

Washington University Law Review

Volume 95 | Issue 2

2017

Advisory Nonpreemption

Sarah E. Light

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Recommended Citation

Sarah E. Light, *Advisory Nonpreemption*, 95 WASH. U. L. REV. 325 (2017).

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ADVISORY NONPREEMPTION

SARAH E. LIGHT*

ABSTRACT

We are living in an era of dramatic and unpredictable technological and business innovation. Federal agencies have been at the forefront of updating substantive legal rules to meet new challenges not originally contemplated by Congress. Yet some innovations—for example, autonomous vehicles—also upset longstanding allocations of authority between the federal and state governments. Significant uncertainty about whether local or national concerns will predominate as innovations develop requires temporary flexibility in allocations of regulatory authority. This Article identifies a new method that federal agencies can use to promote such flexibility before the initiation of a rulemaking or before Congress acts to address such disruptions—advisory nonpreemption. Ordinary preemption shifts the balance of power from the states to the federal government. Advisory nonpreemption has the opposite effect. Advisory nonpreemption can open a dialogue among the federal government, the states, interest groups, and industry not only about the best substantive rules to address innovation, but who ought to govern and enforce those rules. Most importantly, advisory nonpreemption is a method of inserting de facto dynamic jurisdiction temporarily into an existing dual federalism scheme. This Article both describes advisory nonpreemption and defends its use as a normative matter using autonomous vehicle safety regulation as a case study. The approach's costs in temporary regulatory uncertainty are outweighed by its benefits in promoting innovation, transparency, and the public interest.

* Assistant Professor of Legal Studies and Business Ethics, the Wharton School, University of Pennsylvania. Thanks to Jessica Bulman-Pozen, Bill Buzbee, Gilles Duranton, Dan Farber, John Paul MacDuffie, David Mindell, Julian Davis Mortenson, Catherine Sharkey, Peter Strauss, J.B. Ruhl, Lou Virelli, Stephen Vladeck, Kevin Werbach, Hannah Wiseman, David Zaring, and participants in workshops at Georgetown Law School, University of Michigan Law School, the Kelley School of Business, the Alliance for Research on Corporate Sustainability, and the New Voices in Administrative Law program for helpful feedback on this project. Thanks also to Jennifer Ko and Adam Tsao for excellent research assistance. All errors are my own.

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INTRODUCTION

Innovations in technology are rapidly transforming people's lives. Autonomous vehicles (AVs) promise to revolutionize how we get from place to place, to improve mobility for those unable to drive, to reduce greenhouse gas emissions, and, most importantly, to reduce human driver error.¹ Unmanned aerial systems (drones) may not only deliver books more quickly from Amazon, but also facilitate "precision agriculture."² Smart homes and appliances can set thermostats to reduce energy demand, and can order more milk when supplies run low.³ Smart textiles with embedded sensors can transform how people interact with their clothing, with significant potential in medical and military contexts, among others.⁴ Technology is likewise transforming the business models that deliver these products and services. For example, the sharing or platform economy is upending longstanding legal relationships among people, goods, and services.⁵ Each of these innovations may follow an unpredictable path. For example, we do not yet know whether automated vehicle technology will replace human drivers, rendering steering wheels obsolete and cars fully "driverless," or whether instead technology will enhance or assist human driving capabilities. Nor do we know whether local concerns—such as weather differences, local driving norms, or urban density—will render fully driverless cars, also known as "Highly Automated Vehicles," (HAVs) a more local than national phenomenon.⁶ And while innovation often holds great promise, it can likewise harm users or third parties.⁷ The

1. See *infra*, Part II (discussing risks and potential benefits of autonomous vehicles).

2. Farhad Manjoo, *Think Amazon's Drone Delivery Idea is a Gimmick? Think Again*, N.Y. TIMES (Aug. 10, 2016), https://www.nytimes.com/2016/08/11/technology/think-amazons-drone-delivery-idea-is-a-gimmick-think-again.html?_r=0; Chunhua Zhang & John M. Kovacs, *The Application of Small Unmanned Aerial Systems for Precision Agriculture: A Review*, 13 PRECISION AGRICULTURE 693 (2012).

3. Ry Crist, *Best Smart Home Devices of 2017*, CNET (Aug. 7, 2017), <https://www.cnet.com/topics/smart-home/best-smart-home-devices/>. But see Stacey Higginbotham, *5 Reasons Why the 'Smart Home' is Still Stupid*, FORTUNE (Aug. 19, 2015, 12:32 PM), <https://perma.cc/DB53-W8GV>.

4. *Introduction*, SMART FABRICS SUMMIT (Apr. 11, 2016), <https://perma.cc/959W-UU7C>.

5. Sarah E. Light, *Precautionary Federalism and the Sharing Economy*, 66 EMORY L.J. 333, 335–37 (2017) (favoring a precautionary approach to the allocation of regulatory authority when business and technological innovation create uncertain, but potentially significant, environmental, health, or safety impacts).

6. See *infra*, Part II, and note 146, which distinguishes different levels of vehicle automation, including the dividing line between vehicles with at least some automated technologies (AVs), and HAVs, which are a subset of AVs in which the vehicle can perform all driving tasks without human intervention under some circumstances, and which are the subject of the case study I address here.

7. Some of these harms may be local in nature, such as vehicle crashes, while others may be national in scope, as evidenced by the recent nationwide hack of major websites via connected devices

law has traditionally protected us from significant risks; yet the law cannot always keep pace with the uncertainties of innovation.⁸

Innovation can challenge settled understandings of substantive legal rules, such as whether a robot can form the requisite “intent” to commit a crime, or whether an Uber or Lyft driver is an “employee” or “independent contractor,” and may require the reconsideration of existing legal categories.⁹ But innovation can also upset the balance of regulatory power among the federal, state, and local governments.¹⁰ *Federalism disruption* occurs when the existing allocation of authority is based on an assumption regarding certain basic facts about regulated technologies or forms of business, and innovations challenge that assumption.¹¹ For example, the federal statute that has regulated motor vehicle safety in the United States for the past fifty years delegates authority to the federal government to regulate the safety of the “vehicle” to the exclusion of state legislation or regulation.¹² States retain primary authority to regulate “driver” behavior through insurance, licensing, and common law tort rules.¹³ This general

like baby monitors. Nicole Perloth, *Hackers Used New Weapons to Disrupt Major Websites Across U.S.*, N.Y. TIMES (Oct. 21, 2016), https://www.nytimes.com/2016/10/22/business/internet-problems-attack.html?_r=0.

8. There is a distinction between *risk*, in which it is possible to calculate the probability of an event occurring, and *uncertainty*, in which it is not possible to calculate this risk. See FRANK H. KNIGHT, *RISK, UNCERTAINTY, AND PROFIT* (1921); see also Daniel Farber, *Uncertainty*, 99 GEO. L.J. 901, 903 (2011) (citing Knight and distinguishing risk from uncertainty).

9. See Eric Biber, Sarah E. Light, J.B. Ruhl & James Salzman, *Regulating Business Innovation as Policy Disruption: From the Model T to Airbnb*, 70 VAND. L. REV. (forthcoming 2017) (offering a theory of when business or technological innovation leads to policy disruption, and a framework for policy responses). Not all technological or business innovation leads to policy disruption. Whether policy disruption arises depends upon a number of factors, including how tightly legal rules are bound to existing business models and technologies, and whether the innovations raise the same or new policy concerns as compared to incumbents. *Id.*

10. Cf. Light, *supra* note 5, at 339–40 (arguing that the rise of the sharing economy upsets longstanding federalism equilibria relating to environmental impacts of transportation).

11. Cf. Biber et al., *supra* note 9. Federalism disruption is arguably one specific form of policy disruption. Here, I do not advance the overbroad claim that *all* innovation creates federalism disruption. Rather, I limit the scope of this article to those innovations that *do* raise such federalism challenges, and how agencies can respond by balancing the twin aims of promoting innovation and the public interest in periods of uncertainty about the impacts of such innovations.

12. National Traffic and Motor Vehicle Safety Act (Vehicle Safety Act), 49 U.S.C. § 30103(b) (2012). As of the date this Article went to press in September, 2017, the House of Representatives had passed a bill entitled the Self-Drive Act, H.R. 3388, 115th Cong., 1st Sess. (Sept. 6, 2017), <https://www.congress.gov/115/bills/hr3388/BILLS-115hr3388eh.pdf>, which would specifically address safety regulation of HAVs by preempting state regulations regarding vehicle “design, construction, or performance” that are not identical to federal safety standards, but which would not preempt state common law. The Senate has yet to act on this bill or propose its own alternative. Because this Article focuses on how federal agencies can address innovation uncertainty in a time-limited fashion, either before initiating a notice-and-comment rulemaking, or before Congress adopts new legislation to address a federalism disruption, a critique of the House bill is outside the scope of the Article.

13. A savings clause provides that federal motor vehicle safety standards do not preempt state

dividing line between state and federal authority was sensible at a time when vehicles and human drivers could be separated into two distinct categories, and both economies of scale in vehicle manufacturing and interstate transportation arguably favored uniform federal safety rules for vehicles.¹⁴

The rise of HAVs erodes the line between vehicles and drivers, creating a federalism disruption. Vehicle hardware and software can now perform functions once exclusively in the control of humans behind the wheel. While concerns regarding economies of scale in manufacturing and interstate spillovers remain, the rise of HAVs raises a number of new concerns. For example, the most significant benefit of HAVs is arguably their ability to reduce accidents that result from human error.¹⁵ But if HAVs cannot drive safely in snow or heavy rain, they may be terrific in Nevada but terrible in Maine. Different states may have compelling reasons to want different rules not only for human drivers, but for vehicles themselves. It may therefore be the case that HAVs will become a local, rather than national phenomenon. On the other hand, if HAVs move out of local testing grounds and begin to cross state lines more frequently, different state rules for HAVs could *themselves* be the cause of accidents. And HAVs and human drivers are likely to be sharing the roads for some time, raising additional safety concerns. Such “innovation uncertainties” can arise temporarily, including questions about what the most significant risks and benefits of the activity are; how those risks and benefits will be distributed locally, regionally, and nationally; what path the innovation may take in its development, and the timing of that development, among others.¹⁶

common law. 49 U.S.C. § 30103(e). In *Geier v. American Honda Motor Co.*, 529 U.S. 861, 883 (2000), the Court read the savings clause narrowly, holding that a state tort suit for failure to equip a vehicle with an airbag was preempted, because the operative federal motor vehicle safety standard adopted by the National Highway Traffic Safety Administration (NHTSA) specifically afforded manufacturers a choice of two passive restraints, and requiring airbags would interfere with the policy of affording a choice. However, more recently, the Court clarified in *Williamson v. Mazda Motor of America, Inc.*, 562 U.S. 323, 335 (2011), that state common law tort claims are not preempted if federal standards merely provide a safety floor. One key distinction between these cases was the agency’s evolving view of the savings clause, as the Court gave some deference to NHTSA’s views in each case. *Compare Williamson*, 562 U.S. at 335 (“[T]he Solicitor General tells us that [NHTSA’s] regulation does not preempt this tort suit.”), with *Geier*, 529 U.S. at 883 (affording deference to agency position that the state tort suit was preempted).

14. Ann E. Carlson, *Federalism, Preemption, and Greenhouse Gas Emissions*, 37 U.C. DAVIS L. REV. 281, 317 (2003) (discussing this rationale for uniform federal rules).

15. *See infra* Part II.

16. One way to address such uncertainties would be to ban the new technology until greater certainty is achieved. Matthew T. Wansley, *Regulation of Emerging Risks*, 69 VAND. L. REV. 401–78 (2016) (favoring temporary bans on innovation while information is gathered about an emerging risk).

Uncertainties about whether local concerns about safety, zoning, tailpipe emissions, or land use, or national concerns about safety, national security, privacy, greenhouse gas emissions, economies of scale, or interstate spillovers will predominate, or whether policy differences among states themselves create new risks, raise important questions about which level of government should decide how to govern *now*. But these uncertainties can also raise questions about who should decide *in the future*. Some recent scholarship has examined the substantive question of how (and whether) to regulate in the face of uncertainty.¹⁷ And many jurists and scholars have recognized the general value of policy experimentation inherent in federalism, especially in cooperative federalism schemes, to address local variation in preferences or values.¹⁸ The federalism literature is virtually silent, however, on a key question of regulatory design: how to inject temporary flexibility into the distribution of regulatory authority when regulators are not writing on a cooperative federalism blank slate. The auto industry has long argued that uniform

However, such an approach fails to appreciate tradeoffs not only between benefits and risks, but between different kinds of risks. Specifically, a ban would fail to take into account the significant potential safety *benefits* of AV technology (benefits along the same axis of promoting safety), as well as benefits and potential harms *along other dimensions*. For example, AVs hold significant potential to reduce fossil fuel use in civilian transportation. JAMES M. ANDERSON, ET AL., *AUTONOMOUS VEHICLE TECHNOLOGY: A GUIDE FOR POLICYMAKERS* 29–30 (2016) (noting the potential for AVs to make use of platooning, lighter vehicles, and lighter batteries if the risk of crashes is reduced). On the flip side, however, if AVs reduce the costs associated with driving (for example, by permitting drivers to read or work while commuting), they may increase vehicle miles traveled and suburban sprawl. *Id.* at 37. Policymakers must take into account tradeoffs across these different risks.

17. See, e.g., Farber, *supra* note 8, at 903; Wansley, *supra* note 16, at 478 (favoring temporary bans on innovation while information is gathered, but not addressing federalism); Catherine Sharkey, *Tort as Backstop to Regulation in the Face of Uncertainty*, JOTWELL (Nov. 26, 2013), <https://perma.cc/BAK7-ZGJQ> (arguing that tort law can serve as a backstop “transition” legal regime before regulation).

18. *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting) (“It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”). See FELIX FRANKFURTER, *THE PUBLIC & ITS GOVERNMENT* 49–51 (1930) (“[O]ur federalism calls for the free play of local diversity in dealing with local problems.”); see also Henry M. Hart, Jr., *The Relations Between State and Federal Law*, 54 COLUM. L. REV. 489, 493 (1954). On the virtues of cooperative federalism, see, for example, Jessica Bulman-Pozen, *Executive Federalism Comes to America*, 102 VA. L. REV. 953, 955, 965–66 (2016) (discussing cooperation among federal and state executives in the face of congressional gridlock); Jessica Bulman-Pozen, *From Sovereignty and Process to Administration and Politics: The Afterlife of American Federalism*, 123 YALE L.J. 1920, 1932 (2014) (arguing that cooperative federalism can yield “ever-more thoroughgoing state-federal integration as states become sites of national policymaking and partisan conflict”); Abbe R. Gluck, *Intrastatutory Federalism and Statutory Interpretation: State Implementation of Federal Law in Health Reform and Beyond*, 121 YALE L.J. 534, 589–92 (2011) (arguing that states play a crucial role in implementing and interpreting federal health care law); Gillian E. Metzger, *Agencies, Polarization, and the States*, 115 COLUM. L. REV. 1739, 1766, 1769–70 (2015) (arguing that states can constrain the executive within cooperative federalism schemes).

national standards promote innovation, economies of scale, and address safety concerns better than fifty separate state rules.¹⁹ In contrast, I have argued that just as we may not want substantive law to freeze in place the technology or business models of the moment, an allocation of regulatory authority among the federal, state, and local governments to address innovation should remain flexible—at least for a short period of time.²⁰ Flexibility in federalism has value in times of innovation uncertainty. Just as we may not yet know the best substantive rules to address innovation, we may not yet know who will be the best regulator, or whether one “best” regulator exists at all.²¹ In focusing either on the virtues of cooperative federalism, or the best initial allocation of regulatory authority to confront a new problem, the existing literature has not addressed how to build temporary flexibility into an existing—and more rigid—allocation of authority.

This Article identifies a new method that federal agencies can use to achieve this time-limited flexibility before initiating notice-and-comment rulemaking: *advisory nonpreemption*, and defends its use as a normative matter. Ordinary preemption shifts the balance of power from the states to the federal government.²² In contrast, advisory nonpreemption has the opposite effect. It is a federal agency’s informal, advisory statement in policy guidance (rather than notice-and-comment rulemaking) that it has authority to regulate in a particular area. But the statement *does not actually preempt* states from regulating—at least temporarily (hence the moniker “nonpreemption”). And the agency sets a timetable to revisit the issue.²³

19. Alan Ohnsman, *GM, Toyota and Lyft Urge Congress to Set Nationwide Self-Driving Car Standards*, FORBES.COM (Feb. 14, 2017, 5:30 PM), <https://perma.cc/J34N-LB5K>; *infra*, notes 138, 235, 241–243, 247, and accompanying text.

20. Light, *supra* note 5, at 362, n. 132 (leaving open the question of how to achieve this shift).

21. *Id.* But see David A. Super, *Against Flexibility*, 96 CORNELL L. REV. 1375, 1382 (2011) (arguing that scarcity of decisional resources in disaster-relief situations undermines flexible regimes’ success).

22. Cf. Amy L. Stein, *The Tipping Point of Federalism*, 45 CONN. L. REV. 217, 222 (2012) (viewing congressional preemption as the dominant method of shifting the balance of power from the states to the federal government, but noting that agency interpretation has limited the need for preemption).

23. This opposite effect is distinct from “reverse preemption,” in which provisions in federal law give states the ability to veto federal agency decisions that conflict with state policy. Ann E. Carlson & Andrew Mayer, *Reverse Preemption*, 40 ECOL. L.Q. 583, 583 (2013). Notably, Congress could also pass new legislation that does not preempt state law, which would result in the same outcome. However, given the many hurdles involved in enacting legislation, federal agencies are likely to be more nimble in this regard, especially in response to rapidly changing innovations. William N. Eskridge, Jr., *Vetogates, Chevron, Preemption*, 83 NOTRE DAME L. REV. 1441 (2008) (noting the difficulties of passing legislation and arguing that one primary effect of such procedural hurdles is the

We can view the National Highway Traffic Safety Administration's (NHTSA's) long-anticipated *Federal Automated Vehicles Policy* (2016 NHTSA Policy) as an example of advisory nonpreemption.²⁴ There, NHTSA offered its advisory interpretation of the terms "vehicle" and "vehicle equipment" in its authorizing statute, the National Traffic and Motor Vehicle Safety Act (Motor Vehicle Safety Act), to include HAV hardware and software.²⁵ Thus, in NHTSA's view, HAV hardware and software are subject to federal motor vehicle safety standards.²⁶ NHTSA noted that under the express terms of the Motor Vehicle Safety Act, federal motor vehicle safety standards preempt state performance standards that are not identical to federal motor vehicle safety standards.²⁷ However, the agency has *not yet adopted* such federal motor vehicle safety standards for HAVs, which must be adopted pursuant to notice-and-comment rulemaking.²⁸ Therefore, the agency used advisory language stating that it "strongly encourages States to allow [the Department of Transportation (DOT)] alone to regulate" HAVs.²⁹ But NHTSA acknowledges that states may proceed notwithstanding the agency's advisory approach, stating that "[i]f a State does pursue [highly automated vehicle] performance-related regulations," the state should "consult" with NHTSA and follow the Model Policy set forth in the document.³⁰

delegation of lawmaking to agencies).

24. U.S. DEPT. OF TRANSP., NAT'L HIGHWAY SAFETY TRAFFIC ADMIN., FEDERAL AUTOMATED VEHICLES POLICY: ACCELERATING THE NEXT REVOLUTION IN ROADWAY SAFETY 1, 38 (2016) [hereinafter 2016 NHTSA Policy]; *infra*, Part II.

25. *Id.* at 38.

26. *Id.*

27. *Id.* at 38 ("If NHTSA issued [a federal motor vehicle safety standard] setting performance requirements for HAVs, then a State could not have its own performance standards on the same aspects of HAV performance unless they were identical to NHTSA's standards.") (emphasis added); 49 U.S.C. § 30103(b) (2012). For a discussion of the evolution of NHTSA's "boilerplate" express and implied preemption language through 2012 in notice-and-comment rulemakings, see Catherine Sharkey, *Inside Agency Preemption*, 110 MICH. L. REV. 521, 542-44 (2012) (noting that after *Geier*, NHTSA amended its boilerplate language on both implied and express preemption, taking a more limited view of each). Since 2012, that language has remained consistent, with NHTSA routinely disclaiming preemptive intent with respect to state tort law, and concluding that its prescribed federal motor vehicle safety standard is only a "minimum" standard. *See, e.g.*, Lamps, Reflective Devices, and Associated Equipment, 81 Fed. Reg. 6454 (Feb. 8, 2016) (to be codified at 49 C.F.R. § 571); Electric Powered Vehicles; Electrolyte Spillage and Electrical Shock Protection, 80 Fed. Reg. 2320 (Jan. 16, 2015) (to be codified at 49 C.F.R. § 571); Rear Visibility, 79 Fed. Reg. 19177 (Apr. 7, 2014) (to be codified at 49 C.F.R. § 571); Ejection Mitigation, 49 Fed. Reg. 55137 (Sept. 9, 2013) (to be codified at 49 C.F.R. § 571); Bus Emergency Exits and Window Retention and Release, 77 Fed. Reg. 19132 (Mar. 30, 2012) (to be codified at 49 C.F.R. § 571) BB 14.2(b). The 2016 NHTSA Policy contains a conditional and abbreviated version of the express preemption boilerplate for state legislative or regulatory actions.

28. 5 U.S.C. § 553 (2012).

29. 2016 NHTSA Policy, *supra* note 24, at 37.

30. *Id.*

NHTSA's "If . . . then" statement about preemption further supports the conclusion that the Policy does not actually preempt state experimentation, because there is no federal law to preempt state action. The agency states explicitly that it anticipates revisiting the guidance in one year.³¹ Thus, even in this preexisting dual federalism scheme, states have continued to set rules for HAVs, and the federal government has advised against, but not foreclosed, this option.³²

Advisory nonpreemption serves multiple salutary purposes. First, it offers transparency by clarifying the agency's current view of its regulatory authority in situations of innovation uncertainty both for the states and for regulated industry. This transparency can provide notice to the public and interested parties, including the states, before an agency is ready to initiate a more durable and long-term strategy of adopting notice-and-comment rulemaking. This transparency can encourage early, meaningful participation in the ultimate rulemaking process (or, if Congress chooses to take up the issue, in debates before Congress). Second, advisory nonpreemption offers temporary flexibility in the allocation of regulatory authority if innovation takes an unpredictable path. And it is advisory, because while the federal agency believes it may hold leverage under the Supremacy Clause to preempt state law under its interpretation of the statute,³³ the circumstances are sufficiently uncertain that technological development may undermine that leverage, or the agency may choose not to preempt state law at all.³⁴ Thus, advisory nonpreemption can open a dialogue with states and industry; it does not shut the door.³⁵ Although advisory nonpreemption imposes costs in regulatory uncertainty, it can promote normative values such as regulatory innovation, technological innovation, and an appropriate degree of precaution about local variation in the risks and benefits of that innovation. While this advisory approach lacks the procedural protections

31. *Id.* at 3.

32. While states could arguably regulate under such circumstances even in the absence of advisory nonpreemption, here, the federal agency is essentially advising that it will not issue preemptive federal motor vehicle safety standards for one year. For further discussion on why advisory nonpreemption is superior to agency silence, see *infra* Part I.B.

33. Heather K. Gerken, Comment, *Slipping the Bonds of Federalism*, 128 HARV. L. REV. 85, 118 (2014) (noting that Congress has a "supremacy trump card"); Jessica Bulman-Pozen & Heather K. Gerken, *Uncooperative Federalism*, 118 YALE L.J. 1256, 1300 (2009) (referring to Congress's supremacy "trump card").

34. *Cf.* Tim Wu, Essay, *Agency Threats*, 60 DUKE L.J. 1841, 1842 (2011) (arguing that informal agency action threatening substantive law enforcement can be desirable under conditions of uncertainty).

35. See *infra*, Part I.B.

of notice-and-comment rulemaking that are designed to promote democratic legitimacy,³⁶ by not freezing for all time the policy preferences of past regulators, advisory nonpreemption promotes a different kind of democratic legitimacy in time. Most significantly, advisory nonpreemption can temporarily insert *de facto* dynamic, overlapping jurisdiction into an existing dual federalism scheme. This temporary dynamism can effectuate the goals of what I have called precautionary federalism, by affording federal and state regulators the chance to determine whether an existing allocation of authority can be applied to the innovation in the longer-term, or requires revision.³⁷

This Article proceeds as follows. Part I explains why time-limited flexibility in the allocation of authority—what I have called precautionary federalism—is warranted under conditions of innovation uncertainty. It then introduces advisory nonpreemption as a mechanism that agencies can use to inject such time-limited flexibility into an existing allocation of regulatory authority before initiating notice-and-comment rulemaking. Part II examines the rise of HAVs as a particularly compelling case study of how advisory nonpreemption can operate in practice to effectuate these goals. Part III turns to the role of the courts, examining how the judiciary might construe a statement of advisory nonpreemption if challenged. Part IV considers objections regarding democratic legitimacy, concluding that advisory nonpreemption enhances, rather than undermines, democratic legitimacy.

I. PRECAUTIONARY FEDERALISM AND ADVISORY NONPREEMPTION

Agencies and the executive branch have taken a leading role in filling substantive regulatory gaps—or even “gaping holes”—when new issues or facts arise that existing legislation does not directly address.³⁸ This has

36. For discussions of different aspects of legitimacy in this context, see Abbe R. Gluck et al., *Unorthodox Lawmaking, Unorthodox Rulemaking*, 115 COLUM. L. REV. 1789, 1839–44 (2015) (examining implications for democratic accountability, legitimacy, and transparency of unorthodox, informal action by agencies); Thomas W. Merrill, *Presidential Administration and the Traditions of Administrative Law*, 115 COLUM. L. REV. 1953 (2015) (offering a skeptical view of recent process-based defenses of administrative discretionary actions to update substantive law, and preferring a mixed positivist and process-based account); Miriam Seifter, *States, Agencies, and Legitimacy*, 67 VAND. L. REV. 443, 443 (2014) (discussing visions of legitimacy that include “centralized presidential control” responsive to majorities and “apolitical application of expertise”); Catherine M. Sharkey, *Federalism Accountability: Agency-Forcing Measures*, 58 DUKE L.J. 2125, 2128 (2009) (arguing that agencies are better than Congress at incorporating state interests in preemption debates, and proposing measures to increase the legitimacy and accountability of administrative action).

37. Light, *supra* note 5, at Part I.D (defining precautionary federalism, and distinguishing it from dual and dynamic federalism).

38. Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PA. L. REV. 1 (2014)

been true in areas as diverse as health care, education, telecommunications law, energy policy, and environmental protection.³⁹ In addition, agencies are playing an increasingly important role in policing the bounds of federalism, a role that has subjected agency action in this sphere to significant criticisms.⁴⁰ Those critiques have largely centered around agencies taking strong stands – in some cases, unauthorized by Congress – that state regulation or legislation is preempted, without taking adequate consideration of state interests in the administrative process.⁴¹ As I explain further below, advisory nonpreemption operates differently – it essentially ratifies some degree of state experimentation in the current absence of preemptive federal regulations. It also operates to open further dialogue between the federal government and the states, while tipping the agency’s hand as to its current view of the scope of its regulatory authority. Advisory nonpreemption therefore solves some of the problems that critics of agency preemption identify.

But before turning to how advisory nonpreemption can inject regulatory flexibility into an existing dual federalism scheme, some context is required to understand why such flexibility is desirable. This

(arguing that agencies are well situated to update legislation to address new problems like climate change in light of congressional gridlock); Bulman-Pozen, *Executive Federalism Comes to America*, *supra* note 18, at 969 (discussing how cooperation among federal and state executives can lead to policy differentiation in the face of congressional gridlock); David J. Barron & Todd D. Rakoff, *In Defense of Big Waiver*, 113 COLUM. L. REV. 265, 265 (2013) (arguing that congressional delegation to agencies of the power to “unmake major statutory provisions” permits agencies to update laws in the face of partisan gridlock); Daniel T. Deacon, *Administrative Forbearance*, 125 YALE L.J. 1548 (2016) (discussing express delegations of administrative forbearance as a tool to address changed circumstances); Cass R. Sunstein, *Partyism*, 2015 U. CHI. LEGAL F. 1, 15–19 (2015) (arguing that in times of party polarization, “relatively broad (though not unconstrained) delegations of authority to the executive branch” along with deference to agencies can allow “significant social problems to be addressed”).

39. See Barron & Rakoff, *supra* note 38, at 279–84 (discussing health care and education); Bulman-Pozen, *Executive Federalism Comes to America*, *supra* note 18, at 976–79, 982–93 (discussing health care, education, climate law); Freeman & Spence, *supra* note 38, at 17–63 (discussing energy policy and climate law); Deacon *supra* note 38, at 1548 (discussing telecommunications law).

40. See, e.g., Sharkey, *supra* note 27, at 521 (arguing that agencies are “ascendant” in preemption, and proposing procedural reforms to guard against potential abuses); Gillian E. Metzger, *Administrative Law as the New Federalism*, 57 DUKE L.J. 2023 (2008) (arguing that administrative law is a constitutionally legitimate source of federalism governance); Nina A. Mendelson, *A Presumption Against Agency Preemption*, 102 NW. U. L. REV. 695 (2008) (arguing that courts should apply a presumption against agency preemption in the absence of express delegation); Ernest A. Young, *Executive Preemption*, 102 NW. U. L. REV. 869, 869–70 (2008) (noting dangers of agency preemption in light of the lack of state representation within agencies). For a more favorable view, see Joshua Hawkes & Mark Seidenfeld, *A Positive Defense of Administrative Preemption*, 22 GEO. MASON L. REV. 63 (2014).

41. See, e.g., Mendelson, *supra* note 40 (proposing judicial limits on agency preemption).

Part therefore first describes the spectrum along which regulatory authority is allocated among the federal and state governments. At one extreme is “field preemption”—a form of dual federalism, in which the federal government is selected as the “optimal” regulator to the exclusion of the states. At the other end of the dual federalism spectrum lies state and local authority without federal involvement. In the middle lie the majority of allocations of regulatory authority, which often contemplate some concurrent role for both the states and the federal government. It then explains how precautionary federalism—which values the possibility of a temporary shift in the allocation of authority toward greater experimentation through regulatory overlap—is valuable during periods of innovation uncertainty.⁴² The second half of this Part then turns to the role that advisory nonpreemption can play in effectuating such a shift. Part II then examines the use of advisory nonpreemption by the NHTSA in the context of HAV safety regulation as a case study to tease out more specific implications.

A. Federalism Spectrum: Dual, Dynamic, and Precautionary

In any legal regime, there is some division of labor between the federal government and the states.⁴³ The federal government can retain regulatory primacy to the exclusion of the states. The states can regulate in the absence of, or with the imprimatur of, federal rules. Or there can be some form of concurrent authority. Such divisions can be express or implied.⁴⁴ And while Congressional text is the touchstone of preemption analysis, recently, the Court has afforded deference to agency interpretations of statutory text with preemptive effect, even in cases in which Congress has not delegated specific authority to the agency to preempt state law, but

42. See Light, *supra* note 5, at 361.

43. Many scholars of federalism—traditionally viewed as encompassing only the federal government and the states—now incorporate local governments into the analysis. See, e.g., Nestor M. Davidson, *Cooperative Localism: Federal-Local Collaboration in an Era of State Sovereignty*, 93 VA. L. REV. 959, 995–1000 (2007) (rejecting the unitary vision of local government as solely part of the states); Heather K. Gerken, *The Supreme Court 2009 Term: Foreword: Federalism All the Way Down*, 124 HARV. L. REV. 4, 22–23 (2010) (discussing the role of local and sublocal governments in federalism theory); Cristina M. Rodríguez, *The Significance of the Local in Immigration Regulation*, 106 MICH. L. REV. 567, 568 (2008) (favoring local participation in immigration regulation and enforcement); Erin Ryan, *Environmental Federalism's Tug of War Within*, in *THE LAW AND POLICY OF ENVIRONMENTAL FEDERALISM: A COMPARATIVE ANALYSIS* 1, 360–61, 361 n.37 (Kalyani Robins ed., 2015) (citing scholarship on this point); cf. David J. Barron, *A Localist Critique of the New Federalism*, 51 DUKE L.J. 377, 378–79 (2001) (discussing similarities between “federalism” and “localism”).

44. Congress may expressly or impliedly preempt state law under the Supremacy Clause. U.S. CONST., art. VI, cl. 2; *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504, 516 (1992).

merely has delegated general authority to implement the substantive terms of the statute.⁴⁵

Federalism scholarship has launched a virtual cottage industry of adjectives to describe different allocations of authority and their value.⁴⁶ But two overarching categories are dual and dynamic federalism. In a dual federalism regime, the question is whether either the federal government or the states can adopt “optimal” legal rules to address the problem at hand.⁴⁷ Significant interstate spillovers, the need to promote economies of scale, a concern that states will “race to the bottom” to adopt lax rules, or significant national interests like privacy or national security tend to favor federal uniform rules to the exclusion of state authority.⁴⁸ In contrast, a desire for regulatory competition, significant differences in local preferences, significant local impacts that predominate over national impacts, and democratic values like citizen participation in government, tend to favor states as optimal.⁴⁹ Positive political theory, also known as public choice theory, offers a descriptive account of why interest groups tend to favor certain forums over others.⁵⁰

Layered on top of these theoretical constructs are actual allocations of federal and state authority in different statutes, with the boundaries policed by courts and agencies. These allocations are not binary, but rather exist

45. On the role of agencies versus courts in preemption, see sources cited *supra* note 40; *infra*, Part III.

46. Light, *supra* note 5, at 336, 336 n.9 (discussing different forms of dynamic federalism).

47. See generally Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 570–71 (1996) (discussing rationales favoring federal rules); Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the “Race-to-the-Bottom” Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210, 1211–12 (1992) (rejecting the argument that states race to the bottom); David B. Spence, *Federalism, Regulatory Lags, and the Political Economy of Energy Production*, 161 U. PA. L. REV. 431, 477–78 (2013) (favoring state, rather than federal, control over hydraulic fracturing); David B. Spence, *The Political Economy of Local Vetoes*, 93 TEX. L. REV. 351, 351–52 (2014) (examining rationales for state and local governance of hydraulic fracturing); Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1210–15 (1977) (examining theories favoring state or federal governance).

48. See sources cited, *supra* note 47.

49. See sources cited, *supra* note 47; see also Henry N. Butler & Jonathan R. Macey, *Externalities and the Matching Principle: The Case for Reallocating Environmental Regulatory Authority*, 14 YALE L. & POL’Y REV. 23, 36 (1996) (discussing the matching principle, which favors regulation at the smallest level of government that captures negative and positive impacts of the targeted activity).

50. Esty, *supra* note 47, at 597–99 (discussing public choice rationales as to why industry and interest groups favor federal or state forums); Richard L. Revesz, *Federalism and Environmental Regulation: A Public Choice Analysis*, 115 HARV. L. REV. 553 (2001) (rejecting the assumption that environmental interest groups are more successful in a federal forum); Spence, *Federalism, Regulatory Lags and the Political Economy of Energy Production*, *supra* note 47, at 466 (discussing public choice accounts of federalism and interest group behavior).

along a spectrum. At one extreme end of the dual spectrum is “field preemption,” in which Congress or a court has determined that the federal regime is so pervasive that no other regulatory action by the states or local governments is permitted. An example is how Congress has chosen to regulate our nation’s airspace in the Federal Aviation Act.⁵¹ In the absence of express preemption language, courts have held that the Act nonetheless impliedly preempts the entire field of airspace regulation based on Congressional intent.⁵² Congress has authorized the Federal Aviation Administration (FAA) to adopt regulations governing the national airspace above a certain height, including its use, as well as aircraft safety and noise.⁵³ And the FAA’s regulations interpreting the Act, adopted through notice-and-comment rulemaking, have been held to “demonstrate an intent to occupy exclusively the entire field of aviation safety.”⁵⁴ Often in cases of field preemption, such federal uniform rules advance significant policies, including concerns that conflicting state rules regarding airspace would create an unsafe regulatory “patchwork,” or that uniform rules are needed to promote industrial economies of scale in the manufacture of vehicles or training of pilots who travel through the airspace. As another example, the Energy Policy and Conservation Act (EPCA) authorizes the Department of Transportation to set motor vehicle fuel economy standards for new vehicles.⁵⁵ The EPCA contains express preemption language prohibiting any state or local government from adopting or enforcing “a law or regulation related to fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard under this chapter.”⁵⁶ Courts have interpreted this provision broadly to preempt state and local governance not only of vehicle manufacture, but also efforts to make local taxi fleets more fuel-efficient

51. Federal Aviation Act of 1958, 49 U.S.C. §§ 40103, 44502, and 44701–44735 (2012).

52. *Montalvo v. Spirit Airlines*, 508 F.3d 464, 468, 470 (9th Cir. 2007) (holding that the Federal Aviation Act “preempts the entire field of aviation safety from state and territorial regulation” despite lack of express language, finding intent in the law’s “structure and purpose”); *French v. Pan Am Express, Inc.*, 869 F.2d 1, 6 (1st Cir. 1989) (holding that the Federal Aviation Act preempts state law relating to pilot drug testing to avoid a “crazyquilt effect”); *Arizona v. United States*, 132 S.Ct. 2492, 2502 (2012) (“Field preemption reflects a congressional decision to foreclose any state regulation in the area, even if it is parallel to federal standards.”); *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 386–87 (1992).

53. 49 U.S.C. §§ 40103, 44502, 44701–44735. The delegation includes a “catch-all” provision that vests the FAA with authority to regulate “other practices, methods, and procedures the Administrator finds necessary for safety in air commerce and national security.” 49 U.S.C. § 44701(a)(5).

54. *Montalvo*, 508 F.3d at 471.

55. 49 U.S.C. § 32902(a) (2012); 49 C.F.R. § 501.3(a)(1)(i) (2013).

56. 49 U.S.C. § 32919(a) (2012). Express preemption language using the words “related to” is construed broadly. *See, e.g., N.Y. State Conference of Blue Cross & Blue Shield Plans v. Travelers Ins.*, 514 U.S. 645, 656 (1995); *Morales*, 504 U.S. at 383–84.

or less polluting through environmentally preferable purchase rules.⁵⁷

At the opposite end of the dual federalism spectrum, the states and local governments can regulate without any federal involvement. The most extreme example is an allocation of authority in which any state or local regulator may act unhindered by federal rules or preemption. Such freedom for the states may arise as a result of federal inaction, deregulation, or conscious design. For example, Michael Dorf and Charles Sabel call for greater “democratic experimentalism.”⁵⁸ In democratic experimentalism, power is decentralized to state and local governments, and the role of a regional or the national government is merely one of coordination to ensure the sharing of knowledge to promote benchmarking and diffusion of regulatory successes.⁵⁹

Alternatively, rather than “dual,” the balance of regulatory authority between can be “dynamic.” In dynamic federalism, there is regulatory overlap or concurrent jurisdiction between the federal and state governments.⁶⁰ Unlike the search for a single, optimal regulator in dual federalism, which promotes certainty and uniformity, dynamic federalism recognizes the value of multiple regulatory voices, not only horizontally in the states, but vertically across the federal and state governments.

Most allocations of authority seem to occupy this middle ground. Often there is a role for both the federal and state governments, and some aspects of the regulatory scheme involve dual federalism with preemption of state law, while other aspects of the regulatory scheme permit state experimentation or greater concurrent jurisdiction.⁶¹ For example, in

57. Light, *supra* note 6.

58. Michael C. Dorf & Charles F. Sabel, *A Constitution of Democratic Experimentalism*, 98 COLUM. L. REV. 267, 314 (1998).

59. *Id.*

60. For discussions of different forms of dynamic federalism, see, for example, David E. Adelman & Kirsten H. Engel, *Adaptive Federalism: The Case Against Reallocating Environmental Regulatory Authority*, 92 MINN. L. REV. 1796, 1798–99 (2008) (discussing ecosystems as a theoretical model for dynamic federalism); William W. Buzbee, *Asymmetrical Regulation: Risk, Preemption, and the Floor/Ceiling Distinction*, 82 N.Y.U. L. REV. 1547, 1555–56 (2007) [hereinafter Buzbee, *Asymmetrical Regulation*] (discussing the value of concurrent, dynamic overlap in the form of federal “floor preemption” in which states may exceed federal standards); William W. Buzbee, *Interaction’s Promise: Preemption Policy Shifts, Risk Regulation, and Experimentalism Lessons*, 57 EMORY L.J. 145 (2007) [hereinafter Buzbee, *Interaction’s Promise*]; Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U. L. REV. 1097, 1099–1100 (2009) (noting the value of iterative interaction among regulators in dynamic federalism); Kirsten H. Engel, *Harnessing the Benefits of Dynamic Federalism in Environmental Law*, 56 EMORY L.J. 159, 176–77 (2006) (favoring dynamic concurrent regulatory authority); Robert A. Schapiro, *Toward a Theory of Interactive Federalism*, 91 IOWA L. REV. 243, 244 (2005) (“Polyphonic federalism . . . seeks to harness the interaction of state and national power to advance the goals associated with federalism.”).

61. Hannah J. Wiseman, *Disaggregating Preemption in Energy Law*, 40 HARV. ENVTL. L. REV.

federal “floor” preemption, the federal government can set a regulatory minimum standard as a baseline, but states can exceed that baseline.⁶² One example of this dynamism is the California waiver provision for vehicle emissions standards in the Clean Air Act.⁶³ Specifically, there are potentially two standards for vehicle tailpipe emissions under the Clean Air Act: the federal standard which provides a floor, and the California standard, which must be “at least” as protective of human health and the environment as the federal floor.⁶⁴ While there is some regulatory experimentation in this dynamic scheme, there can be no more than two standards, as only the state of California can apply for the waiver in the first instance. Other states may then adopt California’s standard if the EPA grants the state a waiver. The statute specifies in advance the bases upon which the EPA may grant California this waiver, and the factors that other states must meet if they wish to adopt California’s standards.

Another allocation that occupies this middle ground is cooperative federalism, which shares features of both dual and dynamic regimes, and has received a great deal of attention in recent federalism scholarship.⁶⁵ In cooperative federalism, the federal government sets performance standards that states must meet, but leaves it up to the states to determine how to meet those standards. For example, in the Clean Air Act, the federal government sets National Ambient Air Quality Standards for criteria air pollutants like ozone, but directs each state to adopt its own state “implementation plan” to meet those standards.⁶⁶ The federal and state governments both play a role in addressing the problem of ambient air quality, as in dynamic federalism. But as in dual federalism, it is the federal government that both sets the standards, and retains the ability to override a state implementation plan that it deems insufficient.⁶⁷ And statutes like the No Child Left Behind Act and the Patient Protection and

293 (2016).

62. Buzbee, *Asymmetrical Regulation*, *supra* note 60, at 1555–56.

63. *See* 42 U.S.C. § 7543(b) (2012) (noting that compliance with the California standard, if preemption is waived by the EPA, constitutes compliance with the Act); *see also* 42 U.S.C. § 7507 (2012) (noting that states in non-attainment areas may adopt California’s standards).

64. 42 U.S.C. § 7543(b). The EPA is delegated authority to grant or deny this waiver. *Id.*

65. On the ascendance of cooperative federalism, see Metzger, *Agencies, Polarization*, *supra* note 18, at 1765–71 (discussing how cooperative federalism “represents the reality of U.S. governance . . . [and] a critical means by which agencies and the executive branch can advance policy in a polarized world”); Gluck, *supra* note 36, at 1792, 1802, 1804, 1806–07, 1813–18, 1820, 1833, 1851–52 (discussing cooperative federalism mechanisms in the Affordable Care Act); Bulman-Pozen & Gerken, *supra* note 33 (focusing on states within cooperative federalism schemes).

66. Clean Air Act, 42 U.S.C. §§ 108(b)(2), 109(d)(2)(c), 7408(b)(2), 7409(d)(2)(C) (2012).

67. Clean Air Act, § 110(c)(1), 42 U.S.C. § 7410(c)(1) (2012) (providing for a federal implementation plan if the Administrator disapproves of the state implementation plan).

Affordable Care Act contain elements of cooperative federalism.⁶⁸ Recent scholarship has noted that cooperative federalism in particular allows states to influence national policy by “dissenting” within a federal regime.⁶⁹

In dynamic federalism, different regulators can influence each other’s policies over time, just as California and the federal government have with respect to vehicle tailpipe emissions standards.⁷⁰ Dynamic federalism recognizes the value of experimentalism and the possibility of tailoring to locally varying conditions.⁷¹ At the same time, however, dynamism can undermine regulatory certainty and finality,⁷² or could lead to under-regulation in a tragedy of the “regulatory commons.”⁷³

These allocations of authority embody varying degrees of regulatory flexibility. A dual regime in which there is field preemption is not particularly flexible to address changed circumstances or innovation that might raise issues of concern to the states. In contrast, a cooperative federalism scheme incorporates a greater degree of flexibility to shift the boundaries of regulatory primacy between the federal government and the states if conditions warrant such a shift to address a federalism disruption.

Elsewhere, I have argued that principles of risk regulation should inform the allocation of regulatory authority among the federal government, the states, and local governments—a principle I have called *precautionary federalism*.⁷⁴ Taking a precautionary approach to federalism requires taking uncertainty and risk-risk tradeoffs into account in the

68. Bulman-Pozen, *supra* note 18, at 977, 987–88 (discussing the Affordable Care Act and the No Child Left Behind Act); Bulman-Pozen & Gerken *supra* note 33, at 1282 (discussing the No Child Left Behind Act); Metzger, *supra* note 18, at 1772–86 (discussing the Affordable Care Act).

69. See Bulman-Pozen, *Executive Federalism*, *supra* note 18, at 953 (interaction between federal and state executive branch officials can promote national policies with state differentiation); Bulman-Pozen & Gerken, *supra* note 33 (state participation in cooperative federalism can promote differentiation in the service of national interests); Heather K. Gerken, *Dissenting by Deciding*, 57 STAN. L. REV. 1745 (2005); Heather K. Gerken, *Exit, Voice, and Disloyalty*, 62 DUKE L.J. 1349 (2013); Heather K. Gerken, *Federalism as the New Nationalism: An Overview*, 123 YALE L.J. 1889, 1893 (2014); Abbe R. Gluck, *Our [National] Federalism*, 123 YALE L.J. 1996 (2014); Cristina M. Rodriguez, *Negotiating Conflict Through Federalism: Institutional and Popular Perspectives*, 123 YALE L.J. 2094 (2014); William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810 (2016) (noting that state differentiation can promote national energy policy).

70. Carlson, *supra* note 60, at 1099–1100.

71. See sources cited *supra* note 60.

72. Schapiro, *supra* note 60, at 290.

73. William W. Buzbee, *Recognizing the Regulatory Commons: A Theory of Regulatory Gaps*, 89 IOWA L. REV. 1, 6–7 (2003) (arguing that regulators will underinvest in regulation in cases of jurisdictional overlap).

74. Light, *supra* note 5, at 360–65.

allocation of regulatory authority.⁷⁵ Precautionary federalism requires regulatory authority to remain fluid and flexible during periods of innovation uncertainty, capable of shifting over time in response to unpredictable paths of innovation.⁷⁶ Precautionary federalism has three primary features. First, it sets a default presumption that greater regulatory flexibility and overlap (dynamism) are warranted when uncertainty about an innovation in technology or business is at its height to promote experimentation. However, that presumption can be overcome if policy diversity is *itself* a source of concern, or if other values outweigh the value of experimentation.⁷⁷ Second, precautionary federalism recognizes that policymakers must take into account risk-risk tradeoffs—such as the potential tradeoffs between vehicle safety and environmental protection noted above—because addressing one set of regulatory concerns can raise other concerns along the same axis or other axes.⁷⁸ Finally, precautionary federalism is limited in time. When greater certainty exists about the impacts of innovation, it may be necessary or appropriate to shift to more uniform (dual) rules.⁷⁹ That discussion, however, left open the question of what method or methods can achieve these precautionary shifts.⁸⁰ It is therefore to the mechanics of advisory nonpreemption that I now turn.

B. *Advisory Nonpreemption*

It is black-letter law that federal agencies have three primary means of regulating: adjudication,⁸¹ rulemaking,⁸² and a third category of more informal methods such as interpretive rules, “general statements of policy,” and statements of “best practices.”⁸³ The third category has been subject to criticism for lacking the procedural safeguards of ordinary notice-and-comment rulemaking.⁸⁴ But others have defended the use of informal methods to preserve substantive regulatory flexibility.⁸⁵ And

75. *Id.*

76. *Id.*

77. *Id.*

78. *Id.*

79. *Id.*

80. *Id.*

81. 5 U.S.C. § 554 (2012).

82. 5 U.S.C. § 553 (2012).

83. 5 U.S.C. §§ 553(b)(A)–(B) (2012); David Zaring, *Best Practices*, 81 N.Y.U. L. REV. 294 (2006) (discussing agency adoption of “best practices” as an informal tool of agency action that can promote horizontal harmonization of state policies).

84. 5 U.S.C. §§ 553(b)(A)–(B) (2012); Gluck et al., *supra* note 36 (discussing the recent rise of “unorthodox” rulemaking).

85. Wu, *supra* note 34, at 1841 (recognizing that agency threats are desirable in periods of business or technological innovation); Zaring, *supra* note 83 (defending “best practices” as a way of

many scholars have noted the increasing frequency of their use.⁸⁶

In addition to their role in substantive regulation, agencies play an important role in policing the bounds of federalism, either through their power of statutory interpretation or through preemption.⁸⁷ Congress may expressly delegate authority to agencies to preempt state law, as in the delegation to the Secretary of Transportation to determine whether state law that conflicts with federal regulation of hazardous waste transportation is preempted,⁸⁸ or to the Federal Communications Commission to preempt state laws with the effect of prohibiting an entity from providing interstate telecommunications services.⁸⁹ In other cases, Congress has delegated authority to an agency to interpret the substance of a statute, but that substantive interpretation may have preemptive effect. For example, Congress has delegated to NHTSA the authority to adopt federal motor vehicle safety standards under the Motor Vehicle Safety Act.⁹⁰ But there is no additional delegation of authority to determine which state laws are preempted. Likewise, Congress has delegated to the FAA the authority to define what constitutes “navigable airspace.”⁹¹ How the FAA interprets what constitutes “navigable airspace” may likewise have significant implications for whether there remains a role for states in regulating the safety of technological innovations like drones.⁹²

As a tool, preemption operates as a one-way ratchet—albeit one upon which agencies do not always insist—in which the federal law blocks state law.⁹³ The allocation of authority moves from multiple regulatory voices

promoting flexible governance).

86. Daniel A. Farber & Anne Joseph O’Connell, *The Lost World of Administrative Law*, 92 TEX. L. REV. 1137 (2014) (discussing differences between administrative law in practice and textbook models); Gluck et al., *supra* note 36 (arguing that administrative law must account for new methods of lawmaking and rulemaking); Wu, *supra* note 34, at 1841; Zaring, *supra* note 83.

87. See, e.g., Sharkey, *Inside Agency Preemption*, *supra* note 27, at 521 (noting rise in agency preemption and advocating measures to routinize consultation with states); Metzger, *supra* note 40, at 2023 (noting rise in agency preemption); Mendelson, *supra* note 40, at 695 (arguing that courts should not defer to agency preemption determinations, especially in the absence of express delegations); Young, *supra* note 40, at 869–70 (highlighting risks of agency preemption).

88. See 49 U.S.C. § 5125(d) (2012); see also 30 U.S.C. § 1254(g) (authorizing the Secretary of the Interior to determine which state laws or regulations are preempted).

89. 47 U.S.C. §§ 253(a), (d) (2012).

90. 49 U.S.C. §§ 30101, § 30111 (2012) (“The Secretary of Transportation shall prescribe motor vehicle safety standards” that are objective and practicable, and meet the need for vehicle safety.)

91. 49 U.S.C. § 40103 (2012).

92. Gregory S. McNeal, *Drones and the Future of Aerial Surveillance*, 84 GEO. WASH. L. REV. 354 (2016). See *infra* note 107 (noting that in *Taylor v. Huerta*, 856 F.3d 1089 (D.C. Cir. 2017), the D.C. Circuit struck down an FAA regulation requiring non-commercial recreational drone users to register with the FAA, but suggesting that a registration requirement is different from safety-related rules).

93. As an example of an agency not insisting on preemption, in *Williamson v. Mazda Motor of*

to one in the federal government. Of course, cooperative federalism schemes are one notable exception. Flexible dynamics within cooperative federalism schemes permit some fluidity in the relationship between the federal government and the states, when values about policy conflict.⁹⁴ But cooperative federalism is not the only game in town. Despite widespread and longstanding reports of the demise of “dual” federalism,⁹⁵ even regimes that contemplate a role for both the federal government and the states sometimes incorporate preemption of state law in certain spheres, including the regulation of vehicle safety, the regulation of toxic chemicals, and other statutes designed to protect health, safety, and the environment. Any account of how to build flexibility into federalism must address not only cooperative federalism or other dynamic regimes in which this flexibility is built in *ex ante*, but also regimes in which there are distinct spheres of federal and state authority. It is within this context that advisory nonpreemption should operate in cases of a federalism disruption: when drones challenge how the FAA should define the nation’s “navigable airspace,” or HAVs challenge what counts as a “vehicle.” While the federal government has been the lead regulator in both areas in the past, the jury is still out as to whether federal regulatory primacy should remain.⁹⁶ Advisory nonpreemption is one method to achieve shifting boundaries on a temporary basis in this context.

Advisory nonpreemption is an agency’s public statement in policy guidance in response to such federalism disruption—before it initiates any notice-and-comment rulemaking—about how it interprets its delegated authority from Congress, and whether its interpretation gives it the power to regulate the innovation.⁹⁷ It has three salient characteristics. First, the agency states publicly its interpretation of the law, including what it considers to be the preemptive effect of its interpretation; yet it does not actually preempt state regulation. Thus, it clarifies the agency’s position based on the current state of innovation, but leaves room open for revision. Second, advisory nonpreemption operates for an expressly limited period

America, Inc., 562 U.S. 323, 335 (2011), the Supreme Court held that state tort law was not preempted by the federal Vehicle Safety Act, giving some deference to NHTSA’s position against preemption.

94. Metzger, *supra* note 18, at 1769–70; Gluck, *supra* note 36, at 1792, 1802, 1804, 1806–07, 1813–18, 1820, 1833, 1851–52; Bulman-Pozen & Gerken, *supra* note 33, at 1256.

95. Edward S. Corwin, *The Passing of Dual Federalism*, 36 VA. L. REV. 1, 23 (1950); Ernest A. Young, “The Ordinary Diet of the Law”: *The Presumption Against Preemption in the Roberts Court*, 2011 SUP. CT. REV. 253, 259 (2011) (contending that after the New Deal, “the Court’s federalism doctrine has generally abandoned dual federalism’s notion of separate spheres in favor of a regime of concurrent jurisdiction”).

96. See *infra*, note 107 (discussing recent regulations governing recreational drone use).

97. If an agency were delegated express preemption authority, see *supra* notes 88–89, advisory nonpreemption could include a statement about the preemptive effect of its interpretation.

of time only, and must be reevaluated on a periodic basis to determine whether the need for flexibility to promote innovation outweighs the costs of uncertain regulatory rules. Third, an agency uses its “informal” authority, such as policy guidance, rather than notice-and-comment rulemaking procedure to adopt advisory nonpreemption. In a chronology, advisory nonpreemption would come before the agency is even prepared to issue a Notice of Proposed Rulemaking—as a NOPR would require the agency to publish “either the terms or substance of the proposed rule or a description of the subjects and issues involved.”⁹⁸ Advisory nonpreemption is therefore more flexible than a rulemaking because it remains subject to revision over a shorter period of time, and with fewer procedural hurdles the agency can respond to changing circumstances or the unforeseeable path that innovations may take.⁹⁹ Thus, advisory nonpreemption can transform—at least temporarily—a dual federalism regime with uniform federal rules or federal regulatory primacy into a flexible regime in which there is dynamic, overlapping jurisdiction. In this sense, advisory nonpreemption achieves the *opposite* of what ordinary preemption contemplates, because it facilitates a temporary shift from uniformity to policy variation.¹⁰⁰

Table 1 offers a schematic of how advisory nonpreemption fits into other federalism frameworks:¹⁰¹

98. 5 U.S.C. § 553(b)(3) (2012). In the ordinary course of agency rulemaking under § 553(b), an agency first publishes a Notice of Proposed Rulemaking (NOPR), then accepts comments from the public, and then publishes a Final Rule. However, in actual practice, there are many additional steps that can occur prior to the publication of a NOPR, including when the agency gives notice to the public of its annual Regulatory Plan and Regulatory Agenda, as well as the very early stage step of publishing an Advance Notice of Proposed Rulemaking. For a summary of the various stages of the rulemaking process, see OFFICE OF THE FED. REGISTER, A GUIDE TO THE RULEMAKING PROCESS, https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf.

99. However, there are also costs to this informality. See *infra*, Parts III, IV.

100. In addition, advisory nonpreemption offers a temporary imprimatur upon state action in the regulatory sphere, while recognizing that this state action may be superseded by the adoption of regulations pursuant to rulemaking, or new legislation by Congress.

101. Thanks to Julian Davis Mortenson for discussions about this chart.

Table 1

	Federal Government Regulating	Federal Government Not Regulating
Preempting	Dual Federalism <i>e.g., Federal drug labeling laws preempt state labeling laws</i>	Field Preemption <i>e.g., Tort reform—even in the absence of federal regulation states are prohibited from regulating</i>
Not Preempting	Cooperative Federalism <i>e.g., Federal government regulates but states can obtain waivers of federal requirements, states can implement federal standards, or states can exceed federal requirements</i>	Advisory Nonpreemption <i>e.g., In a Dual Federalism regime, agency publishes policy guidance indicating its intention with respect to preemption, but does not actually preempt state law</i>

Advisory nonpreemption therefore shares some of the benefits of cooperative federalism during periods of innovation uncertainty. But because not every existing regulatory scheme contemplates some form of overlapping jurisdiction to fit into a cooperative federalism box, advisory nonpreemption affords a mechanism to move from the upper left box of dual federalism temporarily into the realm of greater decentralized experimentation. Whether the regulatory allocation at some point will move back to dual federalism, or into a more cooperative federalism approach when there is greater certainty about the innovation's impacts remains an open question.

A critic of this approach might note that another mechanism—*silence* by federal regulators—could likewise fit into the lower-right hand box. Agency silence also has no preemptive effect. Why, critics might argue, is silence not enough to achieve the same end? The key distinction is a

matter of transparency. When an agency simply remains silent, this affords no insight into the agency's developing views, for example, whether it sees a continuing role for federal involvement or not. In contrast, advisory nonpreemption provides transparency into an agency's current and developing thinking in a way that puts potentially affected communities on notice that they should speak up if they wish to influence the ultimate regulatory scheme.¹⁰²

While it might be tempting to make light of the value of “merely clarifying” an agency's position, this is actually an extremely significant benefit of a transparent approach like advisory nonpreemption. Indeed, in surveying the legislative history, text, and purpose of those sections of the APA that authorizes agencies to rely in their dealings with the public only on rules that have been published, Peter Strauss has argued forcefully that Congress's goal was “putting an end to secret law.”¹⁰³ Advisory nonpreemption would qualify as such a “publication rule,” alongside other agency actions like guidance, “interpretive rules, general statements of policy, or rules of agency organization, procedure, or practice.”¹⁰⁴ Such statements ensure that agency officials apply the law consistently, and “[c]itizens are better off if they can know about these instructions and rely on agency positions, with the assurance of equal treatment such central advice permits, than if they are remitted to the discretion of local agents and to ‘secret law.’”¹⁰⁵ While HAVs offer a high-profile case in which the regulated community is concentrated in a manageable number of firms manufacturing such vehicles, other cases of innovation may have more diffuse regulatory targets, which could raise serious concerns about local discretionary whims. For example, many private individuals are purchasing drones for recreational use.¹⁰⁶ Imagine a world which lacked a clarity regarding whether such people were required to obtain a license from the Federal Aviation Administration (FAA) or from their state or

102. While one option would be for the agency to indicate its view that it has the power to preempt state law, an agency could likewise announce that there are some aspects of a regulatory problem that the agency anticipates leaving to the states. One could think of this as an *advisory safe harbor* provision. Thanks to Dan Farber for discussions on this point.

103. Peter L. Strauss, *Publication Rules in the Rulemaking Spectrum: Assuring Proper Respect for an Essential Element*, 53 ADMIN. L. REV. 803, 806 (2001) (citing 5 U.S.C. §§ 552(a)(1), (2) (2012)). Strauss includes in the umbrella of “publication rules” those “interpretive rules, statements of general policy, staff manuals, and the like” that are published (or such that parties have actual notice), and thus upon which the agency may rely in its “dealings with the public.” *Id.* at 804. 5 U.S.C. § 552(a)(2) (2012).

104. *Id.* at 806 (citing the APA, 5 U.S.C. § 553 (2012)).

105. *Id.* at 808.

106. Carol Pogash, *Santa Delivered the Drone. But Not the Safety and Skill to Fly Them*, N.Y. TIMES (Jan. 8, 2017), <https://www.nytimes.com/2017/01/08/business/drone-safety-risk-popular.html>.

local government before flying their drone on their street. In the absence of some public guidance from the agency, individual bureaucrats might take conflicting positions, such as fining or penalizing some drone users, but leaving others to fly their drones without penalty. Publication rules would ensure that members of the public were treated consistently in this regard.¹⁰⁷

And while it might be important in general that agency interpretations are not made in secret to ensure consistent application of the law, this clarification is especially important under conditions of innovation uncertainty. First, publication provides some guidance to the regulated community as to the agency's thinking about its authority, especially as that thinking evolves over time in response to changing circumstances and the development of technology. It also puts the states and state regulators on notice of the agency's intentions moving forward, so that states whose views conflict with the agency interpretation have notice of its potential preemptive effect and can participate meaningfully in the administrative process.¹⁰⁸ It can also ensure that the agency is even-handed with respect to state interests and concerns. This allows for more informed dialogue among the regulated community, the states, and the federal agency regarding not only the best substantive rules but also how to allocate authority. Several scholars have raised the concern that because states lack formal representation within agencies, state interests will not be taken into account in the agency preemption decisions.¹⁰⁹ They advocate greater consultation.¹¹⁰ Advisory nonpreemption can initiate such consultation in a very public way. And in cases of federalism disruption—in which both the federal agency and the states may have significant expertise on the issue because the innovation blurs the boundaries of who should be regulating—

107. In fact, the FAA recently adopted regulations governing drones that attempted to preempt many state and local rules, and to require a federal license and registration for model aircraft such as drones. A number of states and local governments nonetheless sought to regulate their use. *See* 14 C.F.R. § 101 (governing hobby and recreational use of drones); § 107 (governing non-recreational use of drones); National Conference of State Legislatures, *Current Unmanned Aircraft State Law Landscape*, NAT'L CONF. ST. LEGISLATURES, <http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx> (last updated Oct. 7, 2016). On May 19, 2017, the United States Court of Appeals for the D.C. Circuit ruled that recreational drone users could not be compelled to obtain a license from the FAA, and struck down the so-called Registration Rule as barred by the explicit text of the FAA Modernization and Reform Act of 2012. *Taylor v. Huerta*, 856 F.3d 1089 (D.C. Cir. 2017).

108. This meaningful participation has been a key concern. *See* Sharkey, *supra* note 27, at 522 (favoring improved internal agency procedures to ensure meaningful state participation).

109. *Id.*; Mendelson, *supra* note 40, at 718.

110. Sharkey, *supra* note 27, at 522. This recommendation is consistent with the Recommendation of the Administrative Conference of the United States (ACUS) regarding agency preemption, Administrative Conference of the United States, 76 Fed. Reg. 81-01, 2001 WL 5751 (adopted Jan. 3, 2011), as well as Executive Order 13,132, Federalism, 3 C.F.R. 206 (Aug. 4, 1999).

this dialogue becomes all the more important. To require additional procedures along the lines of notice-and-comment rulemaking before an agency could publish its interpretation of the governing statute would potentially discourage agencies from publishing these statements of policy, and the public, states, and the regulated community would lose these important benefits.¹¹¹

In light of a proliferation of scholarship on the benefits and limitations of informal agency actions in recent years, it is important to define what advisory nonpreemption is not. While advisory nonpreemption communicates the agency's views on the proper sphere of its regulatory authority in the face of innovation, it is not the federalism equivalent of what Tim Wu has called an "agency threat," or what Lars Noah has called "administrative arm-twisting."¹¹² An agency threat is a statement that the agency intends to take enforcement action and can occur in "a wide variety of informal agency activity" such as "warning letters, official speeches, interpretations, and private meetings with regulated parties,"¹¹³ but not in "mere policy guidelines, studies, [and] reports."¹¹⁴ Wu's "paradigmatic example" of a threat is either a "warning letter sent to the company" that the agency intends to take enforcement action,¹¹⁵ or a "public speech given by an agency chair, describing what the agency believes to be unacceptable behavior, coupled with an explicit or implicit threat of either new rulemaking or enforcement of an existing rule."¹¹⁶ In a similar vein, Noah defines administrative arm-twisting as when an agency threatens "to impose a sanction or withhold a benefit in hopes of encouraging 'voluntary' compliance with a request that the agency could not impose directly on a regulated entity."¹¹⁷ Examples of arm-twisting include conditions imposed during licensing proceedings, conditions imposed during government contracting and procurement, efforts to promote voluntary recalls when an agency lacks formal recall authority, and conditions imposed in consent decrees that exceed statutory requirements,

111. Strauss, *supra* note 103, at 808–09 (rejecting calls for greater proceduralization of publication rules by the D.C. Circuit as both beyond what the APA requires, and bad as a matter of policy).

112. Wu, *supra* note 34, at 1842; Lars Noah, *Administrative Arm-Twisting in the Shadow of Congressional Delegations of Authority*, 1997 WISC. L. REV. 873, 875 (1997) (discussing the risks and benefits of informal agency actions).

113. Wu, *supra* note 34, at 1843–44.

114. *Id.* at 1844.

115. *Id.*

116. *Id.*

117. Noah, *supra* note 112, at 874.

among others.¹¹⁸

Advisory nonpreemption is different. First, agency threats are directed to a particular regulatory target, or to the regulated community as a whole. Advisory nonpreemption, in contrast, speaks to two audiences—both regulated community *and* the states. It clarifies the agency’s current view of its regulatory authority in situations of uncertainty for those two audiences. Second, advisory nonpreemption, though informal, is arguably more formal than the types of actions Wu considers agency threats. A public speech would not be sufficient to shift the balance of regulatory authority between the federal government and the states. Third, advisory nonpreemption is not an attempt at a federal power-grab; quite the opposite. Unlike the Food and Drug Administration (FDA)’s efforts to obtain an agreement by a drug manufacturer to “preclear all of its promotional materials” with the agency for two years—something to which it was not legally entitled¹¹⁹—in advisory nonpreemption, Congress has already delegated authority to the agency to regulate in this area and the agency has regulated the area in the past. And it is “advisory” rather than a “threat” because the federal agency opens a dialogue with states and regulated industry for a specified period of time; it does not shut the door.¹²⁰

We can view as an example of advisory nonpreemption the statement by the National Highway Traffic Safety Administration in its 2016 Policy that the federal government has authority to regulate HAV hardware and software as “vehicles” and “motor vehicle equipment,” but that does not expressly preempt state experimentation.¹²¹ The policy has been published, and the agency engaged actively both with the public and the regulated community, as well as with states, before adopting this policy. The Policy itself seeks comment from the public, and envisions a collaborative dialogue with industry and the states about the agency’s ongoing role to police HAV safety.¹²²

118. *Id.* at 876–895.

119. *Id.* at 892.

120. See ERIN RYAN, FEDERALISM AND THE TUG OF WAR WITHIN, xiii (2011) (examining evidence of intergovernmental bargaining); see also Erin Ryan, *Negotiating Federalism*, 52 B.C. L. REV. 1, 4 (2011); Bulman-Pozen, *supra* note 18.

121. 2016 NHTSA Policy, *supra* note 24; *infra*, Part II.

122. Advisory nonpreemption is also unlike “best practices” regulation. Zaring, *supra* note 83, at 308. Best practices may be most appropriate for situations in which “the precise content of the standard is not particularly important.” *Id.* at 294. In contrast, the precise allocation of authority between the federal government and the states *is* extremely important for AVs; however, in light of innovation uncertainty, we cannot say for sure which allocation is best. Safety rules for vehicles are arguably extremely important, as vehicle crashes cause approximately 38,000 deaths and many more injuries in the United States annually. *Motor Vehicle Deaths Increase by Largest Percent in 50 Years*,

To summarize, advisory nonpreemption offers several important benefits. First, it preserves flexibility in the allocation of regulatory authority as technology or business innovation develops. In times of uncertainty, just as we do not yet know what will be the best policy, we do not yet know if there is a best regulator, or if multiple regulatory voices are best.¹²³ Concerns regarding economies of scale, interstate spillovers, or policy conflict that might weigh in favor of uniform, federal rules must be weighed against the possibility that local variation in conditions will predominate over these interstate concerns. And in periods of rapid innovation, technology may develop in unpredictable ways. For example, if HAVs cannot drive safely in snow or heavy rain, driverless cars may be excellent in the desert Southwestern United States, but unworkable in parts of New England during the winter such that “enhanced human driving” might be a preferable goal.¹²⁴ HAVs may become a more local than national phenomenon, and different states may need different rules not only for drivers, but for vehicles themselves. Second, by permitting more regulatory voices to speak under conditions of uncertainty, advisory nonpreemption can serve as precautionary about important policy goals like safety.¹²⁵ If we knew that fully driverless cars were better than enhanced human driving, a uniform national rule might make sense. But right now, it is not clear whether one is preferable in all contexts. Local experimentation can yield important information about safety that a uniform rule might not. Alternatively, while the federal government may not want stringent, mandatory safety rules for HAVs at this time, the state of California might.¹²⁶ Advisory nonpreemption permits these voices to be heard in the early stages of innovation, rather than definitively shutting them down. And by adopting a time-limited policy, advisory nonpreemption puts the states, interest groups, and industry on notice that the federal government may begin a rulemaking process to claim jurisdiction formally, such that if states wish to have a say or influence that process, now is the time.

Having described the essential features of advisory nonpreemption, the

NAT'L SAFETY COUNCIL (Feb. 17, 2016), <https://perma.cc/L5E3-6FWE>. Accordingly, advisory nonpreemption provides temporary flexibility until a better answer—not the importance of the issue—becomes more apparent.

123. Light, *supra* note 5.

124. Neal E. Boudette, *5 Things That Give Self-Driving Cars Headaches*, N.Y. TIMES (June 4, 2016), <https://perma.cc/P9FD-FJKZ>.

125. Light, *supra* note 5.

126. In fact, the state of California does currently desire more stringent safety measures than the federal government. *See infra*, Part III.

next Part offers HAV safety regulation as a case in which to explore its use in practice. Part III will then turn to the normative analysis that weighs the benefits and costs of advisory nonpreemption, and will address the role of courts and the level of deference that is owed to this type of agency action.

II. ROBOT FEDERALISM: THE RISE OF AUTOMATED VEHICLES

The rapid development of HAV technology offers a particularly compelling case study to highlight both why federal agencies should preserve temporary flexibility in the allocation of regulatory authority to address innovation uncertainty, and how they can achieve this flexibility. This Part first examines the division of labor that has existed between the federal government and the states for fifty years to regulate auto safety, and argues that the development of HAV technology is challenging that division of labor. It then discusses the current state of HAV regulation at the federal, state, and local levels. It concludes by demonstrating that NHTSA's 2016 adoption of advisory nonpreemption in policy guidance retains an appropriate degree of temporary flexibility in the allocation of regulatory authority at this time.

A. Federalism in Auto Safety Regulation

For the past fifty years, a division of labor between the federal government and the states has existed regarding the regulation of motor vehicle safety. Under the Motor Vehicle Safety Act, Congress has delegated to the federal Department of Transportation responsibility for regulating the design of “motor vehicles” and “motor vehicle equipment” to ensure their safety.¹²⁷ The Department then sub-delegated that authority to NHTSA. The statute defines “motor vehicle” as “a vehicle driven or drawn by mechanical power and manufactured primarily for use on public streets, roads, and highways,” and “motor vehicle equipment” as:

(A) any system, part, or component of a motor vehicle as originally manufactured;

127. National Traffic and Motor Vehicle Safety Act, 49 U.S.C. §§ 30101–30183; H.R. Rep. No. 89-1776, 10 (1966) (discussing the need for legislation to promote safety). For a thorough account of the development of this regulatory regime, see JERRY L. MASHAW & DAVID L. HARFST, *THE STRUGGLE FOR AUTO SAFETY* (1990); Jerry L. Mashaw & David L. Harfst, *From Command and Control to Collaboration and Deference: The Transformation of Auto Safety Regulation*, 34 *YALE J. ON REG.* 167 (2017). With the rise of HAVs, this is a rapidly changing area of the law, within NHTSA, the states, and now within Congress. *See supra* note 12.

(B) any similar part or component manufactured or sold for replacement or improvement of a system, part, or component, or as an accessory or addition to a motor vehicle.¹²⁸

Pursuant to its delegated authority, NHTSA issues federal motor vehicle safety standards (FMVSS) governing new motor vehicles.¹²⁹ Vehicle manufacturers must self-certify compliance with these standards, which govern matters like placement of essential controls “within reach of the driver,” headlights, vehicle brake systems, placement and performance of rearview mirrors, occupant impact protection requirements, child restraint systems, and other safety features.¹³⁰ NHTSA also has the authority to recall vehicles when safety concerns arise.¹³¹

The Act preempts non-identical state legislation and regulations:

When a motor vehicle safety standard is in effect under this chapter, a State or a political subdivision of a State may prescribe or continue in effect a standard applicable to the same aspect of performance of a motor vehicle or motor vehicle equipment *only if the standard is identical* to the standard prescribed under this chapter.¹³²

However, the states have a continuing role to play. The Act expressly provides that state common law is carved out of this preemption language, and the Supreme Court has interpreted this carve-out to apply if federal standards merely provide a “floor” rather than a ceiling for vehicle performance.¹³³

In addition, in contrast to the federal emphasis on *vehicle* safety, the states, by and large, are responsible for regulating *human drivers*, including through licensing, insurance rules, and traffic safety laws.¹³⁴ Although the statute does define a “driver,” NHTSA defines the term “driver” in its regulations as “the occupant of the motor vehicle seated immediately behind the steering control system.”¹³⁵ Such a definition is necessary for purposes of vehicle safety standards such as the requirement that the rearview mirror or other controls be within the view or reach of

128. 49 U.S.C. §§ 30102(a)(7), 30107(a)(8). The definition also includes devices like helmets designed to protect user safety that are not relevant to this inquiry.

129. 49 U.S.C. §§ 30101, 30111; 49 C.F.R. Part 571.

130. 49 C.F.R. Part 571.

131. 49 U.S.C. §§ 30118–30120 (authorizing recalls).

132. 49 U.S.C. § 30103 (emphasis added).

133. See Vehicle Safety Act, *supra* note 12.

134. 2016 NHTSA Policy, *supra* note 24, at 38.

135. 49 C.F.R. § 571.3.

the driver,¹³⁶ but has implications for how the states may regulate HAVs.

B. Autonomous Vehicle Innovation

The development of HAV technology raises complex technological, ethical, and regulatory questions. Advocates tout the many benefits of HAVs, including their potential to reduce traffic and congestion; to provide mobility to the elderly, children, and people with disabilities; and to reduce greenhouse gas emissions by optimizing traffic flow.¹³⁷ But the single most important benefit of HAVs is arguably their potential to improve safety.¹³⁸ According to the National Safety Council, there were 38,300 fatalities as a result of motor vehicle accidents in 2015—an eight percent increase over the previous year.¹³⁹ Studies have demonstrated that ninety-four percent of vehicle crashes arise from “human choice or error.”¹⁴⁰ HAVs hold promise to reduce the number of accidents by reducing human error, such as those caused by distracted driving, driving-while-texting, and driving under the influence of alcohol.¹⁴¹

On the other hand, however, are competing concerns that as HAV technology is developing, new and different kinds of accidents may occur. Such new types of accidents may result from driver “complacency” that a vehicle is more “autonomous” than it actually is, such that the driver fails to monitor and take over from technical systems when needed.¹⁴² Or accidents could result from technological failure like the vehicle sensors’ inability to distinguish between a light-colored oncoming truck and a grey sky or white clouds in the background.¹⁴³ Accidents may also result from conflicts between algorithms governing different models of HAVs. For example, if two HAVs are driving down the road in opposite directions, and a pedestrian walks in front of them, what does each vehicle’s programming tell it to do? Would a uniform algorithm governing how both HAVs would respond prevent harm better than different

136. 49 C.F.R. § 571.

137. Press Release, U.S. Dept. of Transp., Secretary Foxx Unveils President Obama’s F17 Budget Proposal of Nearly \$4 Billion for Automated Vehicles and Announces DOT Initiatives to Accelerate Vehicle Safety Innovations (Jan. 14, 2016) (noting potential of AVs to enhance “safety, mobility, and sustainability”).

138. ANDERSON ET AL., *supra* note 16, at 1, 31

139. NAT’L SAFETY COUNCIL, *supra* note 122.

140. 2016 NHTSA Policy, *supra* note 24, at 5.

141. DAVID A. MINDELL, OUR ROBOTS, OURSELVES: ROBOTICS AND THE MYTHS OF AUTONOMY 5 (2015).

142. *Id.* at 26.

143. *Id.* at 26; Anjali Singhvi & Karl Russell, *Inside the Self-Driving Tesla Fatal Accident*, N.Y. TIMES (July 12, 2016), <https://perma.cc/9JY3-6276> (discussing crash involving a Tesla in self-driving mode); MINDELL, *supra* note 141 (discussing driver complacency).

algorithms?¹⁴⁴ Or are accurate and uniform systems for vehicles to communicate with other vehicles sufficient to prevent accidents?¹⁴⁵

Such new problems could also arise because vehicle automation is not binary, but rather exists along a continuum. And vehicles at different points along that continuum of automation are likely to be sharing the roads for some time.¹⁴⁶ At one end of the spectrum are ordinary cars lacking any automated features. In the middle are vehicles with some automated features like parking assistance or collision warning systems, but that still require a human driver to make strategic decisions. At the far end of the spectrum are vehicles that NHTSA calls “Highly Automated Vehicles” or “HAVs”—in which the automated systems can perform *all* of the driving tasks that a human otherwise could.¹⁴⁷ Some of these HAV systems contemplate a continuing role for a human driver under certain conditions, while others take a different approach. For example, Google’s former self-driving car project, now an independent spin-off technology

144. Ariel Wittenberg, *Helping to Build ‘Moral Machines’ at MIT*, GREENWIRE (Oct. 18, 2016), <http://www.eenews.net/stories/1060044432> (quoting William J. Ford Jr., Executive Chairman of Ford Motor Co., as saying, “Could you imagine if we had one algorithm and Toyota had another and General Motors had another? We need to have a national conversation about ethics, because we have never had to think about these things before, but the cars will have the time and ability to do it.”).

145. It is important to distinguish between “automated vehicle technologies,” which are the focus of this article, and Vehicle-to-Vehicle (V2V) communication technologies, though the two are “complementary.” U.S. DEPT. OF TRANSP., FACT SHEET, VEHICLE-TO-VEHICLE COMMUNICATION TECHNOLOGY 3 (Dec. 13, 2016). V2V technology can be employed in any vehicle—with a human driver or without—to facilitate communication between vehicles. V2V technology “expand[s] sensing performance” beyond the systems employed by single vehicles, such as LIDAR, radar, or cameras, and can, for example warn the “driver” not to enter an unsafe intersection or to make a left turn into oncoming traffic. *Id.* On December 13, 2016, NHTSA issued a Notice of Proposed Rulemaking to mandate V2V technology in all new light vehicles in the United States. U.S. Dept. of Transp., NHTSA, *Notice of Proposed Rulemaking, Federal Motor Vehicle Safety Standards; V2V Communications*, 49 C.F.R. § 571 (submitted for publication in the Federal Register). There is a strong argument for a federal uniform common language if all vehicles are meant to communicate with one another.

146. After using its own classification system for several years, in 2016, NHTSA adopted the Society of Automotive Engineers (SAE) International taxonomy that separates AVs into six levels of automation. *See* 2016 NHTSA Policy, *supra* note 24, at 9–10 (citing SAE International Standard J3016, http://www.sae.org/misc/pdfs/automated_driving.pdf). An SAE Level 0 vehicle lacks automation. A Level 1 vehicle can assist the driver with certain tasks; while a Level 2 vehicle can “actually conduct” certain tasks, but the human driver both monitors the automated systems and must conduct other tasks. A Level 3 vehicle can conduct driving tasks, but a human driver must be ready to retake control. A Level 4 vehicle is fully automated “and the human need not take back control, but the automated system can operate only in certain environments and under certain conditions.” A Level 5 vehicle can “perform all driving tasks, under all conditions that a human driver could perform them.” NHTSA considers only Levels 3–5 “highly automated vehicles” (HAVs) subject to its 2016 Policy. *Id.*

147. *Id.* at 10. The term “autonomous” should not be read to imply *no* human involvement; human programmers and engineers designed the vehicle and its software to behave in certain ways. MINDELL, *supra* note 141, at 220 (“[A]utonomy is *human action removed in time.*”) (emphasis in original).

firm called Waymo, is currently testing driverless vehicles that lack a steering wheel, accelerator, and brakes, having concluded that humans cannot be counted on to monitor and take over from automated systems safely.¹⁴⁸ How HAVs interact with unpredictable human drivers remains an open question.¹⁴⁹

Although NHTSA contends that the hardware and software are part of the “vehicle” and its “equipment” (favoring federal regulatory primacy), there is another interpretation. The hardware and software of such HAVs would, in another legally relevant sense, be the “drivers.” The vehicle and its software would control not only the physical actions of acceleration, braking, and steering in the moment, but also strategic, tactical, and ethical judgments about how to avoid collisions. Human drivers must constantly make judgment calls and draw upon principles of decision, for example, about whether to obey the law or to violate it in order to promote a higher need for safety or to preserve life.¹⁵⁰ Considering these issues, ethicists have asked how an HAV should respond to the famous “trolley problem.”¹⁵¹ Given a choice between saving the vehicle’s single human passenger, and saving multiple passengers in an oncoming bus, what choice should the vehicle make? A recent empirical study published in *Science* concluded that while people generally believe that HAVs *should* sacrifice vehicle passengers for the greater good, people do not “actually want[] to buy one for themselves” if they will be sacrificed.¹⁵² Perhaps in response to this concern, Mercedes recently announced that the automaker would prioritize saving the life of the driver and vehicle occupants.¹⁵³ In 2015,

148. Waymo, www.waymo.com/journey.

149. James R. Haggerty, *These Drivers are Not Crazy: They’re Just Doing the Pittsburgh Left*, WALL ST. J. (Jan. 20, 2017), <https://www.wsj.com/articles/these-drivers-are-not-crazy-theyre-just-doing-the-pittsburgh-left-1484926356> (noting challenges for AVs facing the local norm of yielding to drivers turning left when the light changes).

150. *Id.* at 26 (offering the example of whether to break the law by crossing the double-yellow line in the middle of the road to avoid a crash).

151. Judith Jarvis Thomson, *The Trolley Problem*, 94 YALE L.J. 1395 (1985) (discussing ethical challenges posed by the hypothetical case of whether to save one person or five at risk from a runaway trolley) (citing Philippa Foot, *The Problem of Abortion and the Doctrine of Double Effect*, in VIRTUES AND VICES AND OTHERS ESSAYS IN MORAL PHILOSOPHY 19 (1978) (originating the trolley problem). Again, this question of how a vehicle would respond to such a situation is distinct from the question of whether the vehicles can communicate with one another to sense each other’s presence. See *supra* note 145 (discussing V2V communication).

152. Jean-Francois Bonnefon, Azim Shariff & Iyad Rahwan, *The Social Dilemma of Autonomous Vehicles*, 352 SCIENCE 1573, 1575 (2015) (discussing AV ethics as a classic “social dilemma” and noting that participants did not wish to enforce utilitarian sacrifices by regulation).

153. Michael Taylor, *Self-Driving Mercedes-Benzes Will Prioritize Occupant Safety Over Pedestrians*, CAR & DRIVER (Oct. 7, 2016), <http://blog.caranddriver.com/self-driving-mercedes-will-prioritize-occupant-safety-over-pedestrians/> (“If you know you can save at least one person, at least save that one. Save the one in the car.”).

the head of what was then Google's self-driving car project argued that such situations do not arise frequently, if at all, although it is a "fun problem for philosophers to think about."¹⁵⁴ Another Google engineer contended that such a scenario would mean that the vehicle "made a mistake a couple of seconds earlier."¹⁵⁵

It is not only such deeply philosophical issues that implicate concerns about HAV safety and the boundaries of federalism. HAVs must also be prepared to make more mundane decisions like whether the vehicle can safely make a left turn across the path of oncoming traffic, or pass another vehicle on the highway before the road turns.¹⁵⁶ HAV technology must thus incorporate not only technical knowledge regarding how to parallel park or how to distinguish between the sky and a light-colored oncoming vehicle to avoid a collision, but principles of decision that embody judgment. Those judgment calls, strategic decisions, and the mistakes that may have preceded them in fully autonomous vehicles would be made not by human drivers in the moment, but rather by vehicle algorithms programmed in advance by human engineers. This narrative would favor state regulatory primacy over such algorithms—at least, perhaps over the software. It is hardly beyond the capacity of well-designed software to recognize that an HAV has crossed state lines and to apply different rules, just as a human driver knows to change speed limits, or a motorcyclist needs to put on a helmet when entering a different state. HAVs thus muddy the distinction between "vehicles" regulated by the federal government, and "drivers" regulated by the states.

To add complexity, innovation's path can be unpredictable. Describing these degrees of automation as a "continuum" could lead to the assumption that technological development will follow a linear path from our current state of affairs to a state of fully driverless cars in the future that lack steering wheels, brakes, and accelerators. And indeed, some

154. Matt McFarland, *Google's Chief of Self-Driving Cars Downplays 'the Trolley Problem,'* WASH. POST (Dec. 1, 2015), <https://www.washingtonpost.com/news/innovations/wp/2015/12/01/google-leader-on-self-driving-cars-downplays-the-trolley-problem/>.

155. Alex Hern, *Self-Driving Cars Don't Care About Your Moral Dilemmas*, GUARDIAN (Aug. 22, 2016), <https://www.theguardian.com/technology/2016/aug/22/self-driving-cars-moral-dilemmas>.

156. The first known collision between AVs occurred in 2007 between two vehicles built by MIT and Cornell participating in the Defense Advanced Research Projects Agency Grand Challenge. MINDELL, *supra* note 141, at 204. The MIT car failed "to classify the other car as a moving object and to derive its future path." *Id.* at 205. The MIT engineers had set a velocity threshold to distinguish between a moving object and a stationary object. Because the Cornell vehicle was "lurching," rather moving at a consistent velocity, the threshold was not triggered. *Id.* The MIT car's software concluded that the Cornell car was stationary, and drove in front of it. *Id.* at 204–05.

automakers and scholars envision such a world.¹⁵⁷ For example, Google was a pioneer in promoting fully driverless cars—a mission now continued by spin-off firm Waymo.¹⁵⁸ But it is important to question that assumption.¹⁵⁹ Indeed, different firms developing HAV technology are staking out diverse positions about whether human drivers should remain in such vehicles in the future, or whether the ultimate goal of HAV technology development should be to remove human drivers entirely. And there is uncertainty about how long these developments will take. Even the former director of Google’s driverless car program recognized that its desired path to driverlessness might be longer than originally anticipated, and that it may proceed in stages, depending upon different local driving conditions.¹⁶⁰ Engineer David Mindell of MIT has argued that assuming a linear path in which machines replace humans is a flawed and ahistorical assumption, in light of how automated technologies have developed in other contexts, such as in deep sea exploration and outer space.¹⁶¹ Other HAV manufacturers have staked out their position as favoring enhancement of human driver capabilities through automation, rather than replacement of human drivers. For example, CEO of the Toyota Research Institute Gil Pratt has described Toyota’s advanced driver assistance system as a “guardian angel” not a robotic “chauffeur.”¹⁶² At this moment,

157. PETER W. SINGER, *WIRED FOR WAR: THE ROBOTICS REVOLUTION AND CONFLICT IN THE 21ST CENTURY* (2009); Matthew Yglesias, *Morgan Stanley Predicts Utopian Society By 2026*, SLATE (Feb. 25, 2014), http://www.slate.com/blogs/moneybox/2014/02/25/morgan_stanley_on_autonomous_cars_utopia_by_2026.html; Tony Dutzik, *Choose Your Own Utopia: What Will We Make of Driverless Cars*, STREETS BLOG USA (Oct. 2, 2015), <http://usa.streetsblog.org/2015/10/02/choose-your-own-utopia-what-will-we-make-of-driverless-cars/>; David Roberts, *The Transformative Potential of Self-Driving Electric Cars*, VOX (Sept. 25, 2015), <http://www.vox.com/2015/9/25/9398063/self-driving-electric-cars>; Adrienne LaFrance, *The High-Stakes Race To Rid The World Of Human Drivers*, THE ATLANTIC (Dec. 1, 2015), <http://www.theatlantic.com/technology/archive/2015/12/driverless-cars-are-this-centurys-space-race/417672/>.

158. Alistair Barr, *Google’s Self-Driving Car Project is Losing Out to Rivals*, BLOOMBERG (Sept. 12, 2016), <https://www.bloomberg.com/news/articles/2016-09-12/google-car-project-loses-leaders-and-advantage-as-rivals-gain> (noting that “Google co-founder Larry Page insisted on complete human driver replacement” and that current CEO of Google’s Self-Driving Cars unit John Krafcik has said, “[f]ull autonomy, although much harder, is the right route”) Waymo, Technology, <https://waymo.com/tech/>.

159. MINDELL, *supra* note 141 (rejecting the myth of “linear progress” for AVs).

160. Lee Gomes, *Google Self-Driving Car Will Be Ready For Some, In Decades For Others*, IEEE (Mar. 18, 2016), <http://spectrum.ieee.org/cars-that-think/transportation/self-driving/google-selfdriving-car-will-be-ready-soon-for-some-in-decades-for-others> (quoting Chris Urmson, former Director of Google’s Self-Driving Cars Project, as saying driverless cars may take as long as thirty years to develop, and may be released “incrementally,” first, in places with favorable weather conditions “where the roads are easy to drive” before a rollout to additional locations). As a technology firm rather than an auto manufacturer, Waymo also faces the challenge of bringing these cars to market. Barr, *supra* note 158.

161. MINDELL, *supra* note 141, at 5, 10.

162. Lucas Mearian, *A.I. Guardian-Angel Vehicles Will Dominate Auto Industry, Says Toyota*

we do not know, and cannot predict with certainty, how HAV technology will develop, which visions of “autonomy” will predominate, and how long the diffusion of this technology will take. HAVs are likely to develop in fits and starts in perhaps unanticipated ways as people adjust to their changing role within HAV systems.¹⁶³

C. Federalism Disruption

Congress did not envision robot cars when it drafted this bedrock legislation in 1966. This “old statute” must confront a “new problem” of how best to regulate HAVs as a substantive matter *today*, in their current state of being.¹⁶⁴ To date, legal scholarship on the rise of autonomous vehicles has focused primarily on the ways in which the blurring of lines between driver and vehicle raises *substantive* questions about the application of existing tort, criminal, and privacy law.¹⁶⁵ But I want to

Exec., COMPUTERWORLD (June 3, 2016), <http://www.computerworld.com/article/3079044/car-tech/ai-guardian-angel-vehicles-will-dominate-auto-industry-says-toyota-exec.html>. A 2016 survey conducted by the University of Michigan Transportation Research Institute demonstrated that only sixteen percent of respondents preferred to ride in a driverless vehicle, while forty-six percent wished to retain “full control” of a vehicle, and thirty-nine percent wanted a “partially self-driving vehicle.” For complete survey results, see Bernie DeGroat, *Vehicle Automation: Most Drivers Still Want to Retain Some Control*, U.MICH. (May 23, 2016), <http://ns.umich.edu/new/releases/23935-vehicle-automation-most-drivers-still-want-to-retain-at-least-some-control>.

163. See Jeremy Hsu, *75% of U.S. Drivers Fear Self-Driving Cars, But It's An Easy Fear To Get Over*, SPECTRUM (Mar. 7, 2016), <http://spectrum.ieee.org/cars-that-think/transportation/self-driving/drive-less-cars-inspire-both-fear-and-hope> (discussing a AAA study finding that seventy-five percent of people are afraid to use self-driving cars, but that establishing trust between a person and an autonomous vehicle can occur established quickly) (citing *Three-Quarters of Americans “Afraid” To Ride In A Self-Driving Vehicle*, AAA NEWSROOM (Mar. 1, 2016), <http://newsroom.aaa.com/2016/03/three-quarters-of-americans-afraid-to-ride-in-a-self-driving-vehicle/>); John Irwin, *Public Not Sold On Fully Autonomous Vehicles, Study Finds*, AUTONEWS (May 23, 2016), <http://www.autonews.com/article/20160523/OEM06/160529968/public-not-sold-on-fully-autonomous-vehicles-study-finds> (discussing age gap in preferences for AVs). But see Daniel Fuller, *Tech Talk: Public Opinion of Autonomous Cars is Changing*, ANDROID HEADLINES (June 30, 2016), <http://www.androidheadlines.com/2016/06/tech-talk-public-opinion-of-autonomous-cars-is-changing.html> (discussing people’s increasing comfort with the idea of AVs).

164. Cf. Freeman & Spence, *supra* note 38 (discussing the “new problem” of climate change). For example, NHTSA is reviewing all existing FMVSS to determine whether they pose conflicts or barriers to innovation for AVs. U.S. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN. & VOLPE, REVIEW OF FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS) FOR AUTOMATED VEHICLES: IDENTIFYING POTENTIAL BARRIERS AND CHALLENGES FOR THE CERTIFICATION OF AUTOMATED VEHICLES USING EXISTING FMVSS—PRELIMINARY REPORT 1 (Mar. 2016). Potential conflicts or barriers include references to human drivers and other vehicle safety standards that could limit or affect AVs, such as requirements for vehicle steering wheels. *Id.* at ii.

165. See, e.g., Sven A. Beiker, *Legal Aspects of Autonomous Driving*, 52 SANTA CLARA L. REV. 1145 (2012) (discussing challenges for regulation, including safety and privacy concerns, but not discussing federalism); Frank Douma & Sarah Aue Palodichuk, *Criminal Liability Issues Created by Autonomous Vehicles*, 52 SANTA CLARA L. REV. 1157 (2012) (discussing the criminal liability issues

focus instead on the boundaries of federalism.

Regulatory authority over HAV safety could be allocated in one of four ways. First, there could be no public regulation of HAV safety. Private vehicle manufacturers could simply incorporate their own visions of both the appropriate degree of autonomy and algorithms directing how the vehicle will respond in different circumstances in proprietary vehicle software, or more communally in private standards set by industry groups—Ford could use one standard and Waymo another, or they could voluntarily agree on a private industry standard.¹⁶⁶ Second, HAV safety could be governed by the states, either through state tort law and the concept of the reasonable person (which would be applied to the algorithms controlling the vehicle), or through state regulatory and legislative standards for HAVs. Under the second approach, state rules or standards governing safe vehicle operation and principles of decision might intrude into what has traditionally been federal territory over vehicle design. But the states could claim that this is within their traditional authority to regulate human drivers—the human “drivers” here are simply in engineering labs, rather than in the vehicles. States have expertise in regulating behavior, and if vehicles are “behaving” in particular ways, then regulating that behavior draws on that expertise. Third, HAV safety could be governed exclusively by federal law. In this case, federal motor vehicle safety standards governing HAVs would arguably intrude into what has traditionally been state regulatory space governing operation of vehicles and behavior of drivers. Fourth, the federal government and the states could share authority in some fashion, perhaps through a scheme of cooperative federalism or floor preemption. Any dynamic approach,

created by autonomous vehicles); Dorothy J. Glancy, *Privacy in Autonomous Vehicles*, 52 SANTA CLARA L. REV. 1171 (2012) (discussing the confluence of autonomous vehicles and privacy laws); David C. Vladeck, *Machines Without Principals: Liability Rules and Artificial Intelligence*, 89 WASH. L. REV. 117 (2014) (discussing products liability and AVs); Jeffrey K. Gurney, *Driving into the Unknown: Examining the Crossroads of Criminal Law and Autonomous Vehicles*, 5 WAKE FOREST J.L. & POL’Y 393 (2015) (discussing criminal law and AVs); Adam Thierer and Ryan Hagemann, *Removing Roadblocks to Intelligent Vehicles and Driverless Cars*, 5 WAKE FOREST J.L. & POL’Y 339 (2015) (arguing against regulating AVs); Ryan Calo, *Robots in American Law* (Feb. 24, 2016) (Univ. of Washington School of Law Working Paper No.2016-04 draft on file with author) (citing scholarship on civil and criminal liability, legal personhood, enforcement, speech, intellectual property, race and gender, and privacy, but not federalism) (manuscript at 33–34). For one exception discussing the division of labor between the federal and state governments, see Andrew R. Swanson, “*Somebody Grab the Wheel!*”: *State Autonomous Vehicle Legislation and the Road to a National Regime*, 97 WASH. L. REV. 1085 (2014). For a summary for policymakers of technical and regulatory issues raised by autonomous vehicles which describes challenges for the allocation of federal and state regulatory authority, see ANDERSON ET AL., *supra* note 16.

166. Thierer & Hagemann, *supra* note 165, at 339 (arguing for “permissionless innovation” for AVs).

however, would raise the possibility of conflicting standards.¹⁶⁷ These four options are reflected in Table 2.

Table 2

No Regulation – Private Standards, Self-Regulation	Federal Motor Vehicle Safety Standards preempt state law
States regulate in the absence of Federal Motor Vehicle Safety Standards	Concurrent (dynamic) Jurisdiction

What makes this case so challenging, however, is that policymakers must not only confront the allocation of regulatory authority given the state of technological innovation *today*. There may be additional innovation in the *future*—foreseen or unforeseen. This raises the question of whether the boundaries of federalism should be strictly determined or remain fluid. A great deal is at stake in these federalism questions, because conflicting rules among the states could *themselves* be the cause of accidents.¹⁶⁸ The next section discusses the regulatory environment leading up to NHTSA’s 2016 adoption of advisory nonpreemption.

D. Regulation of AVs Before 2016

With that background in mind, I now turn to how the regulatory environment regarding AVs and HAVs has evolved over time. While the federal government has encouraged the development of AV technology through grants, studies, and prizes, NHTSA has not, to date, adopted binding federal motor vehicle safety standards for AV technology; nor has

167. See *infra*, Part III (discussing potential for federal-state conflict).

168. Light, *supra* note 5; ANDERSON ET AL., *supra* note 16 (citing industry’s concerns over a “patchwork” of differing state rules).

Congress amended the Motor Vehicle Safety Act.¹⁶⁹ This is not to say, however, that the federal government has been inactive or inattentive to these issues.

1. Federal Policy

At the agency level, NHTSA has been a vocal advocate of AV technology, but has proceeded slowly in addressing its safety risks. In 2013, NHTSA announced its first Preliminary Statement of Policy regarding AVs, addressing the potential benefits of innovation, areas in which additional research would be required to ensure safety, and recommendations to states regarding AV testing.¹⁷⁰ NHTSA identified three “related streams of technological change,” each of which raises its own technological and regulatory issues: (1) in-vehicle crash-avoidance systems; (2) Vehicle-to-Vehicle (V2V) communications technology; and (3) self-driving vehicles (AVs).¹⁷¹ With respect to AVs, the 2013 Policy defined five levels of automation, noting that at that time it was “not aware of any prototype automated vehicle systems that are capable of operating on public roads without the presence of a driver in the driver’s seat who is ready to control the vehicle.”¹⁷² Much of the proposed research agenda thus focused on developing a safe “driver-vehicle interface.”¹⁷³ The 2013 Policy incorporated no language regarding preemption, but did recommend states *not* license self-driving vehicles other than for testing purposes.¹⁷⁴ Therefore, all of the recommendations in the 2013 Policy “assume[ed] that the human driver of the vehicle” was employed by the entity testing the vehicle,¹⁷⁵ and “strongly recommend[ed] that a properly licensed driver be seated in the driver’s seat and ready to take control of the vehicle while the vehicle is operating in self-driving mode on public roads.”¹⁷⁶

How quickly times changed. In November, 2015, the Director of Google’s then Self-Driving Car Project, which became an independent

169. As noted above, on December 13, 2016, NHTSA issued a Notice of Proposed Rulemaking for the related issue of V2V communications. *See supra* note 145. And as noted above, in September, 2017, the House of Representatives passed a bill to regulate HAV safety, but the Senate has yet to act. *See supra* note 12.

170. U.S. DEPT. OF TRANSP., NAT’L HIGHWAY SAFETY TRAFFIC ADMIN., *Preliminary Statement of Policy Concerning Automated Vehicles 1* (2013).

171. *Id.* at 3.

172. *Id.* at 5, 8.

173. *Id.* at 7.

174. *Id.* at 10.

175. *Id.* at 10.

176. *Id.* at 12.

spin-off company called Waymo in December, 2016, requested an interpretation from NHTSA as to whether Google's Self-Driving System (SDS), an "artificial intelligence driver, which is a computer designed into the motor vehicle itself that controls all aspects of driving by perceiving the environment and responding to it" could be the "driver" for purposes of certification of compliance with federal motor vehicle safety standards.¹⁷⁷ On January 14, 2016, NHTSA issued an Update to its Preliminary Statement of Policy Concerning Automated Vehicles, indicating its plans to release a policy guidance on principles for the safe operation of fully automated vehicles, including to propose "best-practice guidance" for fully autonomous vehicles.¹⁷⁸ This 2016 Update indicated that NHTSA would work with the states to develop policies on testing and operation of AVs to "offer a nationally consistent approach to autonomous vehicles."¹⁷⁹ And on February 4, 2016, NHTSA responded to Google's request, stating that the agency "will consider initiating rulemaking to address whether the definition of 'driver' in Section 571.3 should be updated in response to changing circumstances."¹⁸⁰ NHTSA further advised Google to consider petitioning for specific exemptions from federal motor vehicle safety standards that required the presence of a human driver in the left front seat, because it could not determine whether, even assuming that the SDS were the "driver," Google actually met key safety requirements.¹⁸¹

2. State Regulatory Experimentation

In the absence of federal motor vehicle safety standards for AVs, a number of states have adopted legal rules permitting the testing and operation of AVs within their jurisdictions.¹⁸² And a dozen states currently

177. Letter from Paul A. Hemmersbaugh, Chief Counsel, NHTSA, to Chris Urmson, Director of Self-Driving Car Project, Google (Feb. 4, 2016), <https://perma.cc/77J8-Y49N>.

178. U.S. DEPT. OF TRANSP., NAT'L HIGHWAY SAFETY TRAFFIC ADMIN., DOT/NHTSA POLICY STATEMENT CONCERNING AUTOMATED VEHICLES, 2016 UPDATE TO "PRELIMINARY STATEMENT OF POLICY CONCERNING AUTOMATED VEHICLES" 1 (2016), <http://www.nhtsa.gov/staticfiles/rulemaking/pdf/Autonomous-Vehicles-Policy-Update-2016.pdf>.

179. *Id.* at 1.

180. Hemmersbaugh, *supra* note 177.

181. *Id.*

182. For regularly updated information regarding state laws on autonomous vehicles, see Stanford University Center for Internet and Society, Automated Driving: Legislative and Regulatory Action, http://cyberlaw.stanford.edu/wiki/index.php/Automated_Driving:_Legislative_and_Regulatory_Action; ANDERSON ET AL., *supra* note 16 (summarizing state rules as of 2016); Rachel Abrams, *Self-Driving Cars May Get Here Before We're Ready*, N.Y. TIMES (Jan. 21, 2016), <http://www.nytimes.com/2016/01/22/business/dealbook/davos-self-driving-cars-may-get-here-before->

have legislation regarding autonomous vehicles pending.¹⁸³ These state laws exemplify the “laboratories of experimentation” approach to lawmaking advocated by Justice Brandeis, as they take different, and sometimes conflicting, approaches on important issues such as whether a driver must be physically present in the vehicle.¹⁸⁴

Several states have proposed or adopted laws that would permit operation of HAVs without a human driver on public roads. For example, on December 9, 2016, Michigan Public Act 332 of 2016 went into effect.¹⁸⁵ That statute provides that “an automated driving system allowing for operation without a human operator shall be considered the driver or operator of a vehicle for purposes of determining conformance to any applicable traffic or motor vehicle laws and shall be deemed to satisfy electronically all physical acts required by a driver or operator of the state vehicle.”¹⁸⁶ Other states have taken a more circuitous route.¹⁸⁷ For example, in 2012, the State of California amended its Vehicle Code to permit testing of autonomous vehicles on public roads *with* a human operator physically present in the vehicle and ready to take control of the vehicle, under certain conditions.¹⁸⁸ Two important limiting conditions were that the driver had to be an employee, contractor, or designee of the vehicle manufacturer, and that the vehicle had to have systems in place to

were-ready.html?_r=0; Ariel Wittenberg, *States Race to Let Autonomous Cars Drive Alone*, GREENWIRE (Sept. 19, 2016), <https://perma.cc/5T4B-ZL37> (reporting on conflicting state approaches to presence of a human driver).

183. Assemb. B., 399 Reg. Sess. (Cal. 2017–2018) (pending); S.B. 251, Reg. Sess. (Cal. 2017–18) (pending); S.B. 145, Reg. Sess. (Cal. 2017–18) (pending); Assem. B. 87, Reg. Sess. (Cal. 2017–2018) (pending); S.B. 54, 2017–18 Reg. Sess. (Ga. 2015) (pending); H.B. 1596, 29th Leg. (Haw. 2017) (pending); H.B. 2747, 100th Gen. Assemb. (Ill. 2017) (pending); S.B. 1432, 100th Gen. Assemb. (Ill. 2017) (pending); S.B. 902 & H.B. 1013, 2017 Reg. Sess. (Md. 2017) (pending); S.B. 9, 2017 Reg. Sess. (Md. 2017) (pending); S.B. 927 & 928, 2016 Sess. (Mich. 2016) (pending); L.B. 627, 2017 (Nb. 2017) (pending); A.B. 69, 2017–2018 Sess. (Nev. 2017) (pending); H.B. 314, 2017 Sess. (N.H. 2017) (pending); Assemb. B. 554, 2016–2017 Reg. Sess. (N.J. 2016) (pending); Assemb. B. 851, 2016–2017 Reg. Sess. (N.J. 2016) (pending); Assemb. B. 3745, 2016–2017 Reg. Sess. (N.J. 2016) (pending); S.B. 343, 2016–2017 Reg. Sess. (N.J. 2016) (pending); Assemb. B. 31, 2015–2016 Leg. Sess. (N.Y. 2016) (pending); Assemb. B. 7243, 2017–2018 Leg. Sess. (N.Y. 2017) (pending); Assemb. B. 1037, 2017–2018 Reg. Sess. (N.Y. 2017) (pending); H.B. 1394, 2017 Sess. (N.D. 2017) (pending); S.B. 202, 2017 Sess. (Ok. 2017) (pending); H.B. 2461, 2017 Reg. Sess. (Or. 2017) (pending); H.B. 1131/S.B. 1072, 2017 Sess. (Tenn. 2017) (pending); H.B. 0705/S.B. 0513, 2017 Sess. (Tenn. 2017) (pending); H.B. 257, 2017 Gen. Sess. (Utah 2017) (pending); H.B. 1372, 2016 Sess. (Va. 2016) (pending).

184. *See* *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (Brandeis, J., dissenting).

185. Public Act 332 of 2016, amending Mich. Veh. Code § 257.665 (permitting operation by a vehicle without a human driver on public roads within the state).

186. *Id.*

187. S.B. 1298, 2011–2012 Sess. § 2(b) (Cal. 2012) (amending CAL. VEH. CODE § 38750); FLA. STAT. § 316.85 (noting that driver need not be physically present in the vehicle).

188. *Id.*

alert the driver about system failure.¹⁸⁹ Notably, however, the 2012 law anticipated the possibilities that a human operator would not be physically present in the vehicle,¹⁹⁰ and that a vehicle could be operated even without a *remote* human driver.¹⁹¹ While these rules could intrude into federal authority to regulate vehicle safety (especially requirements for vehicle equipment design like alert systems), the 2012 California law expressly recognized that federal regulations “shall supersede” state law if they conflict.¹⁹² While the 2012 statutory language contemplated the possibility of fully driverless cars, the California Department of Motor Vehicles adopted regulations in 2014 that only authorized the testing of AVs with a human driver present in the vehicle, in keeping with the then-state of technology.¹⁹³

In 2016, two developments occurred to change this landscape. First, in 2016, California amended the state vehicle code, authorizing a single local transportation authority to pilot test HAVs without a human driver in the vehicle, including HAVs lacking a steering wheel, brake pedal, and accelerator.¹⁹⁴ The pilot testing of driverless HAVs has been limited to two specified locations (one of which includes some public roads), and only permits operation of such HAVs at speeds of less than 35 mph.¹⁹⁵ The California Legislature made clear that the amendment was “only intended to govern the establishment of one local pilot project,” and not to amend state AV policy more broadly.¹⁹⁶ In September, 2016, however, the California DMV published a draft of proposed regulations that would permit the testing by manufacturers and deployment on public roads within the state of autonomous vehicles *without* drivers.¹⁹⁷ And in March,

189. *Id.* at § 2.

190. If a manufacturer seeks approval to test AVs without a human operator in the vehicle, the Department may impose additional safety requirements *Id.* at § 2(e).

191. California law expressly defines an “autonomous vehicle” as a vehicle with “autonomous technology,” meaning, “technology that has the capability to drive a vehicle without the active physical control or monitoring by a human operator.” *Id.* at §§ 2(a)(2)(A), 2(a)(1).

192. *Id.* at §2(g).

193. Order to Adopt, Title 13, Division 1, Chapter 1, Article 3.7. California DMV (May 19, 2014), https://www.dmv.ca.gov/portal/wcm/connect/d48f347b-8815-458e-9df2-5ded9f208e9e/adopted_t xt.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=d48f347b-8815-458e-9df2-5ded9f208e9e.

194. Assemb. B. 1592, 2015–2016 Sess. (Cal. 2016) (amending CAL. VEH. CODE § 38755).

195. *Id.* at § (a)(1), 1(a)(2). The manufacturer must also certify that the pilot project “complies, or will comply” with NHTSA “guidance, if any, on the safe testing, deployment, and operation of autonomous vehicles.” *Id.* at § 1(c)(2)(D).

196. *Id.* at § 1(g).

197. Draft Express Terms, Title 13, Division 1, Chapter 1, Articles 3.7 & 3.8. California DMV (Sept. 30, 2016), https://www.dmv.ca.gov/portal/wcm/connect/211897ae-c58a-4f28-a2b7-03cbe213e51d/av_expressterms_93016.pdf?MOD=AJPERES.

2017, the California DMV issued proposed regulations for public comment with the same goal in mind—to regulate the testing and deployment on public roads of vehicles without a human driver.¹⁹⁸ The comment period closed in April 2017; however, as of the date this Article went to press, no final regulatory rules have been published.¹⁹⁹

In 2012, Florida initially adopted legislation requiring the operator of an AV to be physically present in the vehicle.²⁰⁰ In 2016, however, the Florida legislature deleted the requirement that the operator be physically present.²⁰¹ This opened the possibility of remote operation of vehicles.²⁰² However, it could likewise include fully driverless cars without even remote operators.²⁰³

In contrast, other jurisdictions, including Nevada, Tennessee, and the District of Columbia, have adopted legal rules permitting the operation of AVs, but requiring a human driver to be present in the vehicle. Specifically, by legislation adopted in 2013, Nevada authorizes AVs, but requires a human operator to be seated in the vehicle and able to take immediate control.²⁰⁴ In 2016, Tennessee adopted legislation authorizing the testing of AVs on public roads.²⁰⁵ The Act distinguishes “No-operator-required autonomous vehicle[s]” (NORAVs), from “Operator-required autonomous vehicle[s]” (ORAVs), and permits manufacturers to test ORAVs on public roads if certified by the State.²⁰⁶ The law calls for the Department of Motor Vehicles to promulgate rules to govern the safe

198. Draft Express Terms, Title 13, Division 1, Chapter 1, Articles 3.7 & 3.8. California DMV (Mar. 10, 2017), https://www.dmv.ca.gov/portal/wcm/connect/caa2f466-fe0f-454a-a461-f5d7a079de49/av_expressterms_31017.pdf?MOD=AJPERES. For further discussion of the potential conflict that could arise between California’s proposed regulations and NHTSA’s 2016 Policy, see *infra* Part III.

199. *Deployment of Autonomous Vehicles for Public Operation*, CAL. DEP’T MOTOR VEHICLES, <https://www.dmv.ca.gov/portal/dmv/detail/vr/autonomous/auto>.

200. FLA. STAT. § 316.85(1); H.B. 1207, 2012 Leg. § 3 (Fla. 2012). Other requirements are similar to California’s, including that federal law “shall supersede” state law in cases of conflict. H.B. 1207 at § 4 BB 4.1; FLA. STAT. § 319.145(1)(d)(2).

201. H.B. 7027, 2016 Leg. Ch. 2016–181 (Fla. 2016) (deleting the requirement that a human operator be present in the vehicle during autonomous mode).

202. FLA. STAT. § 316.85 (“[A] person shall be deemed to be the operator of an autonomous vehicle operating in autonomous mode when the person causes the vehicle’s autonomous technology to engage, regardless of whether the person is physically present in the vehicle while the vehicle is operating in autonomous mode.”).

203. *Id.*

204. NEV. REV. STAT. § 482A.070 (2013). The Nevada statute directs the Department of Motor Vehicles to establish a special driver’s license “endorsement” for any operator of an AV within the state. *Id.* at § 482A.060; 482A.200 (2011).

205. S.B. 1561, 109th Gen. Assemb. (Tenn. 2016); H.B. 1564, 109th Reg. Sess. (Tenn. 2016) (codified in TENN. CODE ANN. §§ 47, 54, 55, 67 (2016)).

206. S.B. 1561, 109th Gen. Assemb. §§ 2, 3 (Tenn. 2016), (effective Jan. 1, 2017).

testing of NORAVs in the state.²⁰⁷ And in 2013, the District of Columbia adopted legislation authorizing the operation of AVs on public roads within the District, as long as a human driver is seated in the vehicle and prepared to assume control.²⁰⁸

In 2015, by Executive Order, the State of Arizona adopted an intermediate position, authorizing the creation of pilot testing programs on certain university campuses in cooperation with AV manufacturers.²⁰⁹ Arizona requires a licensed, human operator to monitor and be able to take control of the vehicle if necessary.²¹⁰ The operator must be an employee, contractor, or other designee of the entity developing the technology to operate the vehicle.²¹¹ However, the human operator need not be physically present in the vehicle, and instead may be at a remote location.²¹² Finally, both North Dakota and Utah have adopted legislation requiring studies of AVs, and assessing what laws might require adoption or amendment to address AVs in the state,²¹³ and Louisiana has defined “autonomous technology” for purposes of its Highway Regulatory Act.²¹⁴

Local governments have likewise adopted rules governing AVs, often to encourage partnerships with industry or academia to test such vehicles. Pittsburgh, home to Carnegie Mellon University, for example, has taken a leadership position in the development and testing of AVs.²¹⁵ As a result, in 2016, Uber began testing AVs in the city as part of its services, though a human driver sat in the driver’s seat to monitor the vehicles to ensure safety, and the experiment has not been without friction.²¹⁶ In Las Vegas, the City Council adopted a resolution in 2016 creating an “innovation district” that permits local officials to craft rules to permit testing of

207. *Id.* § 9 (effective Jan. 1, 2017). Tennessee preempts local governments from banning AVs within their jurisdictions. S.B. 598, 109th Reg. Sess. (Tenn. 2015).

208. D.C. CODE § 50-2352 (2013).

209. Ariz. Exec. Order No. 2015-09 (Aug. 25, 2015) <https://azgovernor.gov/file/2660/download?to ken=nLkPLRi1>.

210. *Id.*

211. *Id.*

212. *Id.*

213. H.B. 1065, 64th Leg. Assemb. (N.D. 2015) (requiring a legislative management study); Utah Code Ann. § 41-102 (West 2016).

214. H.B. 1143, 2016 Reg. Sess. (La. 2016) (enacting LA REV. STAT. § 32:1, § 1.2 (2016)).

215. Cecilia Kang, *No Driver? Bring it On. How Pittsburgh Became Uber’s Testing Ground*, N.Y. TIMES (Sept. 10, 2016), <https://perma.cc/M9PG-2DCM>.

216. *Id.*; Cecilia Kang, *Pittsburgh Welcomed Uber’s Driverless Car Experiment. Not Anymore*, N.Y. TIMES (May 21, 2017), <https://perma.cc/CP67-LKG3>. Uber attempted to expand its driverless vehicle program in San Francisco, but withdrew after the California DMV took the position that this program was illegal and revoked the cars’ registrations. Christopher Mele, *In a Retreat, Uber Ends its Self-Driving Car Experiment in San Francisco*, N.Y. TIMES (Dec. 21, 2016), <https://perma.cc/UG6Z-DYZT>.

AVs.²¹⁷ Other cities, including Ann Arbor, Michigan, Somerville, Massachusetts, and Johnson County, Iowa are partnering with universities and private firms to test AVs.²¹⁸ And Waymo is testing its driverless cars in Mountain View, California; Austin, Texas; Kirkland, Washington; and Metro Phoenix, Arizona.²¹⁹

E. 2016: Advisory Nonpreemption

In September 2016, NHTSA issued the *Federal Automated Vehicles Policy: Accelerating the Next Revolution in Roadway Safety* (2016 NHTSA Policy or Policy).²²⁰ The agency is clear about the Policy's interim, informal status: "[A]s this area evolves, the "unknowns" of today will become "knowns" tomorrow. We do not intend to write the final word on highly automated vehicles here. Rather, we intend to establish a foundation and a framework upon which future Agency action will occur."²²¹ The agency invites comments on its Policy, and indicates that it will revisit the Policy within one year.²²² The 2016 NHTSA Policy notes that safety is the agency's top priority.²²³

Yet, while making clear that the Policy is an interim one, NHTSA nonetheless takes a stand on the proper spheres of federal and state authority:

As motor vehicle equipment increasingly performs "driving" tasks, [the federal Department of Transportation's] exercise of its authority and responsibility to regulate the safety of such equipment will increasingly encompass state tasks similar to "licensing" of the non-human "driver" (e.g., hardware and software performing part or

217. Adam Candee, *The Car of the Future is Already on the Road in Nevada*, LAS VEGAS SUN (Jan. 30, 2017 2:00 AM), <https://lasvegassun.com/news/2017/jan/30/autonomous-driverless-vehicle-future-nevada/>; Ben Miller, *Las Vegas to Launch "Innovation District" Geared Toward High-Tech Transportation Testing*, FUTURE STRUCTURE (Feb. 9, 2016), <http://www.govtech.com/fs/Las-Vegas-to-Launch-Innovation-District-Geared-Toward-High-Tech-Transportation-Testing.html>.

218. Jordan Graham & Brian Dowling, *Massachusetts Seeks to Become Autonomous Vehicle Research, Testing Hub*, FUTURESTRUCTURE (Jan. 22, 2016), <https://perma.cc/4NLF-J3VN> (discussing local initiatives); Press Release, Boston Mayor's Office, Mayor Walsh Announces Autonomous Vehicle Initiative, (Sept. 14, 2016), <https://perma.cc/BXF9-XJKE> (discussing Boston initiatives); Allana Akhtar, *The City That Runs Itself: Mcity and the Future of Automated Transportation*, MICH. DAILY (Mar. 29, 2016), <https://perma.cc/YJY3-HQUU> (discussing development of MCity in Ann Arbor as the first testing ground for AVs in the world); Josh Leary & Marco Santana, *Iowa County Says Yes to Driverless Cars*, USA TODAY (July 25, 2014), <https://perma.cc/E3SE-XUYX>.

219. Waymo, *On the Road*, <https://waymo.com/ontheroad/>.

220. 2016 NHTSA Policy, *supra* note 24.

221. *Id.* at 3.

222. *Id.*

223. *Id.* at 5.

all of the driving task).²²⁴

In that vein, the Policy states explicitly that hardware and software are part of the vehicle, and thus subject to federal motor vehicle safety standards.²²⁵ But the Policy does not expressly preempt state law—nor can it, given its informal nature—to date, NHTSA has *not actually issued* any federal motor vehicle safety standards that would have this preemptive effect. Instead, the language is conditional, noting that the Motor Vehicle Safety Act contains express preemption language, and that “*If* NHTSA issued [a federal motor vehicle safety standard] setting performance requirements for HAVs, *then* a State could not have its own performance standards on the same aspects of HAV performance unless they were identical to NHTSA’s standards.”²²⁶

With respect to what states *should* do, the wording is advisory:

[The Department of Transportation] *strongly encourages* States to allow DOT alone to regulate the performance of HAV technology and vehicles. If a State does pursue HAV performance-related regulations, that State *should* consult with NHTSA and base its efforts on the Vehicle Performance Guidance provided in this Policy.²²⁷

The Policy thus encourages federal-state consultation, and encourages the states to adopt a Model State Policy (upon which the agency likewise seeks comment) to avoid inconsistent or conflicting rules.²²⁸ NHTSA appears to acknowledge that states may experiment with different approaches, explaining that it does not intend for state policies to achieve “uniformity or identical laws and regulations across all States. Rather, the aim should be sufficient consistency of laws and policies to avoid a patchwork of inconsistent State laws that could impede innovation and widespread distribution of safety enhancing automated vehicle

224. *Id.* at 38.

225. *Id.* at 38.

226. *Id.* at 38. (emphasis added). The 2016 NHTSA Policy neither asserts nor disclaims preemptive intent with respect to state tort law, noting only that “[t]he Supreme Court has also found that State laws may be preempted if they stand as an obstacle to the accomplishment and execution of a NHTSA safety standard.” *Id.* It does not contain boilerplate language used after 2012 in the rulemakings cited *supra*, which asserts that states may exceed safety standards that prescribe only a minimum, and that “many NHTSA rules” prescribe “only a minimum safety standard.” 81 Fed. Reg. 6454–58 (February 8, 2016). For a discussion of NHTSA boilerplate, see *supra* note 27.

227. 2016 NHTSA Policy, *supra* note 24, at 37 (emphases added).

228. *Id.* at 37 (“The Model State Policy . . . can help to avoid a patchwork of inconsistent laws and regulations among the 50 States and other U.S. jurisdictions, which could delay the widespread deployment of these potentially lifesaving technologies.”).

technologies.”²²⁹ The Policy then confirms that the federal and state governments will operate in different spheres. Federal authority will include setting federal standards for new motor vehicles and equipment, enforcing compliance with those standards, managing recalls, and issuing “guidance for vehicle and equipment manufacturers to follow” including performance guidelines for HAVs. State authority will cover licensing of “human” drivers, motor vehicle registration, adopting and enforcing traffic laws, conducting vehicle safety inspections, and regulating insurance and tort liability.²³⁰

This Policy is not an enforceable command; indeed, in the absence of federal motor vehicle safety standards that apply to HAVs, it is not clear what federal standards would be enforced.²³¹ And it remains to be seen whether the states will continue to adopt their own rules or will instead begin to adopt more uniform standards.²³² But this advisory guidance is a way of not only signaling where the agency intends to go in the future, but of preserving flexibility in the allocation of regulatory authority now between the federal government and the states in times of uncertainty.

NHTSA’s 2016 Policy will not be the final word on HAV safety regulation. Indeed, it has not even been the final word to date.²³³ The next Part addresses one potential critique of advisory nonpreemption—the potential for regulatory conflict—and examines the degree of deference that courts would likely give to advisory nonpreemption if challenged. The final Part addresses a second potential critique, relating to democratic legitimacy in light of the method’s informal nature. It concludes with the Article’s major normative claim that advisory nonpreemption can balance the need for precaution under conditions of uncertainty relating to innovation, while simultaneously promoting innovation and democratic legitimacy in time. These important benefits outweigh the costs in temporary regulatory uncertainty and the potential for conflict between the federal government and the states.

229. *Id.* at 39.

230. *Id.* at 38–39 (citing Highway Safety Act, 23 U.S.C. §§ 401–412 (2012), *et seq.*, which charges the States with reducing traffic crashes through safety programs, traffic regulations, vehicle inspection and registration, licensing, and driver education, among other means).

231. *See infra*, Part III (discussing degree of judicial deference owed to the Policy).

232. One state has already given notice that it plans a more binding approach. *See infra*, Part III (discussing California’s regulatory proposal to make AV safety standards mandatory).

233. *See infra*, Part III (discussing California’s proposed HAV regulations); *supra* note 12 (noting House bill proposing to regulate HAV design and safety).

III. ADVISORY NONPREEMPTION AND THE COURTS

Advisory nonpreemption is a useful tool that federal agencies can use to modify an existing allocation of authority and to promote innovation and precaution in times of innovation uncertainty. But flexibility has costs. This Part first acknowledges one limitation of this approach—the potential for conflict between federal and state policies—and examines how courts might interpret advisory nonpreemption in the context of such a conflict.

A. Potential Conflict

One concern about advisory nonpreemption is that concurrent authority can lead to regulatory uncertainty and potential for conflicts between the federal policy and state law rules in the short term. States may decline the federal advice to adopt a model approach and instead adopt their own rules. This lack of regulatory uniformity can increase costs to industry by reducing economies of scale, and requiring firms to comply with multiple rules.²³⁴

One such conflict may arise between NHTSA and the California Department of Motor Vehicles (CDMV) regarding how to regulate AV safety.²³⁵ Just two weeks after NHTSA released its 2016 Policy, the state agency released draft proposed regulations that could create a conflict with parts of the NHTSA guidance.²³⁶ And in March, 2017, the California

234. There are other potential concerns arising out of concurrent jurisdiction, including the possibility of unintended “leakage” from states with stricter standards to states with more lax standards if a vehicle authorized for testing or deployment in one state crossed state lines into another state that did not permit such vehicles on public roads. In a different context, one recent economic study has demonstrated the significant potential for leakage as a result of concurrent jurisdiction over emissions limits for new vehicles. Lawrence H. Goulder, Mark R. Jacobsen & Arthur Van Benthem, *Unintended Consequences from Nested State and Federal Regulations: The Case of the Pavley Greenhouse-Gas-per-Mile Limits*, 63 J. ENVTL. ECON. & MGMT. 187 (2012). Whether such leakage will occur in cases of concurrent/dynamic jurisdiction depends upon the nature of the legal regimes themselves, and the way that federal and state standards interact. In the vehicle emissions context, vehicle manufacturers were governed by a federal *average* standard, such that meeting a higher standard in certain states permitted manufacturers to reduce their environmental performance in other states while still meeting the federal average standard.

235. Ariel Wittenberg & Anne Mulkern, *Autonomous Cars: Calif., DOT in Turf War over Robocar Regulation*, E&E NEWS (Nov. 22, 2016), <http://www.eenews.net/stories/1060046097>.

236. *Deployment of Autonomous Vehicles for Public Operation*, CAL. DEP’T MOTOR VEHICLES, <https://www.dmv.ca.gov/portal/dmv/detail/vr/autonomous/auto>. There are different degrees of conflict between federal and state laws. In one case, it is impossible to comply with both sets of rules; in the other, it is possible to comply with both rules if the target complies with the more stringent rule. See *Fla. Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142–43 (1963) (discussing how federal law trumps state law in the former context). California’s proposed rule would raise the latter concern.

DMV issued proposed regulations for public comment.²³⁷ Where NHTSA merely *recommends* that automakers should submit a safety assessment letter to the agency (addressing concerns like vehicle cybersecurity, system safety, and operational design),²³⁸ California's proposed regulations would *require* automakers to submit the safety assessment letter to its Department of Motor Vehicles (DMV) in order to obtain a state testing permit.²³⁹ California's proposed regulations would also require automakers to notify (but not to obtain approval from) each locality in which they wish to operate.²⁴⁰

Some automakers criticized California's draft proposed regulations for "effectively codifying NHTSA's optional . . . safety assessment"²⁴¹—a critique that likewise applies to the March 10, 2017 proposed regulations. They argued that the shift from an optional safety assessment to a mandatory one would be too onerous, and directly contradicts the voluntary nature of the NHTSA Policy.²⁴² Additionally, many in the industry assert that "an autonomous vehicle policy should be national in scope, allowing manufacturers to build vehicles that can be tested and sold in all 50 states."²⁴³ If California's proposed regulations become law, automakers complain that they would have to abide by a patchwork of regulations that hinders innovation.²⁴⁴ On the other hand, Jean Shiimoto, the Director of the California DMV, has argued that automakers have already been testing AVs in California for years, and that the state should not have to wait for NHTSA to issue mandatory safety regulations.²⁴⁵ In the state agency's view, California must act now in order to protect the safety of its citizens.

This potential conflict between California's and NHTSA's approaches highlights the challenges that can arise in instances of advisory nonpreemption. But this limitation is not insurmountable. It merely

237. Draft Express Terms, Title 13, Division 1, Chapter 1, Articles 3.7 & 3.8, California DMV (Mar. 10, 2017), <https://www.dmv.ca.gov/portal/wcm/connect/caa2f466-fe0f-454a-a461-f5d7a079de49/av-express-terms-31017.pdf?MOD=AJPERES>.

238. 2016 NHTSA Policy, *supra* note 24, at 15.

239. Cal. CODE REGS. tit. 13, §§ 227.38(g), 228.06(d) (proposed Mar. 10, 2017).

240. *Id.* § 227.38(a) (proposed Mar. 10, 2017). The draft proposed regulations would have required manufacturers to obtain permission from the local governments, but provision was removed from the proposed regulations.

241. Wittenberg & Mulkern, *supra* note 235.

242. *Id.*

243. *Id.* (citing Paul Scullion, Global Automakers Safety Manager).

244. A second concern that is always in the background when agencies are acting, is the potential that Congress will adopt new legislation that overtakes agency action. As the one-year time period for reviewing the 2016 NHTSA Policy approached, on July 27, 2017, the Self-Drive Act was introduced in the House. *See supra* note 12.

245. *Id.*

highlights the importance of ongoing dialogue between the federal government and the states, and the need to include industry voices in that conversation as well. In the words of one scholar, allowing multiple voices to speak in a regulatory space, can promote an “iterative” process of regulatory improvement.²⁴⁶ Just as California is proposing concrete steps to lead in the area of AV safety, California has taken such steps in the past in a different context—the regulation of vehicle tailpipe emissions.²⁴⁷ The federal government and California have engaged in an iterative process, together and apart over time, to improve and refine standards for vehicle tailpipe emissions.²⁴⁸ And while this iterative process played out in the context of a dynamic regime under the Clean Air Act, in which California was singled out for special treatment *ex ante* to participate in the setting of tailpipe standards, the existing regime for motor vehicle safety does not currently incorporate that dynamism.

Advisory nonpreemption, however, renders the dual regime temporarily dynamic, permitting the state to engage in the same kind of process with the federal government here. This iterative process can improve the safety standards as a substantive matter, and can help determine whether state or federal regulation—or some form of concurrent jurisdiction—would be best in the long run. Indeed, in 2015, the head of NHTSA wrote a memorandum to California DMV Director Shiomoto to update her on the agency’s progress with AV regulations while her agency was simultaneously working on California’s AV rules.²⁴⁹ In that memorandum, NHTSA stated that its mission is to “prevent crashes and save lives on America’s roads,” and that it was “eager to work with [her] and officials in other states to support the development of [AVs].”²⁵⁰ If the states and federal government are willing to work together, advisory nonpreemption can help to move the regulatory process forward from a temporarily flexible regime to some entirely new allocation of authority. And while

246. Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U. L. REV. 1097, 1100 (2009) (observing the benefits of repeat interaction between the federal and California governments on motor vehicle tailpipe emissions standards).

247. That process involved three potentially conflicting sets of standards for new motor vehicles: emissions standards under the Clean Air Act set by the EPA, emissions standards under California law set by California, and fuel economy standards under the Energy Policy and Conservation Act set by the Department of Transportation. Jody Freeman, *The Obama Administration’s National Auto Policy: Lessons from the “Car Deal,”* 35 HARV. ENVTL. L. REV. 343 (2011) (discussing the interagency rulemaking process).

248. *Id.*

249. Memorandum from the Nat’l Highway Safety Traffic Admin. to Jean M. Shiomoto, Director, Cal. Dep’t of Motor Vehicles (June 2, 2015) (on file with author).

250. *Id.*

one option is to return to a dual federalism regime in which the federal government adopts the “best” (however defined) safety standards, informed by discussions with state officials, there are alternatives. One alternative allocation to consider is one with concurrent, dynamic jurisdiction similar to the regime that exists for tailpipe emissions, in which one state like California, or coalition of states working together, can adopt either “more protective” rules if such rules can be assessed along a linear continuum, or simply alternative rules about driverlessness, after obtaining a waiver from NHTSA. Other states could then adopt those rules, creating a two-tier, but not multi-tier, system.

Moreover, at least one commentator has noted that even industry groups may prefer flexibility, if there is a risk that a federal regulation will get the substance of a regulation wrong.²⁵¹ For example, in its 2013 Preliminary Guidance on Autonomous Vehicles, NHTSA stated that the states should adopt rules to ensure that a human driver would be present in the vehicle.²⁵² It made this recommendation on the basis that driverless vehicles had not yet been tested. However, only two years later, Google sought guidance from the agency as to whether a “vehicle” could ever be considered a “driver” given its efforts to promote driverless cars that actually lacked a steering wheel. Had NHTSA made the human driver rule mandatory and prohibited state experimentation, it would likely have stifled this innovation. Greater stability in the balance of power may provide regulatory certainty for markets, but may be less able to keep up with the unpredictable nature of innovation.²⁵³ This Article advocates advisory nonpreemption as occupying a temporary middle ground.

B. Role for Courts

While conflicts between the federal government and the states can often be resolved through negotiations and consultation, there remains the possibility that an aggrieved party could initiate a legal challenge either to the federal agency’s action of advisory nonpreemption, or to the state law that poses a potential conflict. For example, an auto manufacturer,

251. Wu, *supra* note 34, at 1843 (noting that APA procedures are meant to protect not only the public, but industry, and that industry bears the costs of a slow rulemaking process).

252. NAT’L HIGHWAY SAFETY TRAFFIC ADMIN., PRELIMINARY STATEMENT OF CONCERNING AUTOMATED VEHICLES (2013), http://www.nhtsa.gov/staticfiles/rulemaking/pdf/Automated_Vehicles_Policy.pdf.

253. Even skeptics of flexible regulatory regimes acknowledge that flexibility’s benefits can, under certain circumstances, outweigh its costs. Super, *supra* note 21, at 1382 (arguing that flexibility may be warranted when “the benefits of new information or other important resources exceed the costs of decreases in the availability of other inputs required for a decision and in the value of the decision rendered”).

preferring the more flexible approach advocated by the federal agency, might bring a legal challenge to the state rule. This type of challenge would raise the question of whether advisory nonpreemption actually preempts state law, as well as subsidiary questions about whether advisory nonpreemption is a final agency action, whether such a challenge is ripe, and what degree of deference the courts owe to such a statement about the agency's interpretation of the words "vehicle" and "motor vehicle equipment" in the Motor Vehicle Safety Act. A safety advocate or citizen of the state with the potentially conflicting rule could also challenge the federal agency's advisory nonpreemption statement directly as being "arbitrary and capricious" under the APA, raising similar questions of justiciability and deference.²⁵⁴

At the same time, to the extent that the agency's advisory nonpreemption statement is not merely interpreting substantive statutory text (the terms "vehicle" and "vehicle equipment"), but also addressing the balance of power between the federal government and the states, the specific question of what deference is owed to an agency's determination about the preemptive effect of its actions could raise additional concerns.²⁵⁵ This section examines how courts might address these issues in the face of such a challenge, using the 2016 NHTSA Policy to explore these issues. It concludes that a court would be unlikely to find state law preempted as a result of the 2016 NHTSA Policy for two reasons. First, the agency itself does not appear to claim that the Policy has preemptive effect; it claims only that the issuance of a federal motor vehicle safety standard *would* preempt state law. However, this triggering condition has not yet occurred. Second, a policy guidance document is entitled to deference according to its persuasiveness. As the expert agency charged with enforcing the statute, NHTSA's reading of the terms "vehicle" and "vehicle equipment" in the statute is certainly reasonable.²⁵⁶ However, as

254. Cf. Strauss, *supra* note 103, at 817–837 (discussing justiciability concerns for "publication rules" including finality and ripeness, as well as the degree of deference owed).

255. Sharkey, *supra* note 27; Mendelson, *supra* note 40; Metzger, *supra* note 40.

256. Before undertaking an examination of the deference questions, a brief note on finality is warranted. Before any agency action can be challenged in the courts, that action must be "a final agency action" under the APA. 5 U.S.C. § 704 (2012). Because policy guidance documents may be amended as circumstances change—indeed, this flexibility is one of their most important attributes—a question arises as to whether such an interpretive document constitutes such "final agency action." If, in the circumstances described above, NHTSA were to order California to stand down with its rules and make the claim that its policy preempted the state regulation—effectively applying the policy in a concrete case—this concrete application would constitute a final agency action to challenge in court, and the challenge would be ripe for review. Because of the tentative and conditional nature of the agency's statements in the 2016 NHTSA Policy, it is unlikely that a party would seek "pre-enforcement review." *Abbott Labs. v. Gardner*, 387 U.S. 136 (1967), *abrogated by Califano v.*

noted above, this is not the only possible interpretation.

If a court were to find any justiciability hurdles surmounted, it would ultimately confront the question that is the “hot topic” in administrative law—what deference is owed to the agency’s interpretation? Judicial deference to agency actions is not a binary issue.²⁵⁷ Courts neither blindly obey the agency interpretation nor reject it entirely. Instead, there are three degrees of deference to agency action: *Chevron* deference, in which a court must defer to an agency interpretation of an ambiguous statute that is reasonable;²⁵⁸ *Skidmore* deference, in which a court views the agency interpretation as having precedential, persuasive influence or “weight;”²⁵⁹ and no deference at all.

In such analysis, one must of course begin with the text of the statute, which expressly delegates to NHTSA the authority to issue federal motor vehicle safety standards to reduce traffic accidents and deaths.²⁶⁰ The statute defines “motor vehicle” as “a vehicle driven or drawn by mechanical power and manufactured primarily for use on public streets, roads, and highways,” and “motor vehicle equipment” as:

- (A) any system, part, or component of a motor vehicle as originally manufactured;
- (B) any similar part or component manufactured or sold for replacement or improvement of a system, part, or component, or as an accessory or addition to a motor vehicle.²⁶¹

The ultimate legal question is whether these terms include hardware and software in HAVs. But the question of deference comes first.

Chevron requires courts to undertake their deference analysis in two famous “steps:” first, to determine whether the statutory text is clear regarding the precise question at issue, and second, if the text is ambiguous, to determine whether the agency’s interpretation is

Sanders, 430 U.S. 99 (1977); Strauss, *supra* note 103, at 818–22 (discussing finality and ripeness). It is further unlikely that a court would find the matter “ripe” prior to enforcement, given that Congress set the trigger for preemption as the issuance of a federal motor vehicle safety standard, a trigger that has not yet occurred.

257. Strauss, *supra* note 103, at 811 (discussing *Chevron*, *Skidmore* and no-deference alternatives).

258. *Chevron U.S.A. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837 (1984).

259. *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944); *United States v. Mead Corp.*, 33 U.S. 218 (2001); Strauss, *supra* note 103, at 811 (referring to *Skidmore* deference as *Skidmore* “weight”).

260. 49 U.S.C. §§ 30101, 30111 (2012) (“The Secretary of Transportation shall prescribe motor vehicle safety standards” that are objective and practicable, and meet the need for vehicle safety).

261. *Id.* §§ 30102(7), 30107(8).

“permissible” or reasonable under the law.²⁶² However, there is an antecedent question that precedes such analysis. Cass Sunstein identified this as *Chevron* “Step Zero,” in which the court must make an initial determination of “whether the *Chevron* framework applies at all,”²⁶³ or whether instead, some lesser form of deference under *Skidmore* is warranted. Under this analysis, *Chevron* deference is warranted when Congress has delegated rulemaking authority to the agency, and the agency action has “the force of law”—namely, that it was adopted pursuant to notice-and-comment rulemaking or “by some other indication of comparable congressional intent.”²⁶⁴ Other forms of agency action, including policy guidance documents, interpretive statements, letters, and other “publication rules,” warrant lesser deference under *Skidmore*, namely the weight of their persuasive power.²⁶⁵

Complicating this Step Zero analysis is the “major questions” doctrine in which the Supreme Court has rejected agency attempts to remake statutory schemes wholesale. Sunstein has identified this doctrine as raising an additional Step Zero issue, in which courts have indicated their willingness to reduce deference—even to no deference at all—“if a fundamental issue is involved, one that goes to the heart of the regulatory scheme at issue.”²⁶⁶ Lisa Heinzerling has referred to these canons of statutory construction as the “power” canons, because they go to the degree of power that agencies have vis-a-vis Congress to address those issues that are of economic and political significance, including when agencies assert regulatory authority in new areas or attempt major changes to statute schemes.²⁶⁷

262. *Chevron*, 467 U.S. at 842–44.

263. Cass R. Sunstein, *Chevron Step Zero*, 92 VA. L. REV. 187 (2006). Sunstein cites, among others, *United States v. Mead*, 533 U.S. 218 (2001); *Christensen v. Harris County*, 529 U.S. 576 (2000); and *Gonzales v. Oregon*, 546 U.S. 243 (2006), as “Step Zero” decisions. In Sunstein’s view, under some circumstances, it may be irrelevant whether *Chevron* applies, and he advocates greater use of *Chevron* deference to agencies when the agency has “authoritatively answered a question about the meaning of a statute that it has been asked to implement.” *Id.* at 192.

264. *Mead*, 533 U.S. at 226–27.

265. *Skidmore*, 323 U.S. at 139–40; *Mead*, 533 U.S. at 228 (citing *Skidmore* and noting that deference “has been understood to vary with circumstances,” and that courts look to the “degree of the agency’s care, its consistency, formality, and relative expertness, and to the persuasiveness of the agency’s position”).

266. Sunstein, *supra* note 262, at 193.

267. Lisa Heinzerling, *The Power Canons*, 58 WM. & MARY L. REV. 1933 (2017) (arguing that the Supreme Court has limited deference to agencies on issues of economic and political significance). Heinzerling cites as examples *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427, 2444 (2014) (addressing the EPA’s application of the Clean Air Act to climate change); *King v. Burwell*, 135 S. Ct. 2480, 2488–89 (2015) (addressing matters at the heart of the Affordable Care Act); and *Michigan v. EPA*, 135 S. Ct. 2699, 2707–08 (2015) (holding that the EPA went beyond the bounds

Taking these two aspects of the Step Zero inquiry into account, it is easy to see that the 2016 NHTSA Policy, with its interpretation of the terms “vehicle” and “vehicle equipment,” would warrant only *Skidmore*, rather than *Chevron* deference. This conclusion would not be particularly controversial, as it is merely a publication rule, and was not adopted pursuant to notice-and-comment procedures.²⁶⁸ The more complex question is whether the major questions doctrine would limit any deference a court might owe to the agency’s interpretation at all. On the one hand, the question of what constitutes a “vehicle” or “vehicle equipment” quite clearly goes to the heart of the statute, and thus, could easily be read to implicate the major questions doctrine. And it is likewise clear that Congress did not anticipate the rise of HAVs when it used the term “vehicle.” On the other hand, NHTSA could argue that the major questions doctrine should not apply here, because its interpretation of “vehicle” and “vehicle equipment” would not be “disastrously unworkable,” “result in . . . a dramatic expansion of agency authority,” or “extend[] [agency] jurisdiction over millions of previously unregulated entities.”²⁶⁹ The latter reading is likely more plausible.

If a court held that the major questions doctrine did not preclude deference to the agency’s interpretation, a court would likely find the interpretation persuasive under *Skidmore*. After all, NHTSA is the agency with expertise, charged with overseeing vehicle safety. And HAVs—though they do not routinely yet—may soon travel in interstate commerce, implicating safety concerns that the states may not be able to address with separate rules. Moreover, while it would be possible to interpret the terms “vehicle” and “vehicle equipment” to incorporate only the hardware, and not the software (in other words, to interpret the software as a “driver” that would be subject to state control), NHTSA’s reading is certainly reasonable.

But what of NHTSA’s statements on preemption? The statute states clearly that what preempts state law is “[w]hen a motor vehicle safety standard is in effect.”²⁷⁰ The 2016 NHTSA Policy appears to acknowledge

of its authority to ignore costs in regulating existing power plants).

268. Cf. Strauss, *supra* note 103, at 811–12 (concluding that publication rules are entitled to “precedential” *Skidmore* weight, relying on the text of 5 U.S.C. § 552(a)(2) for the analogy to precedent).

269. Cf. Kevin O. Leske, *Major Questions about the “Major Questions” Doctrine*, 5 MICH. J. ENVTL. & ADMIN. L. 479, 493–94 (2016) (noting that *Utility Air Regulatory Group v. EPA*, the Court concluded that the major questions doctrine did not apply to EPA’s interpretation that sources already subject to permitting requirements under the Clean Air Act could be required to install additional pollution-reduction devices).

270. 49 U.S.C. § 30103(b)(1) (2012).

this absence in its use of conditional language: “*If* NHTSA issued” such a standard for HAVs, “*then* a State could” only adopt identical legislative or regulatory performance standards.²⁷¹ The agency therefore does not actually preempt any state law and instead merely advises the states (“strongly encourages”) to cede this territory to the federal agency.²⁷² This 2016 Policy therefore lacks any actual preemptive effect. In this way, the situation resembles that of *Grocery Manufacturers Association v. Sorrell*, in which industry trade organizations challenged a Vermont law requiring mandatory labeling of food containing genetically engineered organisms.²⁷³ The plaintiffs contended that the Vermont mandatory labeling law was expressly preempted under the terms of several federal statutes that prohibit states from imposing food labeling standards that are “not identical” to federal labeling laws.²⁷⁴ The court held that the industry plaintiffs could not establish express preemption based on the “not identical” language because there was in fact no federal labeling requirement in place.²⁷⁵

Advisory nonpreemption therefore does not implicate the kinds of concerns raised by some scholars who argue that agencies have claimed too much federal authority without congressional authorization, and that courts ought not to defer to such decisions.²⁷⁶ Advisory nonpreemption has the opposite effect—it does not actually preempt state action—and thus preserves a role for the states, at least temporarily, in the face of innovation uncertainty. This deference analysis can serve as a guide to other federal agencies going forward if they decide to use advisory nonpreemption. These legal questions are deeply case-specific. But if an agency seeks to use its interpretive authority to announce its current views on regulatory balance, while retaining flexibility to change those views in the future, and permitting state experimentation to continue, advisory nonpreemption can serve these ends effectively in other contexts as well.

271. 2016 NHTSA POLICY, *supra* note 24, at 38 (emphasis added).

272. *Id.* at 37.

273. 102 F. Supp. 3d 583 (D. Vt. 2015). *Cf.* Catherine M. Sharkey, *States Versus FDA*, 83 GEO. WASH. L. REV. 1609 (2015) (discussing *Sorrell* and arguing that courts should defer to the views of the agency to resolve preemption challenges, even views expressed in informal guidance documents, if the agency has considered relevant state interests in the regulatory process).

274. *Sorrell*, 102 F. Supp. 3d at 611–14 (discussing the preemptive effect of the federal Food, Drug, and Cosmetic Act (FDCA), 21 U.S.C. § 343 (2012), combined with the Nutrition Labeling and Education Act, 21 U.S.C. §§ 343-1(a)(1)–(5) (2012), which expressly preempt state food labeling requirements that are “not identical” to mandatory labeling requirements under the FDCA).

275. *Id.* at 612 (“Plaintiffs acknowledge that the FDA has promulgated no formal standards for GE labeling.”); *Id.* at 614 (“[T]he absence of a federal standard obviates any claim that a state requirement is ‘not identical’ to it”).

276. Mendelson, *supra* note 40.

IV. DEMOCRATIC LEGITIMACY

Advisory nonpreemption poses a second risk—that it may outlast its temporary nature.²⁷⁷ One scholar writing about temporary substantive rules in the form of agency “threats,” offered an example of how the Food and Drug Administration’s (FDA’s) informal response to computerized medical devices became “stale and counterproductive” because the agency never followed up on its threats with more formal enforcement, and because informal action essentially replaced notice-and-comment rulemaking for twenty-five years.²⁷⁸ While there is always a risk that advisory nonpreemption will outlast its usefulness, the same is arguably true for any regulation, including formal rules, which are much harder to amend when circumstances change. And in the federalism context, this concern may prove less salient than for temporary substantive rules, largely because advisory nonpreemption *allows the states to proceed with their own rules*. If the states do so, as California has proposed in this case, then state action can provoke additional federal action. Conflict requires resolution, or at a least more iterative dialogue. In the substantive context of the FDA’s regulation of software in medical devices, the exclusive nature of the regime meant that no other regulator could force such a conversation to take place, leaving open the possibility that a draft policy could remain in place, unchallenged for so long.²⁷⁹

In addition to these concerns regarding regulatory uncertainty and potential for policy conflict lies a deeper question about whether advisory nonpreemption promotes or conflicts with norms of democratic legitimacy. This concern is not unique to advisory nonpreemption, but has been leveled at other informal agency actions.²⁸⁰ In this context there are two levels of debate over legitimacy. The first raises a separation of powers question—whether agencies are the right institution to preempt state action, and whether they have been properly authorized by Congress to do so in the first instance.²⁸¹ Because advisory nonpreemption only

277. Cf. Nathan Cortez, *Regulating Disruptive Innovation*, 29 BERK. TECH. L.J. 175, 191–94 (2014) (arguing that the FDA’s use of informal guidance to address substantive law became stale and outlived their usefulness).

278. *Id.* (acknowledging that the FDA’s pre-clearance procedure for medical devices counteracted some of these negative effects).

279. *Id.*

280. Strauss, *supra* note 103, at 804 (noting the ongoing debate over whether informal agency rules are “legitimate instruments of agency policy or a ruse to evade the higher procedural obligations associated with adopting regulations”).

281. See Young, *supra* note 40, at 878. Ernest Young, for example, argues that preemption by the executive branch in the absence of clear authorization by Congress is problematic even if the agency preempts via notice-and-comment rulemaking because “the deliberation assumed by ‘political

occurs in a context in which the agency has been delegated authority from Congress to interpret the statute, and has interpreted the particular provisions raising federalism concerns in the past—this first concern is not implicated here.

The second level of concern relates to the informal nature of the agency action. The procedures set forth under the Administrative Procedure Act (APA) for notice-and-comment rulemaking are designed to protect democratic legitimacy. In this context, democratic legitimacy means opportunities for public participation, transparency about agency actions and interpretations, and accountability, including the right of the public to challenge agency actions in the courts.²⁸² Informal actions by agencies do not require publication of a proposed action, opportunities for comment by the public, responses by the agency to those comments, and opportunities for judicial review.²⁸³

Despite this lack of formal procedures, many scholars have defended the use of informal agency actions on a number of grounds. For example, Peter Strauss has argued that such informal “publication” rules tend to dwarf the volume of notice-and-comment regulations, and that publication rules both promote consistent agency administration and fairness to the public through guidance on interpretation of regulations.²⁸⁴ Other prominent scholars of administrative law recognize the value of the third, least formal, category of agency action, including non-legislative rules,

safeguards’ theories of federalism takes place among the states’ representatives in Congress, not among interest groups submitting comments to federal bureaucrats. Federal agencies, after all, have no mandate to represent state interests and possess strong countervailing incentives to maximize their own power and jurisdiction.” *Id.*

282. Merrill, *supra* note 36, at 1955–56 (distinguishing the positivist vision of legitimacy as rooted in legal authority in a statute or the Constitution from the process-based tradition in which legitimacy depends upon a process of “reasoned decision making,” and in which “all relevant interests” are heard); see also Gluck et al., *supra* note 36, at 1839 (discussing concerns about public participation, transparency, and accountability). In this case, NHTSA’s interpretation is authorized by Congress, addressing the positivist concern. However, accountability and transparency are certainly increased by a fair and open process for considering all relevant views under the process-based tradition.

283. 5 U.S.C. § 553(b) (2012). Under Sections 552(a)(1) and (2) of the APA, however, if the agency has published an informal rule, opinion, statement of policy, interpretation or even a staff manual or instruction, or if a party has “actual and timely notice” of its terms, the policy “may be relied on, used, or cited as precedent by an agency against a party other than the agency.” The goal of Congress in adopting this provision, simultaneously with the enactment of the Freedom of Information Act in 1966, was to “end secret law, not additional proceduralization.” Strauss, *supra* note 103, at 806.

284. Strauss, *supra* note 103, at 808. Strauss notes that the APA describes three degrees of “force” of agency actions: “actions validly adopted pursuant to congressionally authorized rulemaking procedures have the kind of authority we commonly ascribe to statutes; actions that meet the public requirements of section 552(a) have such authority as we commonly ascribe to precedents; and in other cases, agencies are not permitted to treat their actions as having legal force on citizens.” *Id.* at 811.

policies, statements of best practices, and others.²⁸⁵ Tim Wu, for example, contends that agencies have three choices when it comes to substantive lawmaking under conditions of uncertainty: to make law, to “forgo any action” until uncertainty is resolved, or to “watch the growth of the industry and issue threats that indicate where it has concerns, and possibly the direction in which it hopes the industry will grow.”²⁸⁶ The first risks “premature lawmaking” that could “cripple” innovation, while the second option completely fails to protect the public interest.²⁸⁷ The third alternative, to make a “threat,” offers a balance that can “facilitate public debate.”²⁸⁸ Similar choices arise in the federalism context. The federal government could adopt a strict, dual federalism regime that preempts state experimentation, or a dynamic regime that permits concurrent action by the states and federal government, or could simply fail to regulate, leaving the states or private industry to govern essentially without federal oversight. The choice among these may be premature if the path of innovation is uncertain. And the wrong choice may completely fail to protect the public interest. Advisory nonpreemption can instigate the kind of debate over the proper allocation of regulatory authority to achieve the right balance.

With respect to democratic accountability, the advantage of a flexible, temporary approach like advisory nonpreemption is that it can be amended more easily than notice-and-comment rulemaking.²⁸⁹ In this way, the political preferences of past regulators about the proper allocation of authority are not enshrined into the future where they outlive their usefulness or accuracy.²⁹⁰ The allocation of authority is more likely to be

285. Jacob E. Gersen & Eric A. Posner, *Soft Law: Lessons from Congressional Practice*, 61 STAN. L. REV. 573, 578–79 (2008) (advantages of soft law include influencing behavior and beliefs of the public and other lawmaking bodies); Strauss, *supra* note 103, at 804; Wu, *supra* note 34, at 1847; Zaring, *supra* note 83, at 294.

286. Wu, *supra* note 34, at 1848–49.

287. *Id.* at 1849–50.

288. *Id.* at 1851.

289. Strauss, *supra* note 103, at 812 (amendments to publication rules do not require notice-and-comment rulemaking).

290. In the context of constitutional law, many scholars and political philosophers have rejected the idea that one generation should bind another. See Daniel E. Herz-Roiphe & David Singh Grewal, *Make Me Democratic, But Not Yet: Sunrise Lawmaking and Democratic Constitutionalists*, 90 N.Y.U. L. REV. 1975, 2005 (2015) (discussing the countermajoritarian difficulty as an inter-temporal problem); JOHN HART ELY, *DEMOCRACY AND DISTRUST: A THEORY OF JUDICIAL REVIEW* (1980) (“[T]o the extent that [the constitution] ever represented the ‘voice of the people’ . . . it represents ‘the voice of people who have been dead for a century or two.’”); David Hume, *Of the Original Contract*, in *ESSAYS: MORAL, POLITICAL AND LITERARY* 452, 457 (Oxford Univ. Press 1963) (1741–1742) (rejecting the idea of “consent of the fathers to bind the children”); Jean-Jacques Rousseau, *Of the Social Contract or Principles of Political Right*, in *THE SOCIAL CONTRACT AND OTHER LATER POLITICAL WRITINGS* 111–12 (1997) (rejecting the idea that one generation can bind another through

consistent with the state of fast-paced innovation.²⁹¹ In the substantive regulatory context, Gluck et al. have argued that one facet of legitimacy that unorthodox methods advance is the “legitimacy of government getting its work done.”²⁹² This argument has equal force in the federalism context. Advisory nonpreemption promotes a kind of democratic legitimacy in time—one in which a flexible approach allows the agency to offer its view on an initial allocation of power, but one that is subject to revision in time as more information is gathered. Thus, the allocation of authority will better reflect the needs of good policymaking, as well as the will of the people over time. When considering innovation and advisory nonpreemption, the question is not whether the benefits outweigh the costs, but rather, whether the benefits outweigh the costs *for now*. The answer to this question is a strong yes.

CONCLUSION

The rise of HAV technology offers a particularly compelling case study that highlights the need for flexible mechanisms that permit agencies to shift regulatory primacy in dialogue with the states, rather than enshrine it statically for the next many years. The Motor Vehicle Safety Act, with its jurisdictional division between vehicle and driver, could become obsolete with the rise of AVs if NHTSA does not work with the states to make it relevant in light of this innovative technology. And that Act is not likely to be the only statute that will face a federalism disruption. Federal agencies can use *advisory nonpreemption* to preserve a flexible allocation of regulatory authority between the federal government and the states to address innovative technologies that disrupt well-settled allocations of authority. NHTSA’s advisory nonpreemption sets a proposed default of federal uniform rules for vehicle safety, but keeps the boundaries of federalism fluid. This tool allows federal agencies to inject temporary flexibility into a dual federalism regime to address the uncertain and unpredictable paths that new technologies may follow.

“perpetual Government”).

291. Wu, *supra* note 34, at 1851 (noting that a new administration can revise or reverse an agency “threat” according to its political preferences). Cf. Yair Listokin, *Learning Through Policy Variation*, 118 YALE L.J. 480, 553 (2008) (offering an economic justification for the principle that “the best policy choice in the face of uncertain outcomes depends critically on the reversibility of the policy”).

292. Gluck et al., *supra* note 36, at 1842.