

ADVISORY NONPREEMPTION

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© 2017 Draft 2017-12-01 14:50. *Forthcoming in 95 Wash & Lee Law Review.*

* 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, 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.

ADVISORY NONPREEMPTION

[ANONYMOUS]

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 of these new challenges – for example, new technologies like autonomous vehicles – upset longstanding legislative boundaries not only for substantive legal rules, but also for federalism. Significant uncertainty about whether local or national concerns will predominate as innovations develop requires temporary flexibility in the allocation of regulatory authority among the federal, state, and local governments to address these concerns. This Article identifies a new method that federal agencies can use to promote such flexibility before the initiation of a rulemaking – *advisory nonpreemption*. Ordinary preemption shifts the balance of power from the states to the federal government. Advisory nonpreemption has the opposite effect. It is a federal agency’s advisory statement in policy guidance that it has regulatory authority, and a suggestion to states to limit their regulatory actions. But the statement *does not actually preempt* states from regulating – at least temporarily. And the agency sets a timetable to revisit the issue. Advisory nonpreemption can open a dialogue among the federal government, the states, 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* overlapping, 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 technology 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.

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I. 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, or whether instead technology will enhance 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 a more local than national phenomenon.⁶ And while innovation often holds great promise, it can likewise harm users or third parties.⁷ The 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/Lyft driver is an "employee" or "independent contractor," and may require the

¹ See *infra*, Part III (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); 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 2016*, CNET (Dec. 2, 2016); but see Stacey Higginbotham, *5 Reasons Why the 'Smart Home' is Still Stupid*, FORTUNE (Aug. 19, 2015, 12:32p.m.).

⁴ *Introduction*, SMART FABRICS SUMMIT (Apr. 11, 2016), <http://smartfabricssummit.com/>.

⁵ [Footnote omitted for anonymous review]

⁶ See *infra*, Part III.

⁷ Some of these concerns may be local in nature, such as differences in local driving conditions, while others may be national in scope, as evidenced by the recent "hack" of the internet via connected devices like baby monitors. Nicole Perlroth, *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. FRANK H. KNIGHT, RISK, UNCERTAINTY, AND PROFIT (1921); see also Daniel Farber, *Uncertainty*, 99 GEO. L.J. 901, 903 (2011) (citing Knight in distinguishing risk from uncertainty).

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 The states retain primary authority to regulate “driver” behavior through insurance, licensing, and common law tort rules.¹³ This general 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 favored uniform federal safety rules for vehicles.

The rise of AVs 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. And while concerns regarding economies of scale in manufacturing and interstate spillovers remain, the rise of AVs raise a number of new concerns. For example, the most significant benefit of AVs is arguably their

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), working paper available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2951919 (offering a theory of when business or technological “disruption” leads to policy disruption, and a framework for policy responses). Not all technological or business innovation leads to policy disruption. *See id.* 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. *See id.*

¹⁰ [Footnote omitted for anonymous review].

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).

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

ability to reduce accidents that result from human error.¹⁴ But if AVs 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 fully driverless cars (also known as “Highly Automated Vehicles” or “HAVs”) will become a local, rather than national phenomenon. On the other hand, if AVs move out of local testing grounds and begin to cross state lines more frequently, different state rules for AVs could *themselves* be the cause of accidents. And AVs 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.¹⁵

This question of 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, can raise important questions both about which level of government should decide how to govern *now* in the current

¹⁴ See *infra* Part III.

¹⁵ 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. 401-478 (2016) (favoring temporary bans on innovation while information is gathered about an emerging risk). However, such an approach fails to appreciate risk-risk tradeoffs. Specifically, a ban would fail to take into account the significant potential safety *benefits* of AV technology (benefits along the same axis), 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., AV TECHNOLOGY: A GUIDE FOR POLICYMAKERS (Rand Corp. Eds. 2016). First, AVs may facilitate the optimization of vehicle speeds through the use of “platooning” in ways that will increase fuel economy. *Id.* at 29-30. Platooning can reduce the distance between vehicles and increase travel lane capacity. *Id.* The theory goes that this will increase fuel economy by decreasing vehicle congestion on highways. A smoother traffic flow (even if it is at a lower “peak” speed), can improve vehicle fuel economy by allowing vehicles to travel, on average, at a higher “effective” speed. *Id.* at 30. Second, if as advocates contend, AVs can reduce the risk of accidents, cars can be made of lighter materials. *Id.* at xvi, 5, 30. Lighter cars require less power to operate, which likewise can reduce fuel consumption, and facilitate greater use of electric or alternative fuel vehicles. *Id.* at 30. Lighter vehicles require smaller electric batteries than heavier vehicles to go the same distance, which can in turn, lower the cost of electric vehicles for ordinary consumers. *Id.* at 34. Smaller batteries also have a lesser environmental impact from disposal at the end of their lifecycle than larger batteries. *Id.* There are many unknowns about how AV technology will develop, however. It remains possible that 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.

state of uncertainty, and who should decide *in the future*.¹⁶ 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 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 national standards are best to promote innovation, economies of scale, and to address safety concerns.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

¹⁶ Note that safety has both local and national dimensions.

¹⁷ See, e.g., Farber, *supra* note 8, at 903; Matthew T. Wansley, *Regulation of Emerging Risks*, 69 VAND. L. REV. 401-478 (2016) (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), <http://torts.jotwell.com/tort-as-backstop-to-regulation-in-the-face-of-uncertainty/> (arguing that tort law can serve as a backstop “transition” mechanism 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.”); FELIX FRANKFURTER, THE PUBLIC AND ITS GOVERNMENT 49–50 (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, e.g., Jessica Bulman-Pozen, *Executive Federalism Comes to America*, 102 VA. L. REV. 953, 955, 969 (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).

¹⁹ Alan Ohnsman, *GM, Toyota and Lyft Urge Congress to Set Nationwide Self-Driving Car Standards*, FORBES.COM (Feb. 14, 2017, 5:30PM); *infra*, notes 138, 234, 239-241, 246, and accompanying text.

²⁰ [Footnote omitted for anonymous review].

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 largely ignored 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 non-preemption*, 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 non-preemption 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, and that its interpretation of the statute would have preemptive effect. But the statement *does not actually preempt* states from regulating – at least temporarily (hence its moniker of nonpreemption). And the agency sets a timetable to revisit the issue.²³

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 AV hardware and software.²⁵ Thus, in NHTSA’s view, AV 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 AVs,

²¹ *Id. But cf.* 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).

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 (Sept. 2016), <http://www.nhtsa.gov/nhtsa/av/av-policy.html> [hereinafter 2016 NHTSA Policy]; *see also infra*, Part III.

²⁵ *Id.* at 38.

²⁶ *Id.*

²⁷ *Id.* at 37 (“*If* NHTSA issued [a federal motor vehicle safety standard] setting performance requirements for [highly autonomous vehicles], *then* a State could not have its own performance

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 DOT alone to regulate” AVs.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 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 will revisit the guidance in one year.³¹ Thus, for the moment, even in this preexisting dual federalism scheme, states are continuing to set rules for AVs, 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 notice-and-comment rulemaking. This transparency can encourage early, meaningful participation in the ultimate rulemaking process. 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

standards on the same aspects of [highly autonomous vehicle] performance unless they were identical to NHTSA’s standards.”) (emphases added); 49 U.S.C. § 30103(b). 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., 81 FR 6454-6458 (February 8, 2016); 80 FR 2320-2326 (January 16, 2015); 79 FR 19177-19250 (April 7, 2014); 49 FR 55137, 55167 (September 9, 2013); 77 FR 19132, 19138 (March 30, 2012). 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.

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

³⁰ *Id.*

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 II.B.

³³ Heather K. Gerken, *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,

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 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 II 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 III examines the rise of AVs as a particularly compelling case study of how advisory nonpreemption can operate in practice to effectuate these goals. Part IV turns to the role of the courts, examining how the judiciary would construe a statement of advisory

³⁴ *Uncoperative Federalism*, 118 YALE L.J. 1256, 1300 (2009) (referring to Congress's supremacy “trump card”).

³⁵ Cf. Tim Wu, *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).

³⁶ See *infra*, Part II.B.

³⁷ 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 Seifert, *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 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 [Footnote omitted for anonymous review]

nonpreemption if challenged. Part V considers objections regarding democratic legitimacy, concluding that advisory nonpreemption enhances, rather than undermines, democratic legitimacy.

II. 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 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

³⁸ Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PA. L. REV. 1 (2014) (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*, *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 (2013) (arguing that congressional delegation to agencies of the power to “unmake 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 (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*, *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 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 Agency Preemption*, 22 GEO. MASON L. REV. 63 (2014).

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

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 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 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 III then examines the use of advisory nonpreemption by the NHTSA in the context of AV safety regulation as a case study to tease out more specific implications.

A. *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

⁴² [Footnote omitted for anonymous review]

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, *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. Rodriguez, *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 at 360–61, 361 n.37 (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”).

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 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 the federal government alone 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

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).

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

⁴⁶ [Footnote omitted for anonymous review]

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*, *supra* note 47, at 466 (discussing public choice accounts of federalism and interest group behavior).

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 along a spectrum. At one extreme end of the dual spectrum is “field preemption,” in which 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

⁵¹ Federal Aviation Act, 49 U.S.C. §§ 40103, 44502, and 44701-44735.

⁵² Montalvo v. Spirit Airlines, 508 F.3d 464, 468, 470-71 (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. U.S., 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. § 40103(b)(1)-(2).

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 v. Trans World Airlines, Inc., 504 U.S. 374, 383-84 (1992).

of vehicle manufacture, but also efforts to make local taxi fleets more fuel-efficient 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. An example is what Michael Dorf and Charles Sabel call “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, instead of “dual,” the balance of regulatory authority between can be “dynamic.” In dynamic federalism, the initial allocation of authority contemplates 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 federal “floor” preemption, the federal government can set a regulatory

⁵⁷ [Footnote omitted for anonymous review]

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, e.g.*, 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*] (same); 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 Wiseman, *Disaggregating Preemption in Energy Law*, 40 HARV. ENVTL. L. REV. 293 (2016).

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, as in dynamic federalism, but as in dual federalism, it is the federal government that sets the standards, and often retains the ability to override a state implementation plan that is insufficient.⁶⁷ And statutes like No Child Left Behind in the educational sphere, and the

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

⁶³ 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 ascendancy of cooperative federalism, see Metzger, *Agencies, Polarization*, *supra* note 18, at 1769-70 (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. It provides a mechanism through which opportunities continually arise for creating cross cutting alliances.”); 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, §§ 108(b)(2), 109(d)(2)(c), 42 U.S.C. §§ 7408(b)(2), 7409(d)(2)(C).

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

Patient Protection and Affordable Care Act, contain provisions 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 allocation of regulatory authority.⁷⁵ Precautionary federalism requires regulatory authority to remain fluid and flexible during periods of innovation uncertainty, capable of

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. Rodríguez, *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 [Footnote omitted for anonymous review]

⁷⁵ *Id.*

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 risk-risk tradeoffs must be taken into account, 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 means that includes interpretative rules, “general statements of policy,” and other methods like 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 many scholars have noted the increasing frequency of their use.⁸⁶

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ 5 U.S.C. § 554.

⁸² 5 U.S.C. § 553.

⁸³ 5 U.S.C. § 553(b)(A)-(B); 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); Gluck et al., *supra* note 36 (discussing the recent rise of emergency rulemaking).

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

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” will likewise have significant implications for whether there remains a role for states in regulating new 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 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

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 49 U.S.C. § 5125(d); 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).

⁹⁰ 49 U.S.C. § 30101; § 30111 (“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.

⁹² Gregory S. McNeal, *Drones and the Future of Aerial Surveillance*, 84 GEO. WASH. L. REV. 354 (2016).

⁹³ There are exceptions to the one-way ratchet. For example, in *Williamson v. Mazda Motor of 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.

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, 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 AVs challenge what counts as a “vehicle.” While the federal government has been the lead regulator in both areas, 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 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 can respond

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 (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* note 88-89, advisory nonpreemption could include a statement about the preemptive effect of its interpretation.

⁹⁸ 5 U.S.C. § 553(b).

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 frameworks¹⁰¹:

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, 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

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

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.

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

preemptive effect. Why, critics might argue, is silence not enough to achieve the same end? 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 agency.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 authorized agencies to rely in their dealings with the public only on rules that had 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 AVs 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 in which there was a lack of clarity regarding whether such people were required to obtain a license from the Federal Aviation Administration (FAA) or from their state or local government. In the absence of some public guidance from the agency, individual bureaucrats might take conflicting positions – fining or penalizing some drone users, but leaving others to fly their drones without

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*, 53 ADMIN. L. REV. 803, 806 (2001) (citing 5 U.S.C. § 552(a)(1) and (2)). 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).

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

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).

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 – this dialogue becomes all the more important. To require additional procedures approaching notice-and-comment rule-making 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

¹⁰⁷ In fact, the FAA recently adopted regulations governing drones that preempt many state and local rules, and require a federal license, yet a number of states and local governments have 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*, <http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx> (last updated Oct. 7, 2016).

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

¹⁰⁹ Sharkey, *supra* note 27, at 522; 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, ACUS, 76 Fed. Reg. 81-01, 2001 WL 5751 (Jan. 3, 2011), as well as Executive Order 13,132, Federalism, 3 C.F.R. 206 (Aug. 4, 1999).

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

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 describes 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, 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. 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

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 (discussing the risks and benefits of informal agency actions).

¹¹³ Wu, *supra* note 34, at 1844.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ Noah, *supra* note 112, at 874.

¹¹⁸ *Id.* at 876-895.

¹¹⁹ *Id.* at 893.

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 AV hardware and software as “vehicles,” 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 AV safety.¹²²

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 AVs 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 Fully

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

¹²¹ 2016 NHTSA Policy, *supra* note 24; see also *infra*, Part III.

¹²² Advisory nonpreemption is also unlike “best practices” regulation. Zaring, *supra* note 83, at 308, as 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, NAT’L SAFETY COUNCIL,

(Feb. 17, 2016), <http://www.nsc.org/Connect/NSCNews-Releases/Lists/Posts/Post.aspx?List=1f2e4535-5dc3-45d6-b190-9b49c7229931&ID=103&var=hpress&Web=36d1832e-7bc3-4029-98a1-317c5cd5c625>. Accordingly, advisory nonpreemption provides temporary flexibility until a better answer – not the importance of the issue – becomes more apparent.

¹²³ [Footnote omitted for anonymous review]

¹²⁴ Neal E. Boudette, *5 Things That Give Self-Driving Cars Headaches*, N.Y. TIMES (June 4, 2016), <https://www.nytimes.com/interactive/2016/06/06/automobiles/autonomous-cars-problems.html>.

driverless AVs 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 the ends of precaution about important policy ends 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 on this score 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 AVs 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 next Part offers AV safety regulation as a case in which to explore its use in practice. Part IV will then turn to the normative analysis that weighs the benefits and costs of advisory nonpreemption, and addresses the role of courts and the level of deference that is owed to this type of agency action.

III. ROBOT FEDERALISM: THE RISE OF AVS

The rapid development of AV technology offers a particularly compelling case study to highlight both why federal agencies should preserve flexibility in the allocation of regulatory authority to address innovation uncertainty, and how they can achieve this flexibility. This Part first examines the existing division of labor between the federal government and the states to regulate auto safety, and argues that the development of AV technology is challenging that division of labor. It then discusses the current state of AV 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.

¹²⁵ [Footnote omitted for anonymous review]

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

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;
- (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

¹²⁷ National Traffic and Motor Vehicle Safety Act, 49 U.S.C. §§ 30101-30183; H.R. Rep. No. 89-1776, at 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 Mashaw & David Harfst, *From Command and Control to Collaboration and Deference: The Transformation of Auto Safety Regulation*, 34 YALE J. ON REG. ____ (forthcoming 2017).

¹²⁸ 49 U.S.C. § 30102(7), § 30107(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).

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 not incorporate a definition of 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 the driver,¹³⁶ but has implications for how the states may regulate AVs.

B. Autonomous Vehicle Innovation

The development of AV technology raises complex technological, ethical, and regulatory questions. Advocates tout the many benefits of AVs, 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 AVs 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 AVs hold promise to reduce the number of accidents by

¹³³ See *supra* note 12.

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

¹³⁵ 49 C.F.R. § 571.3.

¹³⁶ 49 C.F.R. Part 571.

¹³⁷ Press Release, U.S. Dept. of Trans., 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 *Autonomous Vehicle Technology: A Guide For Policymakers*, RAND 1, 31 (2016), http://www.rand.org/content/dam/rand/pubs/research_reports/RR400/RR443-2/RAND_RR443-2.pdf [hereinafter RAND Report 2016].

¹³⁹ Motor Vehicle Deaths Increase by Largest Percent in 50 Years, NAT’L SAFETY COUNCIL, (Feb. 17, 2016), <http://www.nsc.org/Connect/NSCNews-Releases/Lists/Posts/Post.aspx?List=1f2e4535-5dc3-45d6-b190-9b49c7229931&ID=103&var=hppress&Web=36d1832e-7bc3-4029-98a1-317c5cd5c625>.

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

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 AV 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 AVs. For example, if two AVs 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 AV would respond prevent harm better than different 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

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) (discussing crash involving a Tesla in self-driving mode); MINDELL, *supra* note 141 (discussing driver complacency).

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 I focus on here, 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. Part. 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

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 fully “autonomous” systems contemplate a continuing role for a human driver under certain conditions, while others take a different approach. For example, Google 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 driverless AVs 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 fully “autonomous” cars 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 AV should respond to the famous “trolley problem”: Given a choice between saving

of automation. See 2016 NHTSA Policy, *supra* note 24, at 9 (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. *Id.* A Level 3 vehicle can conduct driving tasks, but a human driver must be ready to retake control. *Id.* 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.” *Id.* A Level 5 vehicle can “perform all driving tasks, under all conditions that a human driver could perform them.” *Id.* NHTSA considers only Levels 3-5 “highly automated vehicles” (HAVs) subject to its 2016 Policy. *Id.* at 10.

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).

¹⁴⁸ *Google Self-Driving Car Project*, GOOGLE, <https://www.google.com/selfdrivingcar/how/> (“We removed the steering wheel and pedals, and instead designed a prototype that lets the software and sensors handle the driving.”).

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-crazytheyre-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).

the vehicle's single human passenger, and saving multiple passengers in an oncoming bus, what choice should the vehicle make?¹⁵¹ A recent empirical study in *Science* concluded that while people generally believe that AVs *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, the head of 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 AV safety and the boundaries of federalism. AVs 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 AV 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

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 AND 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.").

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/googles-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 DARPA 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.

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 interpretation would favor state regulatory primacy over such algorithms – at least, perhaps over the software. It is hardly beyond the capacity of highly engineered software to recognize that an AV has crossed state lines and apply different rules, any more than a driver knows to change speed limits, or a motorcyclist needs to put on a helmet when entering a different state. AVs 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 “Google”-type cars in the future. And indeed, some automakers and scholars envision such a world.¹⁵⁷ For example, Google has been a pioneer in promoting fully driverless cars.¹⁵⁸ But it is important to question that assumption.¹⁵⁹ Indeed, different firms developing AV technology are staking out diverse positions about whether human drivers should remain in such vehicles in the future, or whether the ultimate goal of AV technology development should be to remove human drivers entirely. And there is uncertainty about how long these developments will take. Even the director of Google’s driverless car program recently recognized that its desired path to driverlessness may 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

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 “Full autonomy, although much harder, is the right route”).

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

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

C. AVs Disrupt Federalism

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 AVs

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, Google also faces the challenge of bringing these cars to market. Barr, *supra* note 158, <https://www.bloomberg.com/news/articles/2016-09-12/google-car-project-loses-leaders-and-advantage-as-rivals-gain>.

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

¹⁶² Lucas Mearian, *A.I. Guardian-Angel Vehicles Will Dominate Auto Industry, Says Toyota 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 16 percent of respondents preferred to ride in a driverless vehicle, while 46 percent wished to retain "full control" of a vehicle, and 39 percent wanted a "partially self-driving vehicle." For complete survey results, see Bernie DeGroat, *Vehicle Automation: Most Drivers Still Want To Retain Some Control*, UNIV. OF 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/driverless-cars-inspire-both-fear-and-hope> (discussing a AAA study finding that 75% 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*, ANDROIDHEADLINES (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).

as a substantive matter.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 focus instead on the boundaries of federalism.

Regulatory authority over AV safety could be allocated in one of four ways. First, there could be no public regulation of AV safety. Private vehicle manufacturers could simply incorporate their own visions of both the appropriate degree of driverlessness 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 Google another, or they could voluntarily agree on a private industry standard.¹⁶⁶ Second, AV 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 AVs. 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

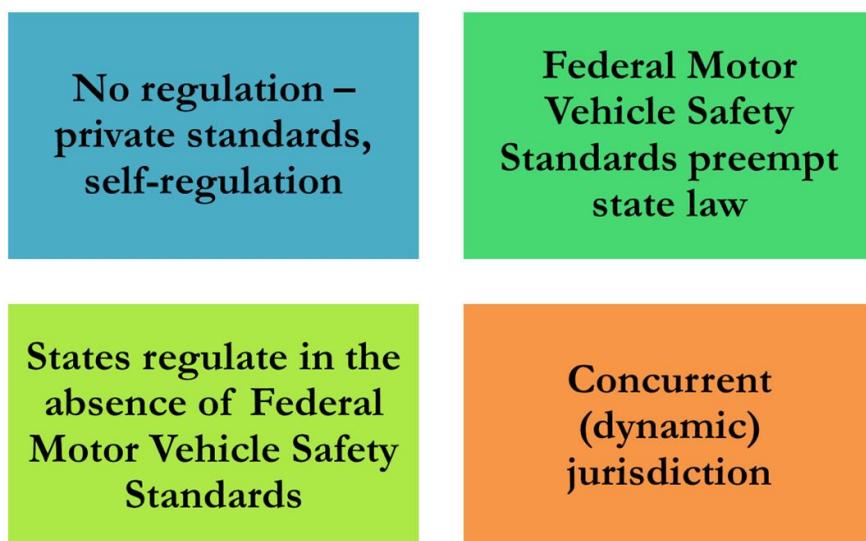
¹⁶⁴ Cf. Freeman & Spence, *supra* note 38 (discussing the “new problem” of climate change). For example, NHTSA and Volpe are partnering to review all existing FMVSS to determine whether they pose conflicts or barriers to innovation for AVs. U.S. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN. & VOLPE, REVIEW OF 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 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* (Working Paper No. X, 2016, 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 RAND 2016 REPORT, *supra* note 138.

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

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

Table 2:



A second complicating factor is that the law must not only confront the allocation of regulatory authority given the state of technological innovation *today*. There may be additional innovation – 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.

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

¹⁶⁸ [Footnote omitted for anonymous review]; RAND 2016 Report, *supra* note 138 (citing industry’s concerns over “patchwork”).

D. Regulation of AVs Before 2016

With that background in mind, I now turn to the current regulatory environment regarding AVs. 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.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 is 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.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

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.

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.

How quickly times changed. In November, 2015, the Director of Google's Self-driving Car Project requested an interpretation from NHTSA as to whether Google's Self-Driving System, 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 self-driving system 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 have legislation pending.¹⁸³ These state laws

¹⁷⁷ Letter from Paul A. Hemmersbaugh, Chief Counsel, NHTSA, to Chris Urmson, Director of Self-Driving Car Project, Google (Feb. 4, 2016), <https://isearch.nhtsa.gov/files/Google%20-%20compiled%20response%20to%20Nov%20%2015%20interp%20request%20--%204%20Feb%2016%20final.htm>.

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 Letter, *supra* note 177.

¹⁸¹ *Id.*

¹⁸² RAND 2016 Report, *supra* note 138 (summarizing state rules); 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-were-ready.html?_r=0; Ariel Wittenberg, *States Race to Let Autonomous Cars Drive Alone*, GREENWIRE (Sept. 19, 2016) (reporting on conflicting state approaches to presence of a human driver).

¹⁸³ S.B. 178, 2016 Reg. Sess. (Al. 2016) (pending); Assemb. B., 2015-2015 Reg. Sess. (Cal. 2016) (pending); S.B. 113, 2015-2016 Reg. Sess. (Ga. 2016) (pending); H.B. 2687, 28th Leg. (Haw.

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

Currently, two states – California and Florida – permit the operation of AVs without human drivers physically present in the vehicle.¹⁸⁵ 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.¹⁸⁶ 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 alert the driver about system failure.¹⁸⁷ Notably, however, the 2012 law anticipated the possibilities that a human operator would not be physically present in the vehicle,¹⁸⁸ and that a vehicle could be operated even without a *remote* human driver.¹⁸⁹ While these rules could intrude into federal authority to regulate vehicle safety (especially requirements for vehicle equipment design like alert systems), the California law expressly recognized that federal regulations “shall supersede” state law if they conflict.¹⁹⁰

In 2016, however, California amended this code, authorizing a single local transportation authority to pilot test AVs *without* a human driver in the vehicle, including AVs lacking a steering wheel, brake pedal, and accelerator.¹⁹¹ The pilot testing of driverless AVs is limited to two specified locations (one of which includes some public roads), but

2016) (pending); H.B. 630, 28th Leg. (Haw. 2016) (pending); H.B. 3136, 99th Gen. Assemb. (Ill. 2016) (pending); H.B. 2977, 189th Gen. Ct. (Mass. 2016) (pending); H.B. 4321, 189th Gen. Ct. (Mass. 2016) (pending); S.B. 1841, 189th Gen. Ct. (Mass. 2016) (pending); H.B. 8, 2016 Reg. Sess. (Md. 2016) (pending); S.B. 126, 2016 Reg. Sess. (Md. 2016) (pending); S.B. 0928, 2015-2016 Sess. (Mich. 2016) (pending); S.B. 995, 2015-2016 Sess. (Mich. 2016) (pending); S.B. 996, 2015-2016 Sess. (Mich. 2016) (pending); H.B. 3325, 89th Leg. (Minn. 2016) (pending); S.B. 2569, 89th Leg. (Minn. 2016) (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. 10586, 2015-2016 Leg. Sess. (N.Y. 2016) (pending); S.B. 789, 2015-2016 Leg. Sess. (N.Y. 2016) (pending); H.B. 2203, 2015-2016 Reg. Sess. (Pa. 2016) (pending); H.B. 1268, 2015-2016 Reg. Sess. (Pa. 2016) (pending); S.B. 2514, 2016 Reg. Sess. (R.I. 2016) (pending); H.B. 2106, 2015-2016 Reg. Sess. (Wash. 2016).

¹⁸⁴ See sources cited *supra* note 18.

¹⁸⁵ S.B. 1298, 2011-2012 Sess. § 2(b) (Cal. 2012) (amending CAL. VEHICLE CODE § 38750).

¹⁸⁶ *Id.*

¹⁸⁷ *Id.* at § 2.

¹⁸⁸ 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).

¹⁸⁹ 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 § 1(a).

¹⁹⁰ *Id.* at § 2(g).

¹⁹¹ Assemb. B. 1592, 2015-2016 Sess. (Cal. 2016) (amending CAL. VEH. CODE § 38755).

only permits operation of such AVs at speeds of less than 35 mph.¹⁹² 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.

Like California, Florida initially adopted legislation in 2012 requiring the operator of an AV to be physically present in the vehicle.¹⁹³ In 2016, however, the Florida legislature deleted the requirement that the operator be physically present.¹⁹⁴ This opened the possibility of remote operation of vehicles.¹⁹⁵ However, it could likewise include fully driverless cars without even remote operators.

In contrast, other states, including Nevada, Michigan, and 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.¹⁹⁶ Michigan adopted legislation governing AVs in 2013, requiring manufacturers to obtain special license plates, and to demonstrate adequate proof of insurance before testing vehicles on public roads.¹⁹⁷ The law specifies that AVs must be operated by an employee, contractor, or other designee of the manufacturer, and that the operator must be physically present in the vehicle during operation and ready to take over control of the vehicle.¹⁹⁸ In 2016, Tennessee adopted legislation authorizing the testing of AVs on public roads.¹⁹⁹ The Act distinguishes “No-Operator-Required Autonomous Vehicles” (NORAVs), from “Operator-Required Autonomous Vehicles” (ORAVs), and permits manufacturers to test ORAVs on public roads if certified by the State.²⁰⁰ The law calls for the Department of Motor Vehicles to promulgate

¹⁹² *Id.* at § 1. 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.

¹⁹³ 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. *Id.* at § 4; FLA. STAT. § 319.145(1)(d)(2).

¹⁹⁴ 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).

¹⁹⁵ 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.”).

¹⁹⁶ 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. NEV. REV. STAT. §§ 482A.060; 482A.200 (2011).

¹⁹⁷ S.B. 169, 97th Leg. (Mich. 2013) (amending MICH. COMP. LAWS § 257).

¹⁹⁸ S.B. 663, 97th Leg. (Mich. 2013) (amending MICH. COMP. LAWS §§ 600.101-600.9947).

¹⁹⁹ 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)).

²⁰⁰ S.B. 1561, 109th Gen. Assemb. (Tenn. 2016), § 2-3 (effective Jan. 1, 2017).

rules to govern the safe testing of NORAVs in the state.²⁰¹ 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.²⁰²

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.²⁰³ Arizona requires a licensed, human operator to monitor and be able to take control of the vehicle if necessary.²⁰⁴ The operator must be an employee, contractor, or other designee of the entity developing the technology to operate the vehicle.²⁰⁵ However, the human operator *need not be physically present* in the vehicle, and instead may be at a remote location.²⁰⁶ 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,²⁰⁷ and Louisiana has defined “autonomous technology” for purposes of its Highway Regulatory Act.²⁰⁸

Several states have legislation (or additional legislation) pending—and in two cases, these proposed laws would permit operation of AVs without a human driver on public roads.²⁰⁹ For example, California AB 2866 would eliminate the requirement for a human driver for the entire state – not just the Contra Costa area.²¹⁰ And Michigan SB 995 would provide that “[a]n 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.”²¹¹ Hawaii’s pending legislation would consider the operator to be the person who engages the autonomous technology, regardless of whether that person is physically present or in a remote location, but does require a human driver to be present (except on

²⁰¹ *Id.* § 9 (effective Jan. 1, 2017). Tennessee preempts local governments from banning AVs within their jurisdictions. S.B. 598, 109th Reg. Sess. (Tenn. 2015).

²⁰² D.C. CODE § 50-2352 (2013).

²⁰³ Exec. Order 2015-09 (Ariz. 2015), Self-Driving Vehicle Testing and Piloting in the State of Arizona; Self-Driving Vehicle Oversight Committee.

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ *Id.*

²⁰⁷ H.B. 1065, 64th Leg. Assemb. (N.D. 2015) (originally meant to add N.D. CENT. CODE § 39-10.14, but was later changed to only require a legislative management study); Utah Code Ann. § 41-26 (2016).

²⁰⁸ H.B. 1143, 2016 Reg. Sess. (La. 2016) (enacting LA REV. STAT. § 32:1, § 1.2 (2016)).

²⁰⁹ Other states with pending legislation include Alabama, Georgia, Hawaii, Illinois, Massachusetts, Maryland, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island, and Washington. *See also* RAND 2016 Report, *supra* note 138, at 2-3.

²¹⁰ Assemb. B. 2866, 2015-2016 Reg. Sess. (Cal. 2016)

²¹¹ S.B. 995, 2015-2016 Sess. (Mich. 2016).

closed test courses).²¹² Some pending legislation would likewise address vehicle design, in such provisions as Hawaii S 630, which would require alert systems and technology to engage and disengage the autonomous technology.²¹³

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.²¹⁴ As a result, in 2016, Uber began testing AVs in the city as part of its services, though a human driver sits in the driver's seat to monitor the vehicles to ensure safety.²¹⁵ In Las Vegas, the City Council adopted a resolution in 2016 creating an "innovation district" that will permit local officials to craft rules to permit testing of AVs, which builds on existing vehicle-to-infrastructure technology set up by Delphi Corp., a private firm, in connection with the annual Las Vegas Consumer Electronics Show.²¹⁶ Other cities, including Ann Arbor, Michigan, Somerville, Massachusetts, and Johnson County, Iowa are partnering with universities and private firms to test AVs.²¹⁷ And Google is testing its driverless cars in Mountain View, CA, Austin, TX, Kirkland, WA and Metro Phoenix, AZ.²¹⁸

²¹² S.B. 630, 28th Leg. (Haw. 2016).

²¹³ *Id.*

²¹⁴ Cecilia Kang, *No Driver? Bring it On. How Pittsburgh Became Uber's Testing Ground*, N.Y. TIMES, (Sept. 10, 2016), <http://www.nytimes.com/2016/09/11/technology/no-driver-bring-it-on-how-pittsburgh-became-ubers-testing-ground.html>.

²¹⁵ *Id.* 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).

²¹⁶ *Id.*

²¹⁷ Jordan Graham & Brian Dowling, *Massachusetts Seeks to Become Autonomous Vehicle Research, Testing Hub*, FUTURESTRUCTURE (Jan. 22, 2016), <http://www.govtech.com/fs/Massachusetts-Seeks-to-Become-Autonomous-Vehicle-Research-Testing-Hub.html> (discussing local initiatives); Press Release, Boston Mayor's Office, Mayor Walsh Announces Autonomous Vehicle Initiative, (Sept. 14, 2016), <https://www.boston.gov/news/mayor-walsh-announces-autonomous-vehicle-initiative> (discussing Boston initiatives); Allana Akhtar, *The City That Runs Itself: Mcity and the Future of Automated Transportation*, THE MICH. DAILY (Mar. 29, 2016), <https://www.michigan-daily.com/section/statement/mcity-university-michigan-private-industry-ford> (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, 2:10 PM), <http://www.usatoday.com/story/money/cars/2014/07/25/iowa-driverless-cars/13159845>.

²¹⁸ Google Self-Driving Car Project, *supra* note 148; Matt McFarland, *How a Seattle Suburb Wooed Google's Self-Driving Cars to Town*, WASH. POST (Feb. 4, 2016), <https://www.washingtonpost.com/news/innovations/wp/2016/02/04/how-a-seattle-suburb-wooed-googles-self-driving-cars-to-town/>.

E. 2016: *Advisory Nonpreemption*

In September, 2016, NHTSA issued its *Federal Automated Vehicles Policy: Accelerating the Next Revolution in Roadway Safety*.²¹⁹ 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.²²⁰

The agency invites comments on its policy, and indicates that it will revisit the policy within one year.²²¹ The 2016 NHTSA Policy notes that safety is the agency's top priority.²²²

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 all of the driving task).²²³

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.²²⁴ 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.”²²⁵

²¹⁹ 2016 NHTSA Policy, *supra* note 24.

²²⁰ *Id.* at 3.

²²¹ *Id.* at 3.

²²² *Id.* at 5.

²²³ *Id.* at 38.

²²⁴ *Id.* at 38.

²²⁵ *Id.* at 38. The 2016 NHTSA Policy neither asserts nor disclaims preemptive intent with respect to state tort law, noting only that “The 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.” 2016 NHTSA Policy, *supra* note 24, at 38. It does not contain boilerplate language used after 2012 in the rulemakings cited *supra*, which asserts that states may exceed safety

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.²²⁶

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.²²⁷ 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 technologies.”²²⁸ The Policy then confirms the respective spheres of federal authority (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 AVs); and state authority (licensing of “human” drivers, motor vehicle registration, adopting and enforcing traffic laws, conducting vehicle safety inspections, and regulating insurance and tort liability).²²⁹

This Policy is not an enforceable command; indeed, in the absence of federal motor vehicle safety standards that apply to AVs, it is not clear what federal standards would be enforced.²³⁰ 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.²³¹ 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.

standards that prescribe only a minimum, and that “many NHTSA rules” prescribe “only a minimum safety standard.” 81 FR 6454–6458 (February 8, 2016). For a discussion of NHTSA boilerplate, *see supra* note 27.

²²⁶ *Id.* at 37 (emphases added).

²²⁷ *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.”).

²²⁸ *Id.* at 39 (emphasis added).

²²⁹ *Id.* at 38–39 (citing Highway Safety Act, 23 U.S.C. § 401 *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).

²³⁰ *See infra*, Part IV (discussing degree of judicial deference owed to the Policy).

²³¹ One state has already given notice that it plans a more binding approach. *See infra*, Part IV (discussing California’s 2016 proposal to make AV safety standards mandatory).

NHTSA's 2016 Policy will not be the final word on AV safety regulation. Indeed, it has not even been the final word to date.²³² 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.

IV. 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 the potential for a conflict 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.²³³

²³² *Id.*

²³³ There are other potential concerns of concurrent jurisdiction, including the possibility of unintended “leakage” from states with stricter standards to states with more lax standards. For example, one recent economic study has demonstrated the significant potential for such leakage as a result of concurrent jurisdiction over greenhouse gas emissions limits for new vehicles. The study concluded that when a number of states adopted more stringent new vehicle emissions standards than the federal standard, vehicle manufacturers could relax their vehicle emissions performance in the non-stringent states. This reduced (though it did not remove) some of the expected benefits of the more stringent state standards (among other effects on the used car market which likewise reduced some of the anticipated benefits). 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

One such conflict may arise between NHTSA and the California Department of Motor Vehicles (CDMV) regarding how to regulate AV safety.²³⁴ Just two weeks after NHTSA released its 2016 Policy, the state agency released proposed draft regulations that could create a conflict with parts of the NHTSA guidance.²³⁵ 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),²³⁶ California's proposed regulations would *require* automakers to submit the safety assessment letter to its Department of Motor Vehicles in order to obtain a state testing permit.²³⁷ California's proposed regulations would also require automakers to obtain approval from each locality in which they wish to operate.²³⁸

Some automakers have criticized California's proposal for "effectively codifying NHTSA's optional . . . safety assessment."²³⁹ They argue 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 guidelines.²⁴⁰ 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."²⁴¹ Automakers are also concerned about California's proposed requirement to obtain local approvals because many municipalities do not currently regulate in this space.²⁴² If California's proposed regulations become law, automakers complain that they would have to abide

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 by meeting a higher standard in the so-called Pavley states, manufacturers could accordingly reduce their environmental performance in other states while still meeting the federal average standard. It is not clear that such leakage would be an issue in the context of AV safety regulation, which is not linear in the same way as emissions limits.

²³⁴ Ariel Wittenberg & Anne Mulkern, *Autonomous Cars: Calif., DOT in Turf War Over Robocar Regulation*, E&E News Reporters (Nov. 22, 2016), <http://www.eenews.net/stories/1060046097>.

²³⁵ Deployment of Autonomous Vehicles for Public Operation, Cal. Dept. of Motor Veh., <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 Florida 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.

²³⁶ 2016 NHTSA Policy, *supra* note 24, at 15.

²³⁷ Cal. Dept. of Motor Veh. § 227.54(h) (proposed Sept. 30, 2016).

²³⁸ *Id.* § 227.54(b) (proposed Sept. 30, 2016).

²³⁹ Wittenberg & Mulkern, *supra* note 234.

²⁴⁰ *Id.*

²⁴¹ *Id.* (citing Paul Scullion, Global Automakers Safety Manager).

²⁴² *Id.*

by “three layers of government [oversight],” at the federal, state, and local levels,²⁴³ which would create a patchwork of regulations that hinders innovation. On the other hand, Jean Shiomoto, the Director of the CDMV, 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.²⁴⁴ 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 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.²⁴⁵ 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.²⁴⁶ 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.²⁴⁷ 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 CDMV Director Shiomoto to update her on the agency’s progress with AV regulations while her agency was simultaneously working on California’s AV

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ 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).

²⁴⁶ 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, but has ended (at least temporarily) in harmonized standards adopted by these three regulators in consultation with industry. 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).

²⁴⁷ *Id.*

rules.²⁴⁸ 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].”²⁴⁹ 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 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 may prefer flexibility, if there is a risk that a federal regulation will get the substance of a regulation wrong.²⁵⁰ 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.²⁵¹ 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.²⁵² This Article advocates advisory nonpreemption as occupying a temporary middle ground.

²⁴⁸ Memorandum from the NHTSA to MS. Jean M. Shiomoto, Director, California Department of Motor Vehicles (June 2, 2015) (on file with author).

²⁴⁹ *Id.*

²⁵⁰ 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).

²⁵¹ 2013 NHTSA Policy on Autonomous Vehicles (May 30, 2013), http://www.nhtsa.gov/staticfiles/rulemaking/pdf/Automated_Vehicles_Policy.pdf.

²⁵² 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”).

B. A 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, 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.²⁵³

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.²⁵⁴ 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.²⁵⁵ However, as noted above, this is not the only possible interpretation.

²⁵³ 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).

²⁵⁴ Sharkey, *supra* note 27; Mendelson, *supra* note 40; Metzger, *supra* note 40.

²⁵⁵ 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. 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

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.²⁵⁶ Courts do not either blindly obey the agency interpretation or 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;²⁵⁷ *Skidmore* deference, in which a court views the agency interpretation as having precedential, persuasive influence or “weight,”²⁵⁸ 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.²⁵⁹ 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.²⁶⁰

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

While *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 “permissible” or reasonable under the law,²⁶¹ there is an antecedent

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 Laboratories v. Gardner, 387 U.S. 136 (1967); 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.

²⁵⁶ Strauss, *supra* note 103, at 811 (discussing *Chevron*, *Skidmore* and no-deference alternatives).

²⁵⁷ *Chevron U.S.A. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837 (1984).

²⁵⁸ *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”).

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

²⁶⁰ 49 U.S.C. § 30102(7), § 30107(8).

²⁶¹ 467 U.S. at 842-44.

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,”²⁶² 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.”²⁶³ 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.²⁶⁴

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.”²⁶⁵ 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.²⁶⁶

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

²⁶² Cass 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.

²⁶³ *Mead*, 533 U.S. at 226-27.

²⁶⁴ *Skidmore*, 323 U.S. at 139-40; *Mead*, 533 U.S. at 228 (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,” citing *Skidmore*).

²⁶⁵ *Id.* at 193.

²⁶⁶ Lisa Heinzerling, *The Power Canons*, 58 WM. & MARY L. REV. __ (forthcoming 2017) (arguing that the Supreme Court has limited deference to agencies on issues of economic and political significance) (discussing *Util. Air Regulatory Grp. 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); *Michigan v. EPA*, 135 S. Ct. 2699, 2707-08 (2015) (holding that the EPA went beyond the bounds of its authority to ignore costs in regulating existing power plants)).

not adopted pursuant to notice-and-comment procedures.²⁶⁷ 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 AVs 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."²⁶⁸ 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 is likely to know more than members of Congress about how to draw a line between technology and human drivers. And AVs – 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."²⁶⁹ The 2016 NHTSA Policy appears to acknowledge this absence in its use of conditional language: – stating "*If* NHTSA issued" such a standard for HAVs, "*then* a State could" only adopt identical legislative or regulatory performance standards.²⁷⁰ 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.²⁷¹ This 2016 Policy therefore lacks any actual preemptive effect. In this way, the situation resembles that of *Grocery*

²⁶⁷ Cf. Strauss, *supra* note 103, at 811-12 (concluding that publication rules are entitled to "predecential" *Skidmore* weight, relying on the text of 5 U.S.C. § 552(a)(2) for the analogy to precedent).

²⁶⁸ Cf. Kevin O. Leske, *Major Questions about the "Major Questions" Doctrine*, 5 MICH. J. ENVTL. & ADMIN. L. 479, 493-94 (2016) (noting that in *UARG 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).

²⁶⁹ 49 U.S.C. § 30103(b)(1).

²⁷⁰ *Id.* 38.

²⁷¹ *Id.* at 37 (emphases added).

Manufacturers Association v. Sorrell, in which industry trade organizations challenged a Vermont law requiring mandatory labeling of food containing genetically engineered organisms.²⁷² The plaintiffs contended that the Vermont mandatory labeling law was expressly preempted under the terms of several federal statutes that prohibit the states from imposing food labeling standards that are “not identical” to federal labeling laws.²⁷³ 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.²⁷⁴

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.²⁷⁵ 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 to permit state experimentation to continue, advisory nonpreemption can serve these ends effectively in other contexts as well.

V. DEMOCRATIC LEGITIMACY

Advisory nonpreemption poses a second risk – that it may outlast its temporary nature.²⁷⁶ 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)

²⁷² 102 F. Supp. 3d 583 (2015), appeal filed (2d Cir. 2015). Cf. Catherine M. Sharkey, *States v. 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).

²⁷³ *Id.* at 611-14 (discussing the preemptive effect of the federal Food, Drug, and Cosmetic Act (FDCA), 21 U.S.C. § 343, combined with the Nutrition Labeling and Education Act, 21 U.S.C. § 343-1(a)(1)-(5), which expressly preempt state food labeling requirements that are “not identical” to mandatory labeling requirements under the FDCA).

²⁷⁴ *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.”).

²⁷⁵ Mendelson, *supra* note 40.

²⁷⁶ 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).

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.²⁷⁷ 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 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.²⁷⁸

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.²⁷⁹ 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.²⁸⁰ Because advisory nonpreemption only 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

²⁷⁷ *Id.* (acknowledging that the FDA’s pre-clearance procedure for medical devices counteracted some of these negative effects).

²⁷⁸ *Id.*

²⁷⁹ 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 higher procedural obligations associated with adopting regulations”).

²⁸⁰ See sources cited *supra* note 87. 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 safeguards’ theories of federalism takes place among the states’ representatives in Congress, not among interest groups submitting comments to federal bureaucrats. Federal agencies have no mandate to represent state interests and possess strong countervailing incentives to maximize their own power and jurisdiction.” *Id.* at 878.

agency actions and interpretations, and accountability, including the right of the public to challenge agency actions in the courts.²⁸¹ 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.²⁸²

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 to offer guidance on interpretation of regulations.²⁸³ Other prominent scholars of administrative law recognize the value of the third, least formal, category of agency action, including non-legislative rules, policies, statements of best practices, and others.²⁸⁴ 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.”²⁸⁵ The first risks “premature lawmaking” that

²⁸¹ Merrill, *supra* note 87, at 1955-56 (distinguishing the positivist vision of legitimacy as rooted in legal authority in a statute or the Constitution, the process-based tradition in which legitimacy depends upon a process of “reasoned decisionmaking,” in which “all relevant interests” are heard); *see also* Gluck et al., *supra* note 87, 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.

²⁸² 5 U.S.C. § 553(b). Under § 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.

²⁸³ 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 rule-making 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.

²⁸⁴ Jacob 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.

²⁸⁵ Wu, *supra* note 34, at 1848-49.

could “cripple” innovation, while the second option completely fails to protect the public interest.²⁸⁶ The third alternative, to make a “threat” offers a balance that can “facilitate public debate.”²⁸⁷ 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.²⁸⁸ 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.²⁸⁹ The allocation of authority is more likely to be consistent with the state of fast-paced innovation.²⁹⁰ 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.”²⁹¹ 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

²⁸⁶ *Id.* at 1849-50.

²⁸⁷ *Id.* at 1851.

²⁸⁸ Strauss, *supra* note 103, at 812 (amendments to publication rules do not require notice-and-comment rulemaking).

²⁸⁹ In the context of constitutional law, many scholars and political philosophers have rejected the idea that one generation should bind another. 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) (citing 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 (rejecting the idea that one generation could bind another).

²⁹⁰ 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”).

²⁹¹ Wu, *supra* note 34, at 1842.

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.

VI. CONCLUSION

The rise of AV technology offers a particularly compelling case study that highlights the importance of 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 fifth 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.