaking: "Reasoned Analysis," The Roadless Rule Repeal, and the 2006 National Park Service Management Policies*, 30 ENVIRONS 65 (2006); *see also* Christopher H. Schroeder & Robert L. Glicksman, *Chevron, State Farm, and EPA in the Courts of Appeals During the 1990s*, 31 ENVTL. L. REP. 10371 (2001); *see also State Farm* 463 U.S. at 41–44.

57. *See State Farm* 463 U.S. at 41–44.

*A. State Farm is Triggered by
Significant Policy Reversals*

One of the advantages of *State Farm* is that it is triggered by abrupt changes in course relative to previous agency direction.⁵⁸ While *State Farm* itself involved the rescission of a rule, the court has applied the *State Farm* standard to a host of situations ranging from deviations from precedent during adjudication to changes between the draft and final version of a decisional document.⁵⁹ Although there has been no clearly elucidated standard, it does appear that the courts look for agency actions that are based on a change in agency rationale.⁶⁰

It is beneficial that *State Farm* is triggered by changes in agency direction because this is the moment when evidentiary concerns are arguably most critical. As described in *Atchison*, a settled course of action is thought to represent an informed judgment by the agency that the policy will be carried out by that action.⁶¹ From this proposition flows the presumption that an agency's settled course of action represents the best way to meet policy objectives.⁶² Put another way, a settled course of agency action represents an objective conclusion about the action's effectiveness in carrying out policy, based on agency expertise, deliberations, and fact finding. Thus, when the agency changes course, there is a need to ensure that the new agency direction still comports with objective reality. To fail to do so would give agencies the freedom to alter their course without any regard to the actual fulfillment of the agency's given policy goals. Furthermore, the rule insulates agency decision-making from the "whipsawing" of competing political pressures by focusing the inquiry on objective reality rather than subjective political desires. The *State Farm* inquiry operates at this critical juncture to ensure that agencies do their due diligence to the fulfillment of their policy goals.

58. *Id.*

59. *See, e.g.* Nat'l Fed'n of Fed. Emps. v. FLRA, 412 F.3d 119, 124-25 (D.C. Cir. 2005) (applying *State Farm* review when the Court found the agency had departed from precedence in right to work situations); *see, e.g.* Sierra Club v. U.S. Army Corps of Eng'rs, 772 F.2d 1043, 1043, 1047-48 (2d Cir. 1985) (applying *State Farm* review when the draft decisional document indicated "significant adverse impact" to striped bass while the final draft indicated only "minor impacts"); *see* N.Y. Pub. Interest Research Grp v. Johnson, 427 F.3d 172, 182-183 (2d Cir. 2005) (applying *State Farm* review when the EPA altered compliance schedule requirements).

60. *See* N.Y. Pub. Interest Research Grp., 427 F.3d 172 at 182-183; *see also* The Fund for Animals v. Norton, 294 F. Supp. 2d 92, 105 (D.D.C. 2003).

61. *Atchison*, 412 U.S. at 807-808.

62. *State Farm*, 463 U.S. at 42.

This aspect of *State Farm* can be seen in action during the storied saga of snowmobile access in Yellowstone National Park.⁶³ In 1996 through 1997, large numbers of bison migrated out of Yellowstone due to increased snowmobile usage and had to be killed to prevent the spread of disease.⁶⁴ The Fund for Animals sued the National Parks Service as a result and the two parties reached a settlement agreement where the NPS would create a plan to regulate snowmobile usage.⁶⁵ By 2001, there was a final rule that severely limited snowmobile use in the following years, ending with the complete elimination of snowmobile usage by the 2003-04 winter season.⁶⁶ However, the rule was stayed by the newly inaugurated Bush administration.⁶⁷ After another legal challenge and a new review by the Bush administration, the NPS issued a new rule that allowed for a much larger number of snowmobiles compared to the old rule and did not include any trail closure or phase out provisions.⁶⁸

In reviewing the new rule, and ultimately striking it down, the court justified its application of *State Farm* analysis with this statement:

This dramatic change in course, in a relatively short period of time and conspicuously timed with the change in administrations, represents precisely the ‘reversal of the agency’s views’ that triggers an agency’s responsibility to supply a reasoned explanation for its change While the Snowcoach Rule was not a rule of long-standing, as it was immediately stayed by the incoming Bush administration, the process leading to the phase-out decision was lengthy, complex, and complete.⁶⁹

The court was signaling that when there are changes in agency policy, there are evidentiary concerns regarding the new action and *State Farm* analysis is needed.⁷⁰ Furthermore, by referencing the “lengthy, complex, and complete” nature of the rule, the court again calls attention to the evidentiary concerns when there is a significant reversal of policy.⁷¹ *Fund for Animals v. Norton*

63. See *Fund for Animals*, 294 F. Supp. 2d 92.

64. *Id.* at 99.

65. *Id.*

66. *Id.* at 99–100.

67. *Id.*

68. *Id.*

69. *Fund for Animals*, 294 F. Supp. at 105.

70. See *id.*

71. *Id.*

provides a clear example of the necessity and advantages of triggering *State Farm* review when an agency reverses a settled course of action.

B. Nature of the State Farm Inquiry

The nature of the *State Farm* inquiry confers two benefits that are particularly suited to keeping science in agency decision-making: (1) It limits excessive judicial activism and (2) it forces disclosure of agency reasoning and the evidence it is based on. Application of *State Farm* restricts judicial activism because it does not require the court to examine the wisdom of a decision.⁷² Instead, the focus of the inquiry is on the reasons given by the agency and their congruence with proffered evidence and statutory mandates.⁷³ Disclosure of agency reasoning and evidence keeps science in agency decision-making because it prevents agencies from “hiding the ball” and making their decisions on the whims of the President and political appointees. An analysis of the four major prongs of *State Farm* review will demonstrate how they restrict judicial activism, and analysis of the rule as a whole will demonstrate how it forces disclosure of the agency’s evidence.

The first aspect of *State Farm* requires a court to ascertain if the agency “relied on factors which Congress has not intended it to consider.”⁷⁴ This element restricts a judge from making normative judgments because the focus of the inquiry is on what Congress had intended. To determine what factors the agency can rely on, a judge must not consider what he or she thinks is good policy, but what Congress has determined is good policy.⁷⁵ *State Farm* itself, is an example of how the Court refers to Congress’ intent when describing relevant factors.⁷⁶ When the Court in *State Farm* instructed the NHTSA to reexamine its findings on seatbelt usage, the Court warned the agency to give passenger safety due weight in its evaluation.⁷⁷ The Court did so because it noted that Congress had identified safety as the “pre-eminent factor” under

72. *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (clarifying the scope of review by stating, “the scope of review under the ‘arbitrary and capricious’ standard is narrow, and a court is not to substitute its judgment for that of the agency”).

73. *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (stating that the agency must “articulate any rational connection between the facts found and the choice made” to pass the arbitrary and capricious standard).

74. *State Farm*, 463 U.S. at 43.

75. *Id.*

76. *See id.* at 55.

77. *Id.*

the authorizing statute.⁷⁸ This instruction to the NHTSA is a demonstration of how the court restrains itself to Congress' intent.⁷⁹

Another restriction on the Court's determination of "relevant factors" is that the Court cannot require consideration of factors that are not within the ambit of the agency's expertise.⁸⁰ This restriction acts as a common law obstacle to judicial activism in *State Farm* review. In *Pension Benefit Guaranty Corp.*, 496 U.S. 633 ("PBGC"), the Supreme Court overturned a decision by the Court of Appeals because the Court of Appeals required the agency to consider the "policies and goals" of the bankruptcy and labor fields.⁸¹ The Supreme Court described the agency as "ill equipped" to adequately consider the goals and policies of the bankruptcy and labor fields and overturned the decision on these grounds.⁸² The decision in *PBGC* demonstrates that even if a judge personally felt that a factor is relevant, he would be barred from requiring its consideration if it is something that the agency is not prepared to evaluate.⁸³

For the second factor of *State Farm*, the court must determine if the agency ignored "an important aspect of the problem" the action sought to address.⁸⁴ This, of course, requires a court to determine the "important aspects." While the language does not contain an explicit constraint like Congress's intent, case law demonstrates that courts have typically supported their determinations with reference to a statute or agency policy.⁸⁵ For example, in *Zinke*, 865 F.3d at 605–06, the D.C. Circuit Court determined an important aspect through reference to the agency's own policy. *Zinke* involved an attempt by the Fish and Wildlife Service (FWS) to remove federal protections from a population of gray wolves.⁸⁶ The action was struck down, partly based on a finding that historical range was an important aspect ignored by the FWS.⁸⁷ In determining that historical range was an important aspect, the court looked to the FWS's own "Range

78. *Id.*

79. *Id.*

80. *Pension Benefit Guar. Corp. v. LTV Corp.*, 496 U.S. 633, 646 (1990) (finding that the lower court was incorrect to deem the agency action as arbitrary and capricious for failure to consider policy that the agency was "ill equipped" to consider).

81. *Id.*

82. *Id.*

83. *See id.*

84. *State Farm*, 463 U.S. at 43.

85. *Humane Soc'y of the United States v. Zinke*, 865 F.3d 585, 605–606 (2017); *MetLife, Inc. v. Fin. Stability Oversight Council*, 177 F. Supp. 3d 219, 240–242 (2016).

86. *Zinke*, 865 F.3d at 589.

87. *Id.* at 605–606.

Policy.”⁸⁸ The FWS’s Range Policy explicitly mentioned loss of historical range as an important aspect of the determinations needed to justify the FWS’s action.⁸⁹ Despite the lack of doctrinal constraint on how to find an important aspect, the court in *Zinke* still felt the need to justify their finding through reference to the FWS’s Range Policy.⁹⁰

Another example of the court’s reliance on statute and agency policy to determine important aspects is seen in a case involving the Dodd-Frank Act: *Metlife, Inc. v. Fin. Stability Oversight Council*, 177 F. Supp. 3d 219, 240–242 (2016). In *Metlife*, the Financial Stability Oversight Council (FSOC) designated Metlife, Inc. for supervision by the Board of Governors of the Federal Reserve System (Federal Reserve) under enhanced prudential standards.⁹¹ The court struck down this designation by finding that cost was an important aspect that the FSOC ignored when making the designation.⁹² To find that cost was an important aspect, the court first looked to the empowering statute, the Dodd-Frank Act.⁹³ The Act stated that “risk-related factors that the Council deems appropriate” must be considered.⁹⁴ Noting that cost-benefit analysis is essential to the administrative process at large, the court determined that cost was an “appropriate” factor.⁹⁵ Furthermore, the court felt the need to demonstrate that cost was a “risk-related factor” to bring it into the ambit of the Act, serving as another example of the restrictions on a judge’s determination of an important aspect.⁹⁶ Application of *State Farm*’s “important aspect” test in *Zinke* and *Metlife* demonstrate that a court’s finding of “important aspects” are limited by statutory and agency policy judgments.

The third factor considered in *State Farm* is whether the agency “offered an explanation for its decision that runs counter to the evidence.” For this factor, scientific and factual evidence, in tandem with the adversarial nature of judicial proceedings, work to restrict judges from making normative evaluations of the agency’s decision. Appreciation of the epistemic value of scientific evidence is crucial to understand how this works. When scientific evidence is available before a court or agency, the conclusions from that evidence necessarily limit the realm of logical

88. *Id.*

89. *Id.*

90. *Id.*

91. *MetLife, Inc. v. Fin. Stability Oversight Council*, 177 F. Supp. 3d 219, 223–24.

92. *Id.* at 240–242.

93. *Id.*

94. 12 U.S.C. § 5323(a)(2)(K) (2018).

95. *Metlife*, 177 F. Supp. 3d at 240–242.

96. *Id.*

explanations for an agency action. Conversely, evidence that is scientifically dubious provides a weaker set of conclusions that do little to reveal the realm of possible explanations. From this perspective, an explanation that runs counter to the evidence can be understood as one that exists outside of the realm of possibilities revealed by the evidence. Evaluation of this factor depends not on the wisdom of the explanation considering the evidence, but whether the evidence has created a logical exclusion to that explanation.

That said, there is an obvious problem: generalist judges may over or underestimate the scope of possible explanations that the evidence allows. Full understanding of what scientific evidence “allows” involves interpretation of technical facts, which may be beyond the scope of a generalist judge’s abilities.⁹⁷ The Herculean task faced by generalist judges is not just to gain this depth of knowledge, but to do so on a wide range of issues.⁹⁸

The adversarial nature of court proceedings is the critical remedy to this problem. Each side of a dispute has incentive to present the logical conclusions resulting from the evidence, but also to point out the weaknesses of the other side’s logic. This may involve attacks on the veracity of proffered evidence to call into question the strength of the conclusions that result from the evidence. In doing so, the parties will partake in a form of “judicial peer-review” where arguments are made on the science underlying a piece of evidence. So, while it is true that a generalist judge may lack the expertise to discern the logical bounds created by the evidence, the adversarial parties will naturally carry out that task on behalf of the judge.⁹⁹ This leaves the judge with the task of evaluating each side’s logical arguments, a task that all judges are deeply familiar with. The third factor of *State Farm* plays on the characteristics of scientific evidence and the advantages of adversarial proceedings to restrict judicial activism.

State Farm’s fourth factor is whether the explanation is “so implausible that it could not be ascribed to a difference in view or the product of agency expertise”. This fourth factor has also been described as a finding of “clear error of judgment”. In

97. See Ronald J. Krotoszynski, Jr., “History Belongs to the Winners”: *The Bazelton-Leventhal Debate and the Continuing Relevance of the Process/Substance Dichotomy in Judicial Review of Agency Action*, 58 Admin. L. REV. 995, 1007 (2006) (quoting Judge Wald who described generalist judges’ ability to completely understand scientific material as “highly suspect”).

98. See *id.* at 1007–09 (giving accounts from two judges about the difficulty of sifting through massive amounts of evidence, and having to do so for a wide range of topics).

99. See e.g. *Boeing Co. v. Cascade Corp.*, 920 F. Supp. 1121, 1123 (D. Or. 1996) (a CERCLA contribution case in which the judge praised the two adverse parties for the clarity they were able to bring to a complicated technical issue).

describing a “clear error of judgment” by an agency, Judge Lasker of the New York Southern District described their actions as “putting a tutu on an elephant and calling it a ballerina”.¹⁰⁰ Judge Lasker’s descriptive use of simile demonstrates how extreme an agency’s action must be to be considered a “clear error of judgment”.¹⁰¹ This factor gives little leeway for a judge to impose his own views while still allowing him to strike down an action should it be based on no evidence whatsoever.

Taking these four factors in a *State Farm* analysis as a whole reveal how they work to ensure reasonable usage of scientific evidence in forming agency decisions, insulating agency decision-making from postmodern influence. *State Farm*’s first two factors impose procedural pressures on agency decision-making to ensure that their reasoning is exposed. The first factor incentivizes an adverse party to look through and expose agency reasoning while the second factor incentivizes an agency to reveal its reasonings on its own.¹⁰² These two factors ensure that only Congress’ intended considerations motivates agency actions. *State Farm*’s final two factors ensure congruency between the explanation given and the action taken, in light of the exposed evidence.¹⁰³ Restated, these two factors examine the link (the agency’s explanation) between the considerations exposed by the first two parts of *State Farm*, and the agency’s action.

State Farm heavily incentivizes usage of scientific evidence in agency decision-making by inquiring into the logical relationship between agency explanation and the proffered considerations. Only evidence that is scientifically sound can provide well supported conclusions that demonstrate a logical relationship between an explanation and the factors considered. In this way, *State Farm* necessitates the inclusion of scientific evidence if an agency action is to survive judicial review, making it utterly anathema to postmodernism’s rejection of objective truths. If an action has survived a *State Farm* analysis, we are left with an action that (1) has taken account of all statutorily mandated and permissible factors, and (2) has relied on credible evidence to support its underlying explanations.

100. *United States v. 27.09 Acres of Land*, 760 F. Supp. 345, 353 (S.D.N.Y. 1991).

101. *See id.*

102. *See State Farm*, 463 U.S. at 43.

103. *See id.*

IV. STATE FARM AND “SECRET SCIENCE”

Having outlined the contours of *State Farm* and the EPA’s Secret Science rule, we now turn our attention to the applicability of *State Farm* to the Secret Science rule. To answer this question, we must analyze the proposed rule to see if it triggers *State Farm* review and how it would fare under that review. Unlike previous *State Farm* case law, which appear to take it as a given that a reversal of longstanding policy has occurred,¹⁰⁴ the peculiar characteristics of the EPA’s rule may call into question if *State Farm* is triggered at all. When *State Farm* analysis itself is applied, it does not appear that the EPA rule will pass muster.

A. Does “Secret Science”
Trigger *State Farm*?

One of the peculiar aspects of the EPA’s proposed rule is that it is not entirely clear whether *State Farm* analysis is triggered at all. Unlike previous *State Farm* cases, which involved rescissions of a previously adopted rule or other facially recognizable reversals,¹⁰⁵ the EPA rule’s reversal of policy is not as conspicuous. In fact, the EPA’s own Notice of Proposed Rulemaking (NPR) describes the rule as a continuation of transparency initiatives undertaken by the EPA, as well as ones laid out in executive orders.¹⁰⁶ However, as demonstrated by *Fund for Animals v. Norton*, the courts have been sensitive to the larger context of an issue and will likely see through the EPA’s attempts to avoid *State Farm* review.¹⁰⁷

As part of the larger context, the court will likely look at the effect of the rule on usage of the Harvard Six Cities study, and similar studies, in informing the EPA’s decisions. Particularly, the court should see that these studies, and any future studies of similar nature, will no longer be used to inform agency decision-making.¹⁰⁸ The rule represents a paradigmatic shift for EPA decision-making: before the rule, these studies could be used;

104. See, e.g. Nat’l Fed’n of Fed. Employees v. FLRA, 412 F.3d 119, 120 (D.C. Cir. 2005); see, e.g. Sierra Club v. United States Army Corps of Eng’rs, 772 F.2d 1043, 1046 (2d Cir. 1985); see, e.g. Humane Soc’y of the United States v. Zinke, 865 F.3d 585, 589 (D.C. Cir. 2017).

105. See Becker, *supra* note 56.

106. Strengthening Transparency in Regulatory Science, 83 Fed. Reg. at 18768.

107. See *The Fund for Animals v. Norton*, 294 F. Supp. 2d 92, 105. (D.D.C. 2003).

108. See Hsu, *People and Science*, *supra* note 11; see also JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10; see also PUBLIC HEALTH, MEDICAL, ACADEMIC, AND SCIENTIFIC GROUPS OPPOSE EPA TRANSPARENCY RULE, *supra* note 12.

after the rule, they cannot. From this perspective, the court should see that the rule does not represent a continuing dedication to transparency, but a departure of policy on what evidence can inform the EPA's decisions.

Despite being framed as a continuation of transparency policies, this rule is closer to a reversal of policy *à la Norton* than it is a continuation of policy. In *Norton*, the court called attention to the “lengthy, complex, and complete” deliberations that led to the policy the agency was trying to reverse.¹⁰⁹ The court did so because, despite not being a longstanding rule, the “lengthy, complex, and complete” deliberations gave such evidentiary weight to the policy that its reversal triggered *State Farm* analysis.¹¹⁰ “Secret Science” is an even stronger case for *State Farm* review than in *Norton* because there would be reversal of a policy that is both weighty and longstanding. Current policies are longstanding as evidenced by the EPA's reliance on them for its entire lifetime.¹¹¹ Reversal of longstanding policy is the quintessential case for *State Farm* review.¹¹² Furthermore, the success of agency decisions based on these types of studies provide direct evidence of the soundness of current policy.¹¹³ Reversing policy in light of this evidence of success is the exact sort of situation that *State Farm* doctrine is concerned with.¹¹⁴ Because of the longstanding nature of current policies and the significant benefits that have accrued from them, Secret Science's reversal on what evidence the EPA is allowed to consider should be enough to trigger a *State Farm* analysis.

B. Can “Secret Science” Survive *State Farm*?

If challenged, Secret Science is likely to fail under *State Farm* review. Because of the problems outlined above, it is very likely that the rule would be struck down for failure to consider an important aspect of the problem and offering an explanation that runs counter to the evidence. It is unlikely that the rule would

109. *Fund for Animals*, 294 F. Supp. at 105.

110. *See id.*

111. *See, e.g. Dow Chemical Co. v. Blum*, 469 F. Supp. 892, 896 (E.D. Mich. 1979) (EPA utilized epidemiological studies when it decided to issue emergency suspension orders); *see also Correia supra* note 23 (describing the successes of policies based on the Harvard Six Cities study).

112. *See Motor Vehicles Mfrs. Ass'n v. State Farm, Mut. Auto. Ins. Co.*, 463 U.S. 29, 42 (1983) (“Accordingly, an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change”); *see also Becker, supra* note 56.

113. *Correia, supra* note 23 (describing the successes of policies based on the Harvard Six Cities study).

114. *See State Farm*, 463 U.S. at 43.

fail the first prong of *State Farm* because, while we may question the wisdom of their consideration, transparency and the strength of agency data is undoubtedly a relevant factor intended for consideration by an agency.¹¹⁵ The “clear error of judgment” prong will not be an issue because, while the rule is clearly of questionable wisdom, it does not rise to the level of clear error.¹¹⁶

The first fatal flaw of the EPA’s Secret Science rule is that it fails to consider an important aspect of the problem. Based on the Notice of Proposed Rulemaking, the EPA makes it clear that the issues of transparency and credibility of research are the problems that the rule seeks to address.¹¹⁷ However, in proposing the strict rule requiring underlying data be made publicly available “in a manner sufficient for independent validation”,¹¹⁸ the EPA very clearly throws the baby out with the bath water. In attempting to address issues of transparency and credibility, the rule throws out credible, transparent and *useful* research.¹¹⁹ This is because the EPA is ignoring a critically important aspect of the problem: the peer-review process.

Without a peer-review process, the problems that Secret Science addresses are very real. However, the problem for the EPA is that peer-review exists, and it addresses the issues of transparency and credibility in a way that makes the costs of the rule largely unjustified.¹²⁰ As has already been pointed out, many of the leading scientific journals have already adopted policies to increase transparency.¹²¹ These transparency policies increase the credibility of an already credible peer-review process.¹²² Although studies are reviewed by other scientists, peer-review is carried out by independent reviewers and

115. See 42 U.S.C. § 7403 (2017) (laying out the requirements for the EPA to establish a national scientific research program to assist with the administration of the Clean Air Act); see also 33 U.S.C. § 1254 (2017) (laying out the requirements for the EPA to establish a national scientific research program to assist with the administration of the Clean Water Act); see also 42 U.S.C. § 6912(a)(1) (2018) (giving wide discretion to the EPA administrator on issues relating to the research undertaken to carry out the Resource Conservation and Recovery Act).

116. See *27.09 Acres of Land*, 760 F. Supp. at 353.

117. Strengthening Transparency in Regulatory Science, 83 Fed. Reg. at 18768.

118. *Id.*

119. See Correia *supra* note 23; see also JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10; see also PUBLIC HEALTH, MEDICAL, ACADEMIC, AND SCIENTIFIC GROUPS OPPOSE EPA TRANSPARENCY RULE, *supra* note 12.

120. See SCRUTINIZING SCIENCE: PEER REVIEW, *supra* note 15; see also JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10; see also PUBLIC HEALTH, MEDICAL, ACADEMIC, AND SCIENTIFIC GROUPS OPPOSE EPA TRANSPARENCY RULE, *supra* note 12.

121. JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10.

122. See *id.*

publications are careful to avoid conflicts of interest.¹²³ The transparency policies allow the transfer of the exact data that Secret Science requires to qualified individuals so that they may engage in a more robust and effective peer-review process.¹²⁴ The main difference between the EPA's proposal and the peer-review policies of the scientific community, is that these policies are sensitive to the realities of their research and allows for secrecy from the public when required.¹²⁵ To put it simply, the only way for the EPA to have found a problem in the first place was to ignore the strengths of these policies altogether.

The EPA, in its NOPR makes some passing reference to a "replication crisis" and the recommendations of bipartisan reports in what is likely an attempt to paint current peer-review procedures as inadequate.¹²⁶ Furthermore, the NOPR states that the Secret Science rule is consistent with the reactions of scientific publications to the "replication crisis".¹²⁷ However, the editors of the journals mentioned, as well as the author of the reports referenced, have issued statements contradicting the lip service the EPA has paid them.¹²⁸ It is unlikely that a court will accept this half-hearted attempt by the EPA to address the existence of peer-review in light of these statements. As a result, it is very likely that a court would find that the EPA has ignored an important aspect of the problem.

The other major deficiency of the Secret Science rule is that the EPA's explanation runs counter to the evidence before it. Part of the EPA's proffered explanation for the rule is that "[u]sing scientific information that can be independently validated will lead to better outcomes..."¹²⁹ However, statements from leading scientific journals and public health organizations argue that just the opposite is true.¹³⁰ Even without the statements from experts, the rule's lack of exemptions demonstrate that the rule will not lead to "better outcomes".¹³¹ Because there are no

123. PEER REVIEW, <https://www.springer.com/gp/authors-editors/editors/peer-review/32888> (last visited Dec. 14, 2018).

124. Strengthening Transparency in Regulatory Science, 83 Fed. Reg. at 18768; see JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10.

125. See JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10.

126. Strengthening Transparency in Regulatory Science, 83 Fed. Reg. 18768 at 18770.

127. *Id.*

128. See Meyer, *supra* note 17.

129. Strengthening Transparency in Regulatory Science, 83 Fed. Reg. 18768 at 18770.

130. See Hsu, *People and Science*, *supra* note 11; see also JOINT STATEMENT ON EPA PROPOSED RULE AND PUBLIC AVAILABILITY OF DATA, *supra* note 10; see also PUBLIC HEALTH, MEDICAL, ACADEMIC, AND SCIENTIFIC GROUPS OPPOSE EPA TRANSPARENCY RULE, *supra* note 12.

131. See Strengthening Transparency in Regulatory Science, 83 Fed. Reg. 18768 at 18770.

exemptions, scientists in charge of studies like the Harvard Six Cities study would have to get the permission of every participant in the study or violate federal law for their studies to be used.¹³² Studies that have resulted in successful agency decisions¹³³ will no longer be used because of the rule's complete ignorance or disregard for the realities of medical studies.

Furthermore, with the rule excluding studies like the Harvard Six Cities study, the studies that remain can hardly be said to "lead to better outcomes". When you exclude studies where the participants' data cannot be published, you are left with two options: (1) studies with smaller participant pools or (2) studies done on animal subjects. Because of participant reticence to submit their personal details for publication,¹³⁴ there will be a smaller participant size for any Secret Science compliant studies. The problem with studies done on smaller participant pools is that the precision and reliability of a study tends to positively correlate with sample size.¹³⁵ Larger sample sizes allow scientists to observe more subtle causal chains and have greater confidence in their results.¹³⁶ Furthermore, larger sample sizes are required in experiments with large variation in study outcome to offset the statistical effects of that variation.¹³⁷ This is particularly important for epidemiological studies as they experience high variation in study outcome due to the effects of socioeconomic, cultural, genetic and biological variations.¹³⁸

Animal studies are equally problematic because there are well documented problems with the applicability of these studies to humans.¹³⁹ One major problem with animal studies comes from the way these animals are kept.¹⁴⁰ Study animals are kept in artificial laboratory conditions, with effects on the animals that influence the results of any trials done on them.¹⁴¹ Another significant problem is that scientists have difficulty replicating diseases in animal subjects due to the incongruence between human and animal models of disease.¹⁴² Animal testing regarding

132. See Meyer, *supra* note 17; see also 45 C.F.R. § 164 (2018) (outlining federally mandated privacy and security requirements for private health information).

133. See Correia, *supra* note 23.

134. Hsu, *People and Science*, *supra* note 11.

135. Karimollah Hajian-Tilaki, *Sample size estimation in epidemiologic studies*, 2 *Caspian J. Internal Med.* 289, 296–98 (2011).

136. *Id.*

137. *Id.*

138. *Id.* at 297.

139. Aysha Akhtar, *The Flaws and Human Harms of Animal Experimentation*, 24 *Cambridge Q. of Healthcare Ethics* 407, 408 (2015).

140. *Id.*

141. *Id.* at 408–09.

142. *Id.* at 409–11.

stroke medication provides an illustrative example.¹⁴³ The underlying physiology of stroke is well understood, and there was a concerted effort to create guidelines to replicate the disease, making it a perfect candidate to solve this problem.¹⁴⁴ Despite these efforts, a promising stroke medication deemed effective in animal trials utterly failed in clinical trials, demonstrating that the replication problem for stroke still existed.¹⁴⁵ These issues with animal testing are more than theoretical and have already resulted in misleading safety studies and the near-abandonment of useful human treatments.¹⁴⁶

In comparison to the types of studies excluded by the proposed rule, the studies that remain cannot be said to provide reliable information to lead to “better outcomes”. After Secret Science, the EPA will be left with small sample sizes and animal studies, whose inadequacies are abundantly clear. When the EPA’s explanation of “better outcomes” is in direct contradiction to the statements of science and health professionals, excludes credible studies, and ignores the inadequacies of Secret Science compliant studies, it is highly unlikely to pass *State Farm* muster.

The failure of this rule can be traced back to its philosophical foundation.¹⁴⁷ As discussed in Part 1, justification for this rule ultimately stems from a postmodern rejection of the objectivity of evidence. Postmodernists have long criticized the expressions of objective truth produced through science, arguing that they are inevitably the product of social, political and personal biases. Through the efforts of actors like Pruitt, Singer and Milloy, these critiques are trying to infiltrate the mechanics of agency decision-making. Unfortunately for proponents of Secret Science, *State Farm*, with its focus on logical relationships and evidence,¹⁴⁸ appears to reject that argument entirely. When postmodern arguments are the only leg that an agency can credibly stand on, *State Farm* will act as a formidable barrier to that action.

143. *Id.* at 409-10, 413-14.

144. Aysha Akhtar, *The Flaws and Human Harms of Animal Experimentation*, 24 Cambridge Q. of Healthcare Ethics 407, 409-10, 413-14 (2015).

145. *Id.*

146. *Id.* at 412-414 (Discussing how animal testing has exposed human test subjects to painful treatments and would have prevented the use of effective anti-cancer medication had animal testing been relied upon).

147. See Hsu, *Accidental Postmodernists*, *supra* note 2; see also Ross, *supra* note 4; see also ORESKES & CONWAY, *supra* note 3; see also HOGGAN, *supra* note 5.

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

V. CONCLUSION

The EPA, with its proposed Secret Science rule, has lobbed another shot at the utility of credible scientific research for agency decision-making. With the promulgation of the final rule delayed until at least 2020,¹⁴⁹ all parties will have to wait to see if their shot will hit its mark. Regardless, this proposed rule comes from a long tradition of financially motivated actors who, whether knowingly or unknowingly, have been waging a postmodern war on science and objectivity.¹⁵⁰ Postmodern critiques can arguably raise salient points about the weaknesses of scientific research. But when bad faith actors give credence to those arguments at the cost of good policy, it appears that *State Farm* will be waiting in the wings to swat these efforts down.

149. Josh Siegel, *EPA delays controversial proposal to limit what scientific research can be used*, Washington Examiner, (Oct. 17, 2018), <https://www.washingtonexaminer.com/policy/energy/epa-delays-controversial-proposal-to-limit-what-scientific-research-can-be-used>.

150. See Hsu, *Accidental Postmodernists*, *supra* note 2; see also Ross, *supra* note 4; see also ORESKES & CONWAY, *supra* note 3; see also HOGGAN, *supra* note 5.