

# From Command and Control to Collaboration and Deference: The Transformation of Auto Safety Regulation

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*Created in 1966 primarily as a rulemaking body empowered to force the technology of motor vehicle safety, the National Highway Safety Administration (NHTSA) had by the mid-1980s largely abandoned rulemaking in favor of aggressively recalling defective vehicles. Devastating losses in pre-enforcement judicial review of rules combined with judicial embrace of recalls to drive that first-period adaptation. Congressional reaction mimicked the signals from the courts, and the Reagan administration's regulatory reform and relief programs of the 1980s further solidified NHTSA's rulemaking retreat. Prodded by congressional mandates, beginning in 1991, but largely of 21st century origin, NHTSA returned to rulemaking in the last two decades, but in a radically revised form. Rather than forcing new technologies, the agency has largely required the diffusion of technologies already in widespread use—technologies that may well have reached near universal deployment in the absence of the agency's efforts. As the protracted airbag case makes clear, deferring to industry's priorities and timetable in this manner may well have cost lives. But the transformation also largely insulated NHTSA from judicial and political challenge. Industry had little reason to contest rules requiring technologies it was already implementing, and courts were unlikely to invalidate such measures in any event.*

*Motor vehicle fatality rates have indeed decreased dramatically since NHTSA's formation. Yet the agency's own research suggests that much of that reduction would have occurred anyway, due to factors other than safety technology. In the meantime, recalls (which have no demonstrable systemic effect on motor vehicle safety) have continued at increasingly high (sometimes astounding) levels, and have been combined with consumer information campaigns, promotion of motorists' behavior modification efforts, non-binding "guidance" documents, and agency-industry voluntary agreements, to round out NHTSA's emerging model of cooperative regulation. Whether or not this strategy has substantial effects in promoting motor vehicle safety, NHTSA's*

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*accommodating posture has resulted in congressional and OMB approval and industry acceptance without litigation.*

*This Article describes the evolution of motor vehicle safety regulation and interprets the agency's transformation as an almost perfect adaptation to a legal culture that is skeptical of ex ante coercive restraints on individual or firm conduct and accepting of post hoc compensatory or punitive action when that conduct fails to satisfy broad social norms. And that process of adaptation is very much a work in progress. Today, NHTSA finds itself in a world that was unimaginable in 1966. Then, it was assumed that safety did not sell; that motorists' misbehavior was intractable and accidents hence unavoidable; and that optimal innovation, in particular to make vehicles more "crashworthy," required government to step in. Fast forward to the present, it appears that safety, at least in some forms, does sell, motorists are at last buckling up in response to mandatory seat belt use laws, and highly automated ("self-driving") vehicles, combined with smart infrastructure, promise a near accident free utopia. Meanwhile, innovation is advancing at a torrid pace, as the automotive, advanced electronics, and software sectors converge. These changes in NHTSA's operational context have reinforced the agency's rulemaking reticence and promoted a preference for statements of "policy," that the agency asserts are non-binding yet potentially enforceable by means of recalls. The agency's attempts to straddle the murky legal boundary between guidance and rulemaking may well be the next arena in which it encounters the constraints of legal culture—a culture that defines the conditions of legitimate administrative action, but not the details of its implementation.*

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## Introduction

*Overview:* Federal regulation of automobile safety in America is a complex and often ironic tale of political ambivalence, judicial skepticism, and bureaucratic adaptation. Telling that story reveals the rule of law and separation of powers at work, as seen through the prism of the National Highway Traffic and Safety Administration (NHTSA), which administers the United States' auto safety regime. The plotline maps the twists and turns of the judicial, legislative, and executive branches as they have sought to oversee NHTSA, as well as the ingenuity regulators have shown in dealing with their overseers' often opaque, inconsistent, and enigmatic commands.

This Article is not our first venture into the thickets of automobile safety regulation. Over twenty-five years have passed since the publication of our book, *The Struggle for Auto Safety (Struggle)*, which examined NHTSA's regulatory record from its formation in 1966 through the mid-1980s. In a nutshell, we found that American legal culture had made broadly applicable, forward-looking safety standards hard to adopt, and case-by-case, retrospective recalls easy to implement. In doing so, our legal culture upended the priority of regulatory techniques envisioned by the architects of NHTSA's mandate, with at best dubious effects on the achievement of the Agency's safety mission.

Over the ensuing quarter century, our findings have been widely cited in academic literature for the proposition that a process of "ossification" has come to afflict large portions of the American administrative state, especially those organs responsible for informal rulemaking. Proponents of this theory argue that informal rulemaking has become so encumbered by procedural and analytic requirements that it is no longer capable of delivering the results expected of it.<sup>1</sup> While "many observers across the political spectrum" believe that ossification is "one of the most serious problems currently facing regulatory agencies,"<sup>2</sup> support for the theory is by no means universal. Some have disputed the extent of the phenomenon or its causes. Others have argued that ossification is a fairy tale altogether, unsupported by hard empirical data.<sup>3</sup>

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1. See, e.g., Thomas O. Garrity, *Some Thoughts on "Deossifying" the Rulemaking Process*, 41 DUKE L.J. 1,385 (1992).

2. *Id.* at 1386.

3. Jason Webb Yackee & Susan Webb Yackee, *Testing the Ossification Thesis: An Empirical Examination of Federal Regulatory Volume and Speed, 1950–1990*, 80 GEO. WASH. L. REV. 1,414 (2012); see also *Justice Denied: Rules Delayed on Auto Safety and Mental Health: Hearing before the Subcomm. on Oversight, Fed. Rights & Agency Action of the S. Comm. on the Judiciary*, 113th Cong. 24-25 (2013) [hereinafter *Justice Denied Hearing*] (statement of Cary Coglianese, Professor of Law, University of Pennsylvania) (noting that the *Struggle for Auto Safety* has been widely cited in support of the ossification thesis, but that claims of a slowdown in rulemaking and a surge in recalls do not withstand empirical scrutiny). But see Richard J. Pierce Jr., *Rulemaking Ossification is Real: A Response to Testing the Ossification Thesis*, 80 GEO. WASH. L. REV. 1,493 (2012).

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To oversimplify only modestly, the ossification debate is largely a dispute between quantitative analysts who look at the data available across the whole of the administrative state, and qualitative analysts who focus more intently on the performance of particular agencies. Although we will seek here to interpret quantitative evidence, we remain firmly in the qualitative, case-study camp. In our view, the broader quantitative analyses, however sophisticated, suffer from a series of disabilities, including the elusiveness of comparable data that are defensible proxies for agency rulemaking performance. Additionally, they lack a clear specification of the expectations that can justifiably be treated as the baseline against which to determine whether a rulemaking regime is “ossified.”

More critically, the most interesting question about the confrontation between regulatory ambitions and legal constraints—what we call here the “legal culture”—is not whether an agency’s rulemaking has become ossified. Ossification is rarely, if ever, a regulatory death warrant; agencies continue to function. Within a given agency, some regulatory techniques may atrophy, or in the current vernacular, “ossify,” while others are energetically and successfully deployed. As *Struggle* emphasized, the legal culture features differential responses—encouragement, indifference, or rejection—to differing regulatory techniques. The critical question for legal analysts, we believe, is how agencies adapt their regulatory techniques to the skewed legal constraints they face and, more ambitiously, what those adaptations suggest concerning the design and performance of the regulatory regime in question.

On the occasion of NHTSA’s fiftieth anniversary, this Article revisits the issue of the Agency’s regulatory performance in the post-*Struggle* period (1986 to the present). Among other matters, we seek to understand whether legal culture has continued to suppress informal rulemaking while elevating recalls at NHTSA, and whether NHTSA has developed other regulatory techniques as further bureaucratic adaptations to the tenacious legal culture enveloping it. Here, as in *Struggle*, we construe that culture broadly: not just as a function of judicial review, but as the message concerning legitimate administrative action emerging from the interaction of all three branches of American government in a system characterized by separated powers, checks and balances, and, more particularly, administrative accountability to both political and legal overseers.

*The Transformation in Brief.* The transformation we describe here is largely a shift in regulatory focus and technique, as NHTSA has groped to find feasible modes of action that are not only faithful to its governing legislation, but also acceptable to the diverse preferences of the judiciary, Congress, the executive branch, industry, and the motoring public. Regulation has not been abandoned. Rather, it has been relentlessly transformed by an agency operating in a highly durable legal environment, under changed technological and market conditions, and responding to a barrage of new and sometimes bewildering statutory instructions and executive directions. This is an account of agency resilience and adaptation, not failure. The regulators here are better cast in the role of resourceful survivors than knaves or fools.

NHTSA's regulatory history can be characterized as describing the evolutionary biology of administrative law in a particular domain—how that law is shaped by and responds to the turbulent environment in which it is implanted and nourished, or neglected and deprived. Briefly stated, in the fifty years since the passage of the National Traffic and Motor Vehicle Safety Act (MVSA) of 1966, NHTSA has progressed through a succession of distinct phases. From its inception until 1974, it functioned largely as a rulemaking agency, setting performance standards for new motor vehicles and motor vehicle equipment. Consistent with the technology-forcing ambitions of MVSA, these rules sometimes pushed the industry into uncomfortable territory by demanding safety innovations that were not on the industry's product development agenda and that it believed provided little or no competitive or marketing advantages. Resistance to technology forcing in this form was fierce.

Responding to judicial and political skepticism of its rulemaking program and enthusiasm for its recall efforts, NHTSA shifted its regulatory emphasis from the issuance of performance standards to the recall of defective products. By the mid-1980s, rulemaking at the Agency was mostly dormant, while recall activity, reinforced by additional legislative authority, burgeoned. Then, spurred in large part by congressional mandates, rulemaking re-emerged at NHTSA around the turn of the twenty-first century. But the form of its rules had changed profoundly. Rather than forcing the development of safety technologies that were low on automakers' list of product development priorities, NHTSA's rules in this new era largely demanded diffusion of safety technologies the industry was already incorporating, or planning to incorporate, in substantial numbers—sometimes in nearly all—of new vehicles.

This co-regulatory strategy relied heavily on auto manufacturers and component developers to develop, produce, and initially deploy advanced safety technologies. NHTSA then developed performance standards for these design features or components, gently pushing the industry to diffuse its self-initiated safety advances throughout the entire new vehicle fleet. To the extent that diffusion would have occurred anyway, due to product liability exposure and market pressures, this form of co-regulation has an illusory quality. Still, it has proven highly effective in avoiding conflict with the Agency's legal and political overseers.

Other regulatory targets, though suitable for rulemaking, were instead slated for inclusion in the Agency's New Car Assessment Program (NCAP). This program attempts to inform consumers concerning the comparative safety performance of new vehicles through a five-star rating system based on crash-testing protocols and information concerning whether new vehicles contain optional safety features. More recently, NHTSA has added additional collaborative techniques to its repertoire. It now places much greater emphasis on industry-wide voluntary agreements for safety improvements rather than mandating them by rule, and on "guidelines," "best practices statements," and "recommendations" of various kinds. None of these approaches is legally

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binding or enforceable in court. Operating in this mode, NHTSA acts as a coordinator of industry self-regulation, rather than a regulatory policeman demanding improved safety performance. Meanwhile, the recall regime has reached new quantitative heights: in recent years, NHTSA has recalled more vehicles than are sold new in the United States.

In short, our research suggests that NHTSA is now predominately a provider of consumer safety information (NCAP), an enforcer of implied warranties (product recalls), a codifier of industry practice, a broker of voluntary agreements, and a promoter of best practices and guidelines. This Article describes the transformation of NHTSA's approach to vehicle safety regulation in considerable detail and asks, "Why this regime?" Our answer is straightforward. The Agency has adapted to a legal culture that is deeply skeptical of ex ante regulatory requirements but supportive of the alternative techniques NHTSA has developed. A regulatory agency that remakes itself as the consumer's non-coercive informant, warranty-enforcement helpmate, and industry collaborator should have few legal or political difficulties.

The main plot line of this complex story is thus easily grasped: the regulatory revolution of 1966 represented by the MVSA was grafted onto a legal culture whose commitments to judicial oversight and political control of delegated authority were structurally hostile to administrative lawmaking. And over time, legal culture rejected the graft. Regulatory agencies are not the unaccountable bureaucrats of popular mythology. They instead operate in a politico-legal environment characterized by multiple sources of constraint, limited sources of support, and the constant risk of being second-guessed by often-fickle overseers. The life of a regulator is not for the faint-hearted.

*The Plan of the Article:* Part I begins with some background material on the original vision for automobile safety regulation as of 1966. This Part then summarizes the findings of our prior research on automobile safety regulation through the mid-1980s. During these formative years, the brave new world of NHTSA's command and control standards encountered the harsh realities of pre-enforcement judicial review, public fury at incursions on its liberty to drive unbuckled, implacable industry opposition, and rapidly waning political enthusiasm for automobile safety regulation outside of the Agency's recall program.

Parts II and III examine the "Ice Age of Rulemaking," the period from about 1986 to 2002. In the post-*Struggle* era, this was NHTSA's most dormant period on the rulemaking front, as demonstrated by an evaluation of the costs imposed and safety benefits gained through the Agency's rulemaking. We find this dormant period to have been massively over-determined. New forms of executive oversight delayed and derailed NHTSA's initiatives, as did leadership by new political appointees with little or no enthusiasm for the Agency's mission. Meanwhile, legislative attempts to reinvigorate the Agency's rulemaking process by safety partisans were stymied by Representative John Dingell's control of the House Energy and Commerce

Committee. The checks and balances built into the American constitutional system all operated in one direction. The MVSA remained facially intact, but its implementation was all checks and no balance.

Part IV looks at congressional directives, all but one of which was adopted after 2000, that ostensibly seemed directed at reinvigorating the Agency's rulemaking efforts. But, on closer inspection, these directives turn out to be much more ambivalent, vacillating, and even inconsistent. In eight separate "agency-forcing" statutes, Congress mandated action but did nothing to protect the Agency's rulemaking process from the vagaries of judicial review. These legislative prods sometimes signaled a lack of enthusiasm for coercive regulation and often appeared intent on refocusing the Agency on the protection of infinitesimal populations.

Part V evaluates the Agency's response to these action-forcing statutes as well as its overall rulemaking activity more recently. A rulemaking rebound has occurred in what we will call the "post-Glacial period." However, these rules are radically different from the key early rules seeking to force technology on a reluctant industry. Instead, we find that the Agency's rulemaking process has largely codified industry practice or borrowed standards in widespread use outside the United States.

Part VI assesses the effects of these rules in promoting automobile safety. From either a quantitative or a qualitative perspective those effects have been modest, perhaps even illusory. Ordering automobile manufacturers to do what they were already doing, or promising to do, produced little industry opposition, while oversight by OMB and Congress occasionally pressed NHTSA to adopt even weaker rules or focus its resources on vanishingly small, even non-existent, safety issues.

Part VII briefly recounts the role of judicial review in the Agency's activities from the mid-1980s to the present. In short, the industry had no interest in suing the Agency when it did nothing or merely required the industry to do what it was already doing, was planning to do, or could easily achieve as demonstrated by foreign regulatory experience. While it has been suggested that judicial review could not have been having significant effects on the Agency's output, given the modest number of judicial review proceedings that it has encountered overall during the last fifty years, that conclusion fails to reckon with the distribution of cases over time and what the Agency was actually doing. The industry's many early successes in getting agency rules overturned as not "reasonable, practicable or appropriate" simply could not be replicated with respect to later rules that did little more than mandate industry's own widespread practices. NHTSA's only loss in judicial review of its rules during this period involved a suit by potential regulatory beneficiaries attacking the weakness of the Agency's standard.

Part VIII returns to recalls. NHTSA has intensified its recall efforts over the last thirty years, a process that continues to this day. The Agency's efforts have been strongly supported by judicial approval, congressional



reinforcement, media coverage, synergy with products liability litigation, and popular acceptance. While much of this activity seems to make common sense—recalling exploding airbags, for example<sup>4</sup>—there is unfortunately no solid evidence that the safety benefits are even remotely equivalent to the substantial costs imposed on both industry and consumers by the massive recalls that have become commonplace in recent years. The best studies suggest that no more than one percent of motor vehicle accidents are caused by manufacturing defects.

Parts IX to XI offer some tentative thoughts on the future of motor vehicle safety regulation. They focus on two developments that are reshaping fundamentally the context in which NHTSA operates. The first concerns the emergence over the past twenty or so years of something resembling a market for motor vehicle safety. This development is socio-economic, perhaps also psychological. Although NHTSA's regulatory strategy relies importantly on this market's existence, very little is known about its origins, scope, and effects.

The second development concerns recent advances in the technology of motor vehicle crash avoidance, including the much-publicized self-driving car. Much of this innovation has occurred in parallel with the convergence of the traditional motor vehicle, software, and advanced electronics industries. As in the case of the market for auto safety, the implications of autonomous vehicles and new software market entrants for NHTSA going forward can only be dimly perceived at present.

A deeper dive into these developments awaits further research, but we do offer some preliminary observations. First, changes in the market and technological environment for vehicle safety regulation challenge some of the basic assumptions underlying the MVSA of 1966. Second, those changed circumstances tend to reinforce adoption of the regulatory strategies that adaptation to the legal culture has also encouraged. The legal culture has required that NHTSA adapt its regulatory techniques, but it did not control the details of that adaptation. Third, these developments raise an obvious question about the continued relevance of agency standard setting as a necessary and viable regulatory technique in the field of motor vehicle safety. For reasons that we briefly sketch in the final pages of this Article, we are skeptical that reliance on information provision, voluntary commitments, and other market-based and cooperative strategies can wholly substitute for the mandatory standard setting envisioned by the proponents of the MVSA of 1966. At the same time, we note the surprising versatility of recalls in enabling NHTSA to cope with changed circumstances, both in the market and technology, that the Agency could hardly have anticipated, let alone control.

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4. See Nat'l Highway Traffic Safety Admin., *Recalls Spotlight: Takata Air Bags Recalls*, U.S. DEP'T TRANSP., [www.safercar.gov/ts/takata/index.html](http://www.safercar.gov/ts/takata/index.html) (last visited Nov. 6, 2016) ("Takata air bags installed in tens of millions of U.S. vehicles are subject to recall due to a safety defect that may cause their inflators to explode and cause serious injuries or deaths.").

## I. Some Background

### A. *The Original Vision*

Drawing on the egalitarian impulses of the Great Society and exuberance over technical advances in the race to the moon, Congress passed the MVSA unanimously.<sup>5</sup> The Act empowered a new federal regulatory agency to compel motor vehicle manufacturers to develop and install safety technologies that could, at the time, only be dimly perceived. The means for reaching that distant horizon was the quasi-legislative power to set general rules governing the safety performance of all new motor vehicles and motor vehicle equipment.

This emphasis on rulemaking was hailed as one of the “greatest inventions of modern government,” and as a cure for the lethargy and ineffectiveness of many old-line agencies, such as the FTC and NLRB, that regulated almost wholly through case-by-case adjudication.<sup>6</sup> The fledgling Agency established by the Act, the forerunner of today’s NHTSA, was authorized to set federal motor vehicle safety standards (FMVSS) subject to the requirements that the rules be “practicable,” be stated in “objective” terms, and “meet the need for motor vehicle safety.”<sup>7</sup> The latter criterion was defined to mean protecting the public against the “unreasonable risk” of accidents and the injury and death often resulting from them.<sup>8</sup> The automobile industry, then the largest segment of the nation’s private sector, was subject to federal safety regulation for the first time.<sup>9</sup>

NHTSA’s rulemaking charge was three-fold. First, the Agency was expected to compel industry to pursue innovations that it would not otherwise pursue. This was the technology-forcing strand of the new regulatory tapestry.<sup>10</sup>

5. National Traffic and Motor Vehicle Safety Act (MVSA) of 1966, Pub. L. No. 89-563, 80 Stat. 718 (codified as amended at 49 U.S.C. §§ 30,101-83 (2012)). For a discussion of the scientific and ideological premises of the Act, see JERRY L. MASHAW & DAVID L. HARFST, *THE STRUGGLE FOR AUTO SAFETY* 1-7 (1990).

6. 1 KENNETH CULP DAVIS, *ADMINISTRATIVE LAW TREATISE* § 6.15, at 283 (1st ed. Supp. 1970).

7. MVSA § 102(2) (codified at 49 U.S.C. § 30111(a) (2012)). In addition, the MVSA provided that standards were to be “minimum” standards and that the agency should “consider whether any such proposed standard is reasonable, practicable, and appropriate for the particular type of motor vehicle or item of motor vehicle equipment for which it is prescribed.” MVSA §§ 102(2), 103(f)(3) (codified at 49 U.S.C. §§ 30,102 (a)(9), 30,111(b)(3) (2012)).

8. MVSA § 102(1) (codified at 49 U.S.C. § 30,102(a)(8) (2012)).

9. At the time of the Act’s passage, the Senate Report noted that “[o]ne out of every six Americans is employed in the industry or in the provision of automotive components or the service of automotive vehicles.” S. REP. NO. 89-1301, at 272 (1966).

10. By “technology forcing” we mean simply innovations that manufacturers, left to their own devices, would not pursue. The spectrum of technologies that might be forced is both broad and indeterminate, ranging from existing technologies that by general consensus should be incorporated into vehicles (such as the essentially design standards that Congress mandated be adopted in 1966) to unspecified and perhaps unimagined technologies that might be deployed to meet specified performance goals (such as fleet mileage standards). For our purposes, the question is not how dramatic of a technological innovation agency rules require, but whether the safety innovations that emerge are driven

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Second, it was charged with making rules to ensure that all citizens, irrespective of their means and abilities, would be secure in their vehicles. This was the equal protection strand. Finally, Congress made clear that safety was the overriding consideration in the issuance of standards. Costs were to be secondary in guiding the Agency's rulemaking calculus.<sup>11</sup>

Almost as an afterthought, Congress also authorized NHTSA to oversee the recall of "defective" motor vehicles.<sup>12</sup> Not much was expected of that secondary power, however. Recalling automobiles was a form of the old and, from a reformist perspective, disfavored adjudicatory model of regulation. Moreover, equipment failure was understood to be responsible for a miniscule percentage of vehicle accidents, injuries, and deaths. The Act was ambiguous on the conditions that justified a recall: it defined an actionable defect simply as "any defect in performance, construction, a component, or material of a motor vehicle or motor vehicle equipment" that related to "motor vehicle safety."<sup>13</sup>

### *B. Reversal of Fortune*

What happened next is elaborated in detail in our 1990 book, *The Struggle for Auto Safety*, which focused on roughly the first fifteen years of the new Agency's activity.<sup>14</sup> In short, NHTSA could no longer be described principally as a rulemaking agency by the mid-1980s. Looking back on the impact attributable to its own safety standards, the Agency itself reported in 2004 that the "cost and weight in passenger cars changed little from 1974 to 1986, as no major new FMVSS went into effect."<sup>15</sup>

The Agency increasingly focused its efforts on recalls.<sup>16</sup> Yet the safety benefits of this burgeoning activity were, and are, far from clear. A 2008 study

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by regulatory demands or by other factors, such as consumer demand, market competition, or liability risks.

11. The technology-forcing and egalitarian strands of the statute are discussed in further detail in MASHAW & HARFST, *supra* note 5, at 59-65. The Senate Report memorializes the primacy of safety in the statutory calculus, relative to other factors, such as cost, industry hardship, and technological feasibility. S. REP. NO. 89-1301.

12. MVSA § 113 (codified as amended at 49 U.S.C. §§ 30,118-20(A) (2012)).

13. *Id.* § 102(1), (11) (codified as amended at 49 U.S.C. § 30,102 (a)(2), (8) (2012)).

14. See MASHAW & HARFST, *supra* note 5, at 10-14.

15. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., DOT-HS-809-834, COST AND WEIGHT ADDED BY THE FEDERAL MOTOR VEHICLE SAFETY STANDARDS FOR MODEL YEARS 1968-2001 IN PASSENGER CARS AND LIGHT TRUCKS, at xi (2004). This was by no means an isolated appraisal. Testifying before Congress in 2013, a prominent auto safety activist noted that "during [the] first five years after its creation in 1966, NHTSA issued more safety standards than it did in the next forty years." *Justice Denied Hearing*, *supra* note 3, at 67 (statement of Clarence M. Ditlow, Executive Director, Center for Auto Safety). An investigative report by the *Los Angeles Times* in 2000 came to a similar conclusion. Myron Levin, *Upgrades on Auto Safety Standards Languish*, L.A. TIMES, Sept. 18, 2000, at C1 (stating that a review of government documents and court records over thirty years showed a pattern of agency failure to upgrade safety standards buried in a "bureaucratic mire").

16. Recalls under NHTSA's auspices increased from about fifteen million vehicles in the period from 1966 to 1970 to over thirty-nine million vehicles from 1976 to 1980. MASHAW & HARFST, *supra* note 5, at 10-14.

funded by Congress reveals that some ninety-five percent of accidents were caused by driver error or roadway conditions.<sup>17</sup> Vehicle failure accounted for a mere 2.4% of accidents.<sup>18</sup> Safety standards might help drivers reduce their mistakes (crash avoidance) or ameliorate the effects of accidents once they occurred (crashworthiness). Recalls did neither.<sup>19</sup>

### C. Pre-Enforcement Judicial Review

To explain this retreat to the old form of case-by-case regulation, *Struggle* postulated a “legal culture hypothesis.” In highly abbreviated form, that hypothesis stated that the legal culture surrounding NHTSA had made issuing rules hard and ordering recalls easy.<sup>20</sup> Exhibit A for the hypothesis was the Agency’s record in defending its rules on pre-enforcement judicial review. NHTSA lost six of the ten rulemaking cases litigated in its first decade (1968 to 1978).<sup>21</sup> And in those cases, the courts stringently interpreted the statutory criteria of “reasonableness,” “practicability,” “objectivity,” and “meeting the need for safety.”

In doing so, the courts subjected the Agency to a highly proceduralized form of reasonableness review that played into the hands of the auto industry’s full court press opposing standards. Years later, when asked why the auto industry opposed NHTSA’s safety proposals no matter how minor, an industry executive reportedly explained that when “we tie them up in so many little

17. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., DOT-HS-811-059, NATIONAL MOTOR VEHICLE CRASH CAUSATION SURVEY: REPORT TO CONGRESS 25-26 (2008).

18. *Id.* The survey found that only 130 accidents out of a total of 5,471 accidents in the sample could be attributed to the condition of the vehicle, principally tire and brake failure or degradation. Of course, not all such conditions are caused by defects: inadequate maintenance and vehicle age are also factors.

19. See MASHAW & HARFST, *supra* note 5, at 11, 167-71; see also Kevin M. McDonald, *Do Auto Recalls Benefit the Public?*, 32 REG. 12, 12-13 (2009) (noting that the benefits of motor vehicle recalls are dubious and largely unproven). *But see* Yong-Kyun Bae & Hugo Benitez Silva, *The Effects of Automobile Recalls on the Severity of Accidents*, 51 ECON. INQUIRY 1232 (2013) (finding that there is no empirical evidence of the effect of vehicle recalls on safety but establishing a model that suggests recalls of new models continuously diminish the severity of accidents over time); Yong-Kyun Bae & Hugo Benitez Silva, *Do Vehicle Recalls Reduce the Number of Accidents? The Case of the U.S. Car Market*, 30 J. POL’Y ANALYSIS & MGMT. 821, 858 (2011) [hereinafter *Bae and Silva U.S. Case Study*] (reporting that while the economic profession has not provided any quantitative evidence of the effects of vehicle recalls on safety, the authors’ econometric model suggests that recalls of a particular model reduce accidents of that model by an average of ten percent, ranging from eight percent to nineteen percent).

20. See MASHAW & HARFST, *supra* note 5, at 19.

21. NHTSA’s six losses in court during this formative period were *PACCAR, Inc. v. NHTSA*, 573 F.2d 632 (9th Cir. 1978); *B.F. Goodrich v. U.S. Dep’t of Transp.*, 541 F.2d 1178 (6th Cir. 1976); *Nat’l Tire Dealers & Retreaders Ass’n Inc. v. Brinegar*, 491 F.2d 31 (D.C. Cir. 1974); *Wagner Electric Corp. v. Volpe*, 466 F.2d 1013 (3rd Cir. 1972); *H&H Tire Co. v. U.S. Dep’t of Transp.*, 471 F.2d 350 (7th Cir. 1972); *Chrysler Corp. v. U.S. Dep’t of Transp.*, 472 F.2d 659 (6th Cir. 1972). The Agency’s four wins in court during this period were *Chrysler Corp. v. U.S. Dep’t of Transp.*, 515 F.2d 1053 (6th Cir. 1975); *Ford Motor Co. v. NHTSA*, 473 F.2d 1241 (6th Cir. 1973); *Boating Industry Ass’n v. Boyd*, 409 F.2d 408 (7th Cir. 1969); and *Auto. Parts & Accessories Ass’n v. Boyd*, 407 F.2d 330 (D.C. Cir. 1968).

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things, they never get to the big ones.”<sup>22</sup> The debilitating effects of this obstructionism were magnified by the courts’ demand for “real world” evidence of the feasibility of technologies that the Agency was seeking to force precisely because they were not yet in substantial use. And because the statute provided for judicial review before anyone attempted to comply with a new performance requirement, responsiveness to the rules themselves did not generate the real world experience the courts demanded. Courts, struggling to accommodate the statutory mandate that they review NHTSA’s rules for reasonableness in the abstract, seemed to define NHTSA’s rulemaking role as mission impossible.<sup>23</sup>

NHTSA’s early losses in court included two critical challenges to its most ambitious technology-forcing initiatives: the standards on passive restraints and antilock brakes.<sup>24</sup> These and other challenges could not have come at a worse time. Judicial skepticism emerged at the very moment NHTSA was poised to shift from the design-specific, component-based standards that typified the Agency’s congressionally mandated rules (and proved resource-intensive to defend and keep abreast of technical advances) to more broadly based performance standards that would shift the burden of technology development to industry.<sup>25</sup> That approach, one clearly envisioned by the MVSA, seemed virtually foreclosed by judicial demands that the Agency provide evidence of real-world practicability prior to requiring compliance with the new performance standards.

In contrast, the courts construed NHTSA’s recall mandate about as charitably as the Agency could have hoped. During roughly the same period, in which NHTSA lost sixty percent of its rulemaking cases, it brought and won several cases seeking to establish its *per se* theory of defects.<sup>26</sup> According to that theory, if the government could establish the existence of more than a de minimis number of failures in a safety related component, it had established an actionable defect that presented an unreasonable risk, even without showing what caused the failure or that any accidents or injuries had occurred as a result. The failure constituting the defect could even be attributable to owner

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22. *Justice Denied Hearing*, *supra* note 3, at 74 (statement of Clarence M. Ditlow, Executive Director, Center for Auto Safety).

23. See MASHAW & HARFST, *supra* note 5, at 87-100. The judicial demand for real-world evidence of the feasibility of NHTSA’s rules is reflected in *H&H Tire Co.*, 471 F.2d 350. Court insistence on a highly proceduralized form of rulemaking is reflected in *Wagner Electric*, 466 F.2d 1013.

24. See *Chrysler Corp.*, 472 F.2d 659 (passive restraints); *PACCAR Inc.*, 573 F.2d 632 (anti-lock brakes).

25. See MASHAW & HARFST, *supra* note 5, at 84-87.

26. See *United States v. Gen. Motors Corp.*, 561 F.2d 923 (D.C. Cir. 1977), *cert. denied*, 434 U.S. 1055 (1977) (pitman arms); *United States v. Gen. Motors Corp.* 565 F.2d 754 (D.C. Cir. 1977), *aff’d in part* 417 F. Supp. 933 (D.D.C. 1976) (carburetors); *United States v. Ford Motor Co.*, 421 F. Supp. 1239 (D.D.C. 1976), *aff’d in part, dismissed in part as moot*, 574 F.2d 534 (D.C. Cir. 1978) (seat backs); *United States v. Gen. Motors Corp.*, 518 F.2d 420 (D.C. Cir. 1975) (wheels); *United States v. Ford Motor Co.*, 453 F. Supp. 1240 (D.D.C. 1978) (wipers).

misbehavior (for example, overloading the vehicle) if misuse was “reasonably foreseeable.”<sup>27</sup>

From the standpoint of the 1966 Act’s attempt to reorient auto safety regulation, the judiciary’s skepticism of rules and embrace of recalls seem perverse. And yet, it is utterly conventional from the viewpoint of contemporaneous American legal culture. The major new health and safety initiatives of the 1960s and 1970s gave vast lawmaking powers to new federal agencies. Harmonizing administrative lawmaking—especially a variety that featured coercive rules affecting huge swathes of the American economy—with standard notions of separated powers and the rule of law seemed to demand strong judicial checks on the legality of these new regulatory authorities. All of the major health and safety statutes of this era permitted immediate review of agency rules, and the courts responded with what came to be known as “hard look” judicial review. Meanwhile, products liability law, the common-law analog of recalling defective products, was moving relentlessly in favor of easing the litigation burdens of consumers seeking redress from manufacturing defects.<sup>28</sup>

#### *D. Environmental Reinforcement*

Congress and the executive branch reinforced the message. When the *Chrysler* decision invalidated most of NHTSA’s first passive restraints rule, it did so on the basis of a complaint about the “objectivity” of the testing methodology.<sup>29</sup> But the problems with the test applied only to automatic seat belts, airbags, and passive interiors. The court’s decision left in place another device, the ignition interlock, which prevented motorists from starting their vehicles unless they buckled up. As a (presumably unintended) consequence of the court’s ruling, ignition interlocks were deployed in model year 1974 vehicles to disastrous political effect.

The public despised this interference with its liberty. Motorists bombarded Congress with complaints. Over the objections of safety partisans who estimated that interlocks might save ten thousand lives every year, Congress amended the 1966 Act to prohibit the use of that technology or any belt

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27. 518 F.2d at 427. The per se defects theory was laid out in a seminal memo by then-NHTSA Chief Counsel Frank Berndt in 1978. Memorandum from Frank Berndt, Chief Counsel, Nat’l Highway Traffic Safety Admin., at 1 (1978) (on file with authors) (postulating that the demonstrated failure of a critical safety component (wheels, brakes, steering, lights, etc.) establishes the existence of a safety defect, whether supporting accident data exists or not); see also Allan J. Kam, Director, Highway Traffic Safety Assocs., LLC, Address on NHTSA Safety Defect Investigations at the ATLA 2001 Annual Convention, Products Liability Section (July 17, 2001), [http://www.htsassociates.com/NHTSA\\_safety\\_defect\\_investigations.shtml](http://www.htsassociates.com/NHTSA_safety_defect_investigations.shtml) (reviewing history of litigation affirming per se theory of defects).

28. For a discussion of these developments and the legal culture hypothesis more generally, see MASHAW & HARFST, *supra* note 5, at 1-46, 224-47.

29. 472 F.2d at 676.

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warning buzzer that sounded for more than eight seconds.<sup>30</sup> For good measure, the 1974 amendments attached a “legislative veto” provision<sup>31</sup> (later ruled unconstitutional) to ensure that Congress could rid the public of any further unwanted safety regulations. Congress had instructed the Agency to meet the need for auto safety—but apparently not if the public objected loudly enough.<sup>32</sup>

At the same time, the 1974 amendments greatly bolstered NHTSA’s recall authority. The new provisions required industry to provide repairs at no cost to vehicle owners, strengthened companies’ reporting obligations, doubled fines and penalties, and endowed the Agency with subpoena and plant inspection authority.<sup>33</sup> Meanwhile, executive branch intervention paralleled courts’ demands for rules that proceduralized and rationalized the regulations. Cost-benefit analysis was coming into vogue. Starting in the mid-1970s, the Executive Office of the President, acting initially via the Regulatory Analysis Review Group and later through the Office of Management and Budget (OMB), imposed increasingly stringent requirements for cost-benefit review of safety standards. Recalls, however, were not subject to such review, either within the Agency or by OMB or any other executive branch body.

The external legal and political environment had significant effects on agency organization, staffing, and priorities. Lawyers and cost-benefit analysts gradually gained the upper hand over safety engineers in the battle for the Agency’s direction. In due course, the head of the rulemaking office, an enthusiastic implementer of the 1966 Act’s technology-forcing vision, was exiled to a remote research facility in East Liberty, Ohio, to be replaced by a cost-benefit “policy planner.” Of course, the administrative tanker turned slowly. But by 1978, NHTSA’s internal procedures, defining the roles of engineers, lawyers, and cost-benefit analysts in the rulemaking process, had been profoundly recast. In simple terms, the new procedures put lawyers and policy analysts in charge. Further, they institutionalized a reiterative, fastidious, and ponderous rulemaking process intended to protect the Agency when subjected to judicial, executive, or congressional oversight. NHTSA had internalized the hostile legal and political environment surrounding it.<sup>34</sup>

Summing up the state of affairs in which NHTSA found itself in the mid-1980s, *Struggle* concluded, “We therefore gave NHTSA a task of rational implementation that it felt compelled to abandon, but no rhetorical tools with

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30. Motor Vehicle and Schoolbus Safety Amendments of 1974, Pub. L. No. 93-492, § 109, 88 Stat. 1470, 1482 (codified at 15 U.S.C. § 1409 (2012)).

31. *Id.*

32. The interlock was championed by Lee Iacocca, then at Ford, and was opposed by the Agency, which issued an official interpretation in 1971 that such “forced action” systems did not qualify as “passive.” The interlock was nonetheless included as an option in the version of Standard 208 proposed in October of that year, following a meeting between President Nixon and Ford officials and subsequent political pressure. JOHN D. GRAHAM, *AUTO SAFETY: ASSESSING AMERICA’S PERFORMANCE* 60-65 (1989).

33. Motor Vehicle and Schoolbus Safety Amendments of 1974.

34. See MASHAW & HARFST, *supra* note 5, at 172-201.

which to justify its withdrawal.”<sup>35</sup> The story that follows, covering NHTSA’s post-*Struggle* activity, describes the journey upon which the Agency then embarked in pursuit of legally and politically acceptable regulatory techniques, and the surprising destination at which it has now arrived.<sup>36</sup> In recent years NHTSA has regained some rulemaking momentum. But “technology forcing” is hardly an apt description of its contemporary work product.

## II. The Ice Age of Rulemaking: 1987-2002

The period running from 1987 to the present can be divided roughly into two stages. The first stage, the “Ice Age of Rulemaking,” spanned fifteen years, from 1987 to 2002. It is discussed immediately below. The second stage, to be considered in due course, could be called the “Post-Glacial Rebound.”

During the Ice Age, significant rulemaking at NHTSA atrophied nearly to the point of extinction.<sup>37</sup> To be sure, some rules and amendments to prior rules

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35. *Id.* at 223.

36. Recent empirical research by Professor Cary Coglianese questions *Struggle*’s account. In testimony to a congressional subcommittee in 2013, he reported:

Despite widespread acceptance by virtually every major scholar of administrative law, the claim that NHTSA has retreated from rulemaking and shifted instead to recalls does not bear the weight of scrutiny. NHTSA has continued to issue a substantial body of new regulations even in wake of judicial losses that have been thought to have been paralyzing to the agency. Its recalls did not increase in the aftermath of either the agency’s losses in rulemaking challenges or its wins in recall litigation. When a broad sweep of NHTSA’s litigated cases is considered, it is clear that NHTSA has not been beleaguered by high levels of judicial invalidations.

*Justice Denied Hearing*, *supra* note 3, at 14. One interpretation of Professor Coglianese’s position is that our description of rulemaking up to 1986 is correct, but that sometime after *Struggle*, there occurred a surge in rulemaking (and possibly a decline in recalls) that belies our analysis. Professor Coglianese states:

Given the time period when Mashaw and Harfst conducted their research, they could understandably only observe NHTSA activity through the mid-1980s. Relative to NHTSA’s rulemaking output up through the mid-1970s, rulemaking did fall in the subsequent decade. Mashaw and Harfst correctly observed a decline in the number of NHTSA final rules issued after 1976. Between 1967-1976, NHTSA and its predecessor agencies issued an annual average of 49 final rule documents in the *Federal Register*, while between 1977-1986, NHTSA issued an annual average of only 19. (The average annual output of rules during NHTSA’s first decade is also significantly higher than the annual average from 1977 to 2003.)

*Id.* at 9. The assertion that NHTSA did not retreat from rulemaking or shift towards recalls certainly warrants inspection. If there has been resurgence in rulemaking and an increase in recalls that simply mirrors the increase in the number of vehicles on the road, the deep structure of American legal culture is a poor explanatory candidate for these trends. However, for the reasons discussed in the text that follows, we are not persuaded by Professor Coglianese’s critique.

37. For the reasons discussed in the text, the post-*Struggle* “Ice Age” is defined as the period from 1987 to 2002. But recall that during the *Struggle* period, between 1974 and 1986, NHTSA, by its own account, implemented no significant new safety rules. See *supra* note 15 and accompanying text. Thus, the Ice Age is actually a nearly thirty-year period spanning both the *Struggle* and the post-*Struggle* periods.



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were issued during this period. But very few had any demonstrable impact. Documented costs and benefits hovered near zero. Whatever contributions NHTSA's rulemaking efforts might have made to an ever more voluminous *Federal Register* and *Code of Federal Regulations* during this period, they had little to do with its technology-forcing mission. Nor, for the most, part did they make significant contributions to vehicle safety.

### A. Costs and Weight in the Ice Age

In December 2004, the Agency published a study that identified only fourteen standards as having had any quantifiable cost and weight impact on passenger cars.<sup>38</sup> It also documented that approximately ninety-eight percent of the total cost impact measured in the last year of the study (model year 2001 vehicles) was attributable to either (1) standards in effect for MY 1974 passenger cars, or (2) subsequent improvements to two of those standards, FMVSS 208 on passive restraints and FMVSS 214 on side impact protection.<sup>39</sup> Weight told a similar story,<sup>40</sup> as did the assessment of the standards' impact on light trucks.<sup>41</sup> The vast majority of NHTSA's rules (fifty out of fifty-nine) either had no demonstrated cost or weight impact on passenger cars (forty-five standards) or had only a negligible impact (five standards)—that is, less than five dollars and three pounds each.<sup>42</sup>

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38. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., DOT-HS-809-834, COST AND WEIGHT ADDED BY THE FEDERAL MOTOR VEHICLE SAFETY STANDARDS FOR MODEL YEARS 1968–2001 IN PASSENGER CARS AND LIGHT TRUCKS, at viii tbl.1 (2004).

39. *Id.* at x tbl.2. The agency estimated that the cost of implementing standards in effect for MY 74 passenger cars was \$309.97. By MY 2001, the last year covered in the study, the cost had grown to \$839.13 for passenger cars, an increase of \$537.16. However, the agency attributed the lion's share of this increase to the dual air bag provisions of Standard 208 (\$396.72) and the dynamic testing provisions of Standard 214 (\$129.350). *Id.* at vii tbl.1. The impact of the Standard 208 upgrade first began to be felt from 1991 to 1994, while the impact of the Standard 214 upgrade first began to be felt in 1994 to 1997. *Id.* at x.

40. In fact, the weight impact of standards in effect for MY 74 (70.48 pounds), together with the weight impact of the upgrades of Standard 208 (26.78 pounds) and Standard 214 (37.31 pounds), actually exceeded the total weight impact reported for the last year of the study (125.44 pounds). It appears that the weight impact of some pre-1974 standards diminished over time as manufacturers found more efficient ways to comply with those standards. *Id.* at vii tbl.1, x tbl.2.

41. The light truck story is not quite as dramatic because much of the impact of standards on light trucks was associated with simply extending passenger car standards to light trucks, often years after they had been implemented in passenger cars. In effect, this stretched out the timeline of the standards' impact. *Id.* at xi. The agency did not have any data on the impact of the Standard 214 upgrade at the time of the study. *Id.* at 126.

42. *Id.* at viii tbl.1. To be sure, many standards were outside the scope of the study because they did not apply to passenger cars or light trucks (for example, standards applicable to school buses or motorcycle equipment), and for many others, the agency lacked data. *Id.* at 15–135. The agency often stated that no studies had been performed or were planned. *Id.* It seems reasonable to assume that the agency doubted that the standards at issue had sufficient impact to warrant examination. In any event, after nearly forty years of operation, it seems remarkable that the agency was able to document only fifteen percent of its inventory of standards as having had any quantifiable effect on the cost or weight of passenger cars and light trucks, the predominant means of transportation subject to its jurisdiction.

But costs and weight were not the whole story. It was at least theoretically possible that NHTSA had found a way, perhaps by forcing some breakthrough technologies, to achieve significant life-saving benefits at nominal cost. The Agency's own analyses, however, do not support that conclusion. Rather, they tend to show that you got the safety benefits you paid for during the Ice Age.

### *B. Lives Saved in the Ice Age*

The same year that NHTSA published its cost and weight findings, it released a second study covering the period 1960 to 2002, entitled *Lives Saved by Federal Motor Vehicle Safety Standards and Other Vehicle Safety Technologies*.<sup>43</sup> The report covered virtually all the life-saving technologies introduced in passenger cars and in LTVs (light trucks and vans, *i.e.*, pickup trucks, sport utility vehicles, minivans, and full-size vans) from about 1960 through the late 1990s. The technologies at issue included both voluntary industry measures and measures "associated" with the Agency's safety standards, or, in NHTSA's rendering, both "safety equipment installed to meet specific FMVSS" and "lives saved by installations in advance of FMVSS."<sup>44</sup>

The Agency estimated that between 1960 and 2002, a total of 328,551 lives had been saved by the mandatory and voluntary safety technologies covered in the report. However, the study showed that the vast majority of NHTSA rules originating after 1974 had essentially no demonstrable impact in saving lives, and that the few standards that did save lives all had their provenance in the Agency's heyday of rulemaking, from 1968 to 1974.

In 2002, forty-three active standards applied to cars, light trucks, vans, and SUVs. The Agency, after nearly forty years of rulemaking, could identify only ten—less than a quarter of its inventory—that were demonstrably associated with saving saved lives.<sup>45</sup> Moreover, of the lives saved (22,999)<sup>46</sup> during the last year of the study (2002) by technologies associated with safety standards (as opposed to voluntary measures), 16,886 (73.4%) were attributed to a *single* standard: FMVSS 208.<sup>47</sup> Together with Standard 208, six other standards,<sup>48</sup> all of them originating in the early 1970s or before,<sup>49</sup> accounted for a whopping 97.5% of the total lives saved in 2002 attributed to NHTSA's rules.

43. See NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., DOT-HS-809-833, LIVES SAVED BY FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND OTHER VEHICLE SAFETY TECHNOLOGIES 1960-2002 (2004).

44. *Id.* at x.

45. *Id.* at ix.

46. *Id.* at 186 tbl.2-3.

47. *Id.* at 198 tbl.2-7. The figures shown in Table 2-7 (14,570 lives saved in 2002 attributable to seat belts and 2,473 lives attributable to air bags) were adjusted downward by 157 lives that the agency attributed to voluntary measures. See *id.* at 209-26 tbls.2-12 to 2-22 (passenger cars); *id.* at 232-43 tbls.2-25 to 2-33 (LTVs).

48. *Id.* at 200-03 tbls.2-8 & 2-9. The six standards are FMVSS 105A (provision on dual master cylinder brakes, associated with 379 lives saved in 2002), FMVSS 203 (steering assemblies, 2,634 lives saved), FMVSS 206 (door locks, 1,396 lives saved), FMVSS 212 (windshield bonding, 347

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Moreover, these data can be misleading as a measure of lives saved by NHTSA regulations adopted during the Ice Age. Of the total lives saved (328,551) for the period covered by the study, the agency credited only 44,483 lives to industry's "voluntary improvements."<sup>50</sup> Yet all of the eighteen safety technologies<sup>51</sup> associated with the Agency's standards and identified by NHTSA as saving lives in passenger cars were first voluntarily introduced before—sometimes years before—the standard that later mandated them.<sup>52</sup> Indeed, fourteen of the eighteen technologies were already being equipped in fifty percent or more of new passenger cars by the time the respective standards mandating them took effect.<sup>53</sup> To the extent industry would have continued to install these technologies irrespective of NHTSA's efforts, it is at the very least peculiar to attribute the resulting lives saved to the standard.<sup>54</sup>

In any event, considering the vanishingly small number of lives saved that could be shown to have resulted from most of NHTSA's rules issued or taking effect in the Ice Age, it is hardly a stretch to conclude that during that fifteen-year period, most of the Agency's rulemaking efforts contributed little to motor vehicle safety. But not so fast.

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lives saved), FMVSS 214A (provision on side door beams, 626 lives saved), and FMVSS 216 (roof crush strength, 161 lives saved). The lives saved in 2002 by these standards were adjusted downward where appropriate to account for measures characterized by the Agency as voluntary. *See id.* at 209-226 tbls.2-12 to 2-22 (passenger cars); *id.* at 230-43 tbls. 2-25 to 2-33 (LTVs). As adjusted, the total lives saved in 2002 by technologies associated with these six standards was 5,543.

49. Standards 203 and 206 had effective dates of September 1, 1968, as did the dual master cylinder requirements of Standard 105 relevant to this analysis. They were among the agency's initial set of standards. The effective dates of Standards 212 and 216 were January 1, 1970 and September 1, 1973, respectively. The side door beam requirements of Standard 214 relevant to this analysis took effect on January 1, 1973. *Id.* at 178 tbl.2-1.

The foregoing effective dates are for passenger cars. Most of the standards also applied to LTVs, but they were often extended to LTVs only after they had been in effect for cars for several years. Hence the chronology of LTV implementation is somewhat different. *Id.* at 180; *see also id.* at 178-80 tbls.2-1 & 2-2 (comparing implementation dates for cars and LTVs). The key point is that the overwhelming proportion of lives saved in both passenger cars and LTVs arose in connection with Standard 208 or standards that had their origin in the early 1970s and before.

50. *Id.* at 186 tbl.2-3. The remaining 284,069 lives saved were attributed to "FMVSS in effect."

51. The study speaks of twenty-two technologies, but two (child safety seats and heavy trailer conspicuity tape) do not apply to cars themselves, and two others (those relating to Standards 201 and 214B) are voluntary. *Id.* at 179 & 178 tbl.2-1.

52. *Id.* at 178 tbl.2-1. The same appears to be true of most, if not all, of the LTV technologies. *Id.* at 181 tbl.2-2.

53. *Id.* at 178 tbl.2-1. Moreover, nine of the fourteen technologies were associated with the initial set of standards that Congress had required the Agency in the MVSA to issue by January 31, 1967 "based upon existing safety standards." MVSA, § 103(h). Thus, these initial safety standards were intended by Congress to be codifications of existing practice. In this respect, they are distinguishable from the standards that NHTSA issued much later in the post-Glacial Rebound, as discussed in *infra*, Part V.

54. The agency's analysis is animated by another peculiar assumption. In describing the baseline against which it measured lives saved, the agency states, "The sum of the actual fatalities and the lives saved is the number of fatalities that potentially would have happened if cars and LTVs still had 1960 safety technology and nobody used safety belts." *Id.* at xiv. The proposition hardly seems plausible that automobile technology would have remained static for some forty years and that no one would buckle up in the meantime.

*C. Risk in the Ice Age*

The absolute number of lives saved is not the only, or even necessarily the best, way to measure the benefits of NHTSA's safety rules. One might imagine, for example, that the absolute number of fatalities could remain constant or even increase, but that the fatality rate (defined as fatalities per 100 million miles travelled) might go down as an increasingly mobile society drives more. The fatality rate, a measure of driving risk, is, however, heavily affected by a huge number of variables that have nothing to do with vehicular features, and the challenge of disaggregating them is daunting. In the 2004 *Lives Saved* study, NHTSA took a crack at the issue, and seemed to conclude that much of the reduction in the fatality rate that occurred during the Ice Age had little to do with its standards.

NHTSA acknowledged that a detailed analysis of the fatality rate involved behavioral, environmental, and demographic factors that were beyond the scope of its study. Still, the Agency did offer several observations about the trend in the fatality rate for vehicle occupants. NHTSA noted that the actual occupant fatality rate for car and LTV occupants had fallen from 4.57 fatalities per 100 million miles driven in 1966, when the MVSA was passed, to 1.25 in 2002. However, it also estimated that without any of the safety technologies discussed in the study, the rate still would have fallen from 4.61 in 1960 to 2.18 in 2002.<sup>55</sup> In other words, nearly three quarters of the reduction in the occupant fatality rate did not depend on the technologies related to safety standards. Only the remaining quarter, according to NHTSA, would not have occurred but for the handful of standards discussed above.

Indeed, it was only from 1983 onward, NHTSA asserted, that “the paradigm shifts” and the reduction in the occupant fatality rate could be attributed to safety technologies tied in some way to non-voluntary actions taken by industry in connection with the ten standards identified in the *Lives Saved* study.<sup>56</sup> Even then, however, much of the credit belonged not to technological improvements in seat belt efficacy but to *behavioral* changes in occupants' actual use of seat belts, a technology that was introduced a decade before the enactment of the 1966 Act. With respect to the annual totals of all lives saved by the safety technologies covered in the study, the Agency reported “the largest gains in both absolute and relative terms came with the buckle up laws . . . .”<sup>57</sup>

Between 1983 and 2002, the fatality rate decreased from 1.92 fatalities per 100 million miles driven to 1.25 fatalities per 100 million miles driven, representing about one fifth of the total reduction in the fatality rate from 1966

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55. *Id.* at 194-95 tbl.2-6.

56. *Id.*

57. *See id.* at 187.

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to 2002.<sup>58</sup> From 1983 to 2002, the agency attributed 255,935 lives saved to safety standards in effect, and 26,890 lives saved to voluntary industry measures.<sup>59</sup> Of the lives saved in connection with standards, the agency tied about 60% to the seat belt provisions of Standard 208 (especially occupants' increased use of seat belts), 4.6% to the air bag provisions of the same Standard, and 31.6% to the six standards previously discussed, all of them arising in the early 1970s or before.<sup>60</sup> Thus, according to NHTSA, Standard 208 and the six pre-1974 standards account for approximately 96.4% of all lives saved from 1983 to 2002 tied to standards. To the extent the risks of driving decreased in the Ice Age, it appears the vast majority of NHTSA's rulemaking efforts during that period had little to do with it.<sup>61</sup>

### III. Understanding the Ice Age

Judicial review of NHTSA rulemaking is comparatively rare after 1986.<sup>62</sup> To be sure, the overhang of the Agency's experience on judicial review of its rules was still much in force. But to illuminate the regulatory choices that NHTSA made during and after the Ice Age, we must examine more closely the actions of the Agency's other two constitutionally empowered overseers: the President and Congress. As we shall see, the Ice Age of rulemaking was in many ways over-determined. Both political overseers, albeit for different reasons, seemed to be sending the same message: the Great Society's vision of automobile safety was defunct. Their message was sent, however, not by *de jure* amendment of the 1966 Act, but rather by oversight activities that encouraged a *de facto* disregard of its implementation. This approach has been sanctioned by a legal culture that, for reasons of separation of powers, largely insulates agency inaction from judicial review and, for reasons of electoral accountability, embraces a broad role for political intervention in administrative policymaking.

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58. See *id.* at 195 tbl.2-6.

59. See *id.* at 186 tbl.2-3.

60. See *id.* at 198-201 tbls.2-7 & 2-8. Our estimates are based on extracting data from the tables for the period 1983 to 2002. We adjusted the totals to exclude voluntary measures, and we included only those provisions of Standards 105 and 214 that took effect prior to 1974.

61. We recognize that it may take six to eight years after a standard takes effect before its benefits begin to be significantly felt, as the safety features it requires are only gradually introduced to the fleet and pre-standard cars are retired. Full penetration in all registered vehicles takes much longer (decades) as the fleet turnover rate is slow. See *infra* note 363. That said, the period of Agency activity covered in the study—some thirty-five years—is surely adequate to assess standards taking effect at least as late as the mid-1990s, should they have had any demonstrable effect. See *infra* Part VI for a discussion of the 2015 sequel to the 2004 Lives Saved study.

62. See *infra* Part VII.

### A. Executive Action

Ronald Reagan was swept into power in January 1981 promising economic recovery. A central plank of his platform was regulatory relief, especially relief for the beleaguered automobile industry. Reagan certainly had a point when he portrayed auto manufacturers as the poster children for economic deterioration. At the time he took office, domestic auto producers were hemorrhaging sales, profits, and jobs on an unprecedented scale.<sup>63</sup>

NHTSA, nonetheless, must have felt it was the victim of mistaken identity when the new Administration singled it out in the lineup of suspects as the main culprit, along with EPA, responsible for industry's misfortunes. Reagan claimed that "strangling regulation," including safety regulation, was the root cause of the auto industry's dire straits.<sup>64</sup> In fact, as we have seen, NHTSA had not implemented any significant safety rules since 1974 and would not do so for another several years (until the ultimate implementation of Standard 208).

The facts notwithstanding, Reagan's team proceeded to shower its attentions on NHTSA within days of taking office. In rapid succession, the Administration suspended various "midnight" rules that NHTSA had promulgated in the waning days of the Carter Administration;<sup>65</sup> formed a special cabinet-level task force on the auto industry to tend to its wounds; and promulgated a comprehensive package of regulatory relief measures for auto companies, which the President personally announced.<sup>66</sup> The auto package was thought to be "[p]robably the most significant single regulatory 'event' during

63. See Stephen D. Cohen, *The Route to Japan's Voluntary Export Restraints on Automobiles: An Analysis of the U.S. Government's Decision-Making Process in 1981* (Am. Univ. Sch. Int'l Serv., Working Paper No. 20, 1983), <http://nsarchive.gwu.edu/japan/scohenwp.htm>.

64. MARISSA M. GOLDEN, WHAT MOTIVATES BUREAUCRATS? POLITICS AND ADMINISTRATION DURING THE REAGAN YEARS 43 (2000).

65. See Memorandum from Ronald Reagan to the Secretaries of Twelve Agencies, Postponing Pending Federal Regulations, 1 PUB. PAPERS 63 (Jan. 29, 1981) <http://www.presidency.ucsb.edu/ws/index.php?pid=44134>; see also Thomas O. McGarity, *Regulatory Reform in the Reagan Era*, 45 MD. L. REV. 253, 263-64 (1986). Of the thirty-six "frozen" rules, approximately four were Department of Transportation regulations aimed at the auto industry. Loretta S. Dunn, *Administrative Law—A Look at Judicial Review of the Department of Transportation's Rescission of the Passive Restraint Standard—Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Ins. Co.*, 11 N. KY. L. REV. 455, 457 n.8 (1984).

66. The Presidential Task Force on Regulatory Relief established a specific Auto Industry Task Force aimed at reducing regulations and costs to the industry. McGarity, *supra* note 65, at 263. On April 6, 1981, the EPA and NHTSA submitted to the White House their intent to rescind or modify thirty-four regulations affecting the auto industry. Dunn, *supra* note 65, at 459. The NHTSA relief package entailed rescinding, terminating, delaying, or relaxing safety rules on passive restraints, fields of view, tire grading, seat belt comfort, multi-piece rims, hydraulic brakes, low tire pressure warning systems, testing and labeling of batteries, and vehicle identification numbers. *The Role of OMB in Regulation: Hearings Before the Subcomm. on Oversight & Investigations of the H. Comm. on Energy & Commerce*, 97th Cong. 457-65 (1981) [hereinafter *1981 OMB Hearing*]. For all the whoopla, the NHTSA package was estimated to save the industry only \$600 million in capital expenditures over five years. The Administration said it would save consumers \$5 billion over five years. *Id.* at 423.

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the [Reagan] Administration's first year."<sup>67</sup> In the first sixteen months of the Administration, NHTSA rescinded or relaxed existing rules, terminated pending rulemaking proceedings in twenty-one instances, and proposed similar actions in nineteen more.<sup>68</sup>

A program of "regulatory reform" accompanied Reagan's program of "regulatory relief." In tandem with the Administration's suspension, delay, withdrawal, and rescission of numerous regulatory initiatives and proposals at NHTSA, Reagan issued Executive Order 12,291. That Order imposed on many agencies, including NHTSA, the most extensive and rigorous standards for regulatory cost-benefit analysis theretofore ever applied in the United States.<sup>69</sup> Executive Order 12,291 was greeted with outright hostility in Congress, specifically the Democrat-controlled House, where it was seen as heavy-handed encroachment on the jurisdiction and prerogatives of the legislature.<sup>70</sup>

Reagan's appointees at OMB, charged with overseeing implementation of the Order, vigorously disagreed, noting that the Order expressly applied only to the evaluation of regulations "to the extent permitted by law."<sup>71</sup> As an effort to "increase agency accountability" and "insure well-reasoned regulations," Executive Order 12,291 was grounded, they asserted, in the President's constitutional obligation under Article II, Section 3 to "take care that the laws shall be faithfully executed."<sup>72</sup> Referring to the operations of the Task Force responsible for administering Executive Order 12,291, its Executive Director testified, "We think that the appropriate characterization of what is going on is that the President is seeing to it that the laws are faithfully executed. Now there is a Constitution. The President does have the authority and the responsibility to see that the laws are faithfully executed."<sup>73</sup>

There was, however, an uncomfortable disjunction between Reagan's regulatory relief and regulatory reform programs. Very few, if any, of NHTSA's decisions to suspend, withdraw, or rescind regulatory initiatives at the urging of its new executive overseers seem to have been accompanied by analysis satisfying the rigorous standards of rationality contemplated by

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67. GEORGE C. EADS & MICHAEL FIX, RELIEF OR REFORM? REAGAN'S REGULATORY DILEMMA 125 (1984); see also Teresa M. Schwartz, *A Product Safety Agenda for the 1990s*, 45 WASH. & LEE L. REV. 1355, 1357 (1988).

68. *Oversight of the National Highway Traffic Safety Administration: Hearing Before the Subcomm. on Surface Transp. of the S. Comm. on Commerce, Sci., & Transp.*, 97th Cong. 50-53 (1982) (statement of Clarence Ditlow, Director, Center for Auto Safety).

69. See Exec. Order No. 12,291, 3 C.F.R. § 127 (1982), reprinted as amended in 5 U.S.C. § 601 at 431-34 (1982) (suspended by Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (1993)).

70. See generally 1981 OMB Hearing, *supra* note 66 (recording that representatives raised multiple objections to the Order). A researcher at the Congressional Research Service quickly weighed in with a scholarly article attacking the Order's constitutionality. See Morten Rosenberg, *Beyond the Limits of Executive Power: Presidential Control of Agency Rulemaking Under Executive Order 12,291*, 80 MICH. L. REV. 193 (1981).

71. Exec. Order No. 12,291, 3 C.F.R. § 127.

72. 1981 OMB Hearing, *supra* note 66, at 55-56.

73. *Id.* at 56 (statement of James C. Miller III, Administrator for Information and Regulatory Affairs, OMB, and Executive Director, Presidential Task Force on Regulatory Relief).

Executive Order 12,291. Exhibit one for this proposition was NHTSA's order rescinding Standard 208,<sup>74</sup> which the Supreme Court in 1983 unanimously found was arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.<sup>75</sup> Shortly after the decision, Reagan dismantled his Task Force on Regulatory Relief, and the pace of deregulation throughout government slowed considerably.<sup>76</sup>

### *B. Inside NHTSA*

The Court's invalidation of NHTSA's passive restraints rule rescission in 1983 was not, however, the end of the deregulation story at NHTSA. Five more years remained in the Reagan Presidency, to be followed by four years of the Presidency of George H.W. Bush, who had chaired Reagan's Task Force on Regulatory Relief. During much of this period, the Executive deployed its formidable arsenal of weaponry to deactivate the 1966 regulatory regime. A primary weapon in the arsenal was the presidential power of appointment, specifically the power to appoint NHTSA administrators who either had no expertise in auto safety, were openly hostile to its rulemaking mission, or both.

Reagan's first choice to run NHTSA was Raymond Peck, a coal industry lobbyist, who served as NHTSA Administrator from 1981 to 1983. Peck presented few, if any, qualifications for the position, apart from his steadfast commitment to the deregulatory ambitions of the Reagan Administration. At his confirmation hearing, Peck articulated his regulatory philosophy in these terms:

I fully subscribe to the sharp focus of this Administration on regulatory responsibility. I share the view that the Federal Government should regulate only where regulation can be shown to be cost effective and there is no practicable alternative to regulation . . . . Some of the regulations issued by the agency in the past may be found not to be effective under the

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74. See 46 Fed. Reg. 53,419 (Oct. 29, 1981) (codified at 49 C.F.R. § 571). Although NHTSA did determine that the rescission was a "major rule" and thus required a Regulatory Impact Analysis under Executive Order 12,291, the Agency found it "difficult to provide a reliable estimate of any adverse safety effects of rescinding the automatic restraint requirements." *Id.* at 53,426. The Agency noted the "lack of any directly relevant data on the most important issue" and other difficulties in determining a reliable indication of the benefits of the rule. *Id.* at 53,420. Thus, the rescission was predicated on "uncertainty about the public acceptability and probable usage rate of . . . automatic restraints" as well as a concern that "adverse public reaction to the cost and presence of automatic restraints could have a significant adverse effect on present and future public acceptance of highway safety efforts." *Id.* at 53,419.

75. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 56 (1983).

76. See OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, PRESIDENT'S FINAL REPORT ON REGULATORY RELIEF (1983) (claiming that the Task Force "rationalized the rulemaking process and slowed the growth of new rules").



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application of these criteria. These should and will be considered for revocation.<sup>77</sup>

Peck's standard for regulation was striking. He embraced a kind of least restrictive means test under which auto safety standards were to be avoided if there were *any* "practicable" alternative. Because "driver error" was fingered as the cause of most accidents, it was possible to argue that persuading people to drive more safely—an approach historically left primarily to the states—was a "practicable alternative" to regulating vehicle safety. Peck's approach could be understood as a prescription for returning regulation to the decentralized behavioral modification strategies of the 1950s and shutting down the Agency's standard-setting program altogether. That, in effect, is what Peck and his successor, Diane Steed (a former OMB regulatory analyst), proceeded to do.<sup>78</sup>

An account by Professor Marissa Golden of the Agency's internal workings during this period makes clear that both Steed and Peck brought rulemaking to a grinding halt by requiring NHTSA staff to study and restudy regulatory proposals without ever acting on them.<sup>79</sup> For example, as Professor Golden writes:

In the mid-1980s, the agency was considering a proposal for a rule requiring child-resistant hooks in the rear seats of automobiles. Although the estimated cost was one dollar per car, Peck kept sending the proposal back and requesting a hook that could be installed for ninety-seven cents per car. The engineer who related this story to me added, "Ray never said, 'I just don't want to do it.'" Yet it was clear to this engineer that Peck did not want to issue this regulation; he just did not want to go on record as opposing it.<sup>80</sup>

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77. *Nomination-Administrator, National Highway Traffic Safety Administration: Hearing before the S. Comm. on Commerce, Sci. & Transp.*, 97th Cong. 3, 12 (1981) (statement of Raymond A. Peck, Jr., Administrator, NHTSA).

78. NHTSA policy under Peck's successor, Diane Steed, focused on behavioral modification strategies to the virtual exclusion of motor vehicle safety standards. Under Steed, apart from passive restraints, the Agency promulgated a single new standard, dealing with center-mounted rear brake lights. The lion's share of agency activity was devoted to such issues as drunk driving, seat belt use, and driver training. See Schwartz, *supra* note 67, at 1357 n.15 (citing *NHTSA Authorization and Oversight: Hearings on H.R. 2248 Before the Subcomm. on Telecomm., Consumer Prot. & Fin. of the H. Comm. on Energy & Commerce*, 99th Cong. 31 (1985) (statement of Sen. Timothy Wirth) (testifying that NHTSA had focused almost exclusively on modifying consumer behavior and had "largely ignored" safety standards)); see also *Hearing on NHTSA Authorization Act of 1989 Before the Subcomm. on the Consumer of the S. Comm. on Commerce, Sci. & Transp.*, 101st Cong. 94 (1989) (statement of Joan Claybrook, President, Public Citizen) (stating that during Reagan years, NHTSA issued only one new safety standard, which had been proposed by the prior administration); Phil Frame, *NHTSA Made Inroads Despite Politics, Fireworks*, AUTO. NEWS (Sept. 9, 1996), <http://www.autonews.com/article/19960909/ANA/609090742/nhtsa-made-inroads-despite-politics-fireworks> (noting that apart from conditional reinstatement of Standard 208 following the Court's *State Farm* decision, the Agency's output under Steed included drunk driving programs, CAFE cuts, and a standard on center high-mounted tail lights).

79. GOLDEN, *supra* note 64.

80. *Id.* at 46.

The ninety-seven cents gambit was by no means an outlier.<sup>81</sup> And the legacy of judicial reversal in the 1970s infused NHTSA's administrative culture in the 1980s in other ways that served the deregulatory purposes of the Reagan Administration. Professor Golden reported that the Agency's defeats in court on major rulemaking initiatives, as well as the interlock political fiasco, were still fresh in the minds of agency staff. The desire to avoid additional judicial setbacks, in her words, "was echoed by the careerists I interviewed a decade later."<sup>82</sup>

The net result of this judicially inspired trauma was an exceedingly cautious mindset among the professional staff that elevated "the avoidance of future embarrassments like the ones experienced in the past," a goal that was even "more important than expanding the agency's budget or engaging in high-volume regulatory activity."<sup>83</sup> A risk-averse staff was unlikely to swim against the deregulatory tide.

Research without end was by no means the only source of demoralization for NHTSA rulemakers during the Reagan years. The staff also faced the prospect of being fired in one of the many "reductions in force" (RIFs) that punctuated this period. The result was the mass exodus of mid-level engineers whose talents were essential to rulemaking, coupled with the marginalization of those who stayed because they had nowhere else to go.<sup>84</sup>

The RIF-inspired "voluntary" downsizing—nearly a third of the entire professional staff—was accompanied by corresponding cuts in other agency resources. NHTSA's overall operating budget fell from \$259 million in 1979 to \$211 million in 1988.<sup>85</sup> And, of course, these cuts in manpower and money

81. Professor Golden writes:

[A] telling aspect of the appointees' management style was the manner in which the Reagan appointees handled rule-making activity. Both Peck and Steed ran the agency in a way that agency careerists felt slowed productivity without directly challenging the agency's mission. For example, career recommendations were rarely rejected outright. Instead, Peck and Steed would send proposals back to the lower levels of the agency and requested more research without ever directly commenting on the merits of the proposals or vetoing them. The interviewees' comments in this regard are revealing:

- "No one ever straight-out said deregulation."
- "In most cases, the decision was long delay but not rejection."
- "Everything was researched to death."
- "They just called for more research."
- "Under Reagan, decisions just were not made but were sent back to generate more information. Things were left hanging."

*Id.*

82. *Id.* at 57.

83. *Id.* at 59-60.

84. *See id.* at 50-51.

85. *Id.* at 44.

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came at a time when the Administration was imposing significant new analytic and documentary burdens in ostensible pursuit of rationalizing regulation. Amidst this turmoil, only one constituency at the Agency truly prospered. The research and development staff gained new autonomy because Reagan's political appointees had no rulemaking action plan. Researchers were free to pursue whatever interested them.<sup>86</sup>

Thus did the Reagan Administration prolong by many years the collapse of rulemaking at NHTSA that a skeptical judiciary had precipitated a decade before. The Administration's objection to regulation was grounded above all in ideology—ideology that the electorate had endorsed—not the legal analytics of the courts. And, to be sure, some of the tactics employed by the Reagan Administration—budget cutbacks, staff downsizing, increased DOT secretarial control of agency decision making—were well within the comfort zone of the Executive's discretionary power to faithfully execute the laws. After all, Reagan had run precisely on a platform of deregulation, specifically citing the automobile industry. Ideas matter, and elections have consequences.

But law also matters. Murray Wiedenbaum, a principal architect of Reagan's regulatory strategy, stressed the importance of seeking changes to agencies' organic statutes in pursuing the President's regulatory objectives.<sup>87</sup> The Administration promised to do just that, but never followed through in NHTSA's case. Considered as a whole, it is hard to see Reagan's assault on NHTSA as the faithful execution of its extant statutory mandate. But NHTSA's political leadership under Reagan well understood one of legal culture's most fundamental lessons. Administrative agencies are usually on high legal ground when they do nothing. Separation of powers provides the protective buffer that permits the judiciary to redress the excesses of other branches when those excesses take the form of positive action. But at the same time, absent statutorily imposed rulemaking deadlines, that same doctrine limits the judiciary's perceived authority to address executive inaction, whatever its motives may be.<sup>88</sup>

Steed, the longest-serving Administrator in NHTSA's history, had little to fear from the courts in pursuing a do-nothing course of perpetual research and deep-sixed regulatory proposals. In a system of separated powers, courts do not see themselves as having authority to set or force the agendas of the political

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86. *Id.* at 53.

87. See Murray L. Wiedenbaum, *Regulatory Reform Under the Reagan Administration*, in *THE REAGAN REGULATORY STRATEGY: AN ASSESSMENT* 16, 19-20 (George C. Eads & Michael Fix eds., 1984).

88. See Jerry L. Mashaw, *Law and Engineering: In Search of the Law-Science Problem*, 66 L. & CONTEMP. PROBS. 135, 147 (2003) ("Most other cases during the last decade involving NHTSA related to the non-safety aspects of its jurisdiction, particularly its power to adopt mileage standards for automobile fleets. The agency won all of these cases, but its posture was revealing. Almost all were suits attempting to force the agency to exercise regulatory authority that it declined to use. In short, when subjected to substantive review, NHTSA still seems to do no better than chance in the courts of appeals. Unless it does not do anything. Then it always wins.").

branches. But a tripartite separation of powers system provides opportunities as well as constraints. For NHTSA, the open question was whether the legislative branch would ride to its rescue to reenergize regulation notwithstanding an executive branch determined to do nothing, except deregulate. The congressional cavalry did indeed arrive, but its renegade commander implicitly declared allegiance to NHTSA's executive antagonists.

### C. *The People's House*

Reagan's deregulatory agenda, in particular the issuance of Executive Order 12,291 and its accompanying administration by OMB, provoked outrage in Congress. While the Republican-controlled Senate was comparatively acquiescent, ground zero for opposition was the Democrat-controlled House, and, in particular, the highly influential House Energy and Commerce Committee. Congressman John Dingell, the committee's immensely powerful Chair,<sup>89</sup> set the tone in opening hearings on June 18, 1981, before the Commerce Subcommittee on Oversight and Investigations to consider "the role of OMB in regulation."<sup>90</sup> In most cases, Dingell, who had been appointed Committee Chair within days of Reagan's oath of office, was furious at the Reagan Administration's approach to regulation.

Dingell stressed that the President's initiatives were not only an encroachment on congressional jurisdiction, but also an act of sabotage of the rule of law itself:

Regulatory reform is a subject that should command all our attention. It is needed. The Chair and this Subcommittee have been and will continue to work hard toward that end. The Chair and this Subcommittee, however, will not participate in a process that circumvents existing law and tramples on procedural protections in the name of reform. We are, after all, a nation of laws and not of men.<sup>91</sup>

For most issues, executive attempts to constrain the implementation of liberal legislation were especially likely to provoke Dingell's ire. He was an old-school New Deal Democrat. One news account put it succinctly: "Dingell has left his mark on nearly every significant piece of legislation in the last fifty years, from the Civil Rights Act of 1964 and the creation of Medicare the following year, to his strong support of a series of environmental bills in the 1970s and 80s."<sup>92</sup> Dingell wrote the 1970 National Environmental Policy Act

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89. Speaker Sam Rayburn first appointed Dingell to the House Energy and Commerce Committee in 1957. He served on the Committee until his retirement in 2015.

90. *1981 OMB Hearing*, *supra* note 66.

91. *Id.* at 2.

92. Barbara Maranzani, *57 Years, 177 Days, and Counting: John Dingell Jr. Makes History*, HISTORY (June 7, 2013), <http://www.history.com/news/57-years-177-days-and-counting-john-dingell-jr-makes-history>.

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and the 1973 Endangered Species Act. He was a strong proponent of national health insurance, introducing legislation on that subject every term he served up to the passage of the Affordable Care Act, in which he played an active role.

However, Dingell parted company with his liberal colleagues on the regulation of the automobile industry.<sup>93</sup> Dingell's ties to auto manufacturers were professional, personal, and long standing. Ford's world headquarters was located in Dingell's congressional district. Two of Dingell's sons worked for the automobile industry. His second wife, Debbie, was a lobbyist for General Motors and an heir to the Fisher Brothers' fortune.<sup>94</sup> When it came to Dingell's ties to the industry, Ralph Nader was apoplectic, calling Dingell "a mean-tempered legislator long indentured to the Big Three auto companies."<sup>95</sup> Nader added, "Given his position, his drive, his corporate allies, and his Machiavellian skills, Dingell can now be considered the No. 1 enemy of consumers on Capitol Hill."<sup>96</sup>

Simply stated, when it came to auto safety regulation, Dingell regarded congressional oversight as a constituent service, the important constituent being the auto industry. Consider columnist Jack Anderson's account in 1989:

Dingell has championed the cause of consumers on many issues, but when it comes to auto safety, he has a blind spot. As one auto safety expert put it, "Dingell is the congressman from Detroit, not the congressman for the United States." Since 1981, Dingell has used his powerful position as chairman of the House Energy and Commerce Committee to stall almost every important piece of proposed auto safety legislation. The Center for Auto Safety, a private group that lobbies for stronger legislation, estimates that 100,000 lives could have been saved had all the safety measures Dingell has opposed gone into effect when they were first put on the table.<sup>97</sup>

The membership of the House Energy and Commerce Committee contained many champions of NHTSA's mission and the implementation of its

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93. One other notable area in which Dingell differed from his liberal peers was gun control. David Maraniss, *John Dingell Calls an End to His Legendary House Career*, WASH. POST (Feb. 24, 2014), [https://www.washingtonpost.com/opinions/john-dingell-calls-an-end-to-his-legendary-house-career/2014/02/24/566fae50-9dae-11e3-9ba6-800d1192d08b\\_story.html](https://www.washingtonpost.com/opinions/john-dingell-calls-an-end-to-his-legendary-house-career/2014/02/24/566fae50-9dae-11e3-9ba6-800d1192d08b_story.html).

94. See Ben Terris, *For Debbie Dingell, A Life Primed for Politics*, WASH. POST (Feb. 25, 2014), [https://www.washingtonpost.com/lifestyle/style/for-debbie-dingell-a-life-primed-for-politics/2014/02/25/2062465e-9e6e-11e3-9ba6-800d1192d08b\\_story.html](https://www.washingtonpost.com/lifestyle/style/for-debbie-dingell-a-life-primed-for-politics/2014/02/25/2062465e-9e6e-11e3-9ba6-800d1192d08b_story.html). In anticipation of Dingell's retirement in January 2015, his wife ran successfully to fill his seat. The Dingell family (John Sr., John Jr., and Mrs. Dingell) have held Michigan's twelfth congressional district (and its predecessor districts) for over eighty years.

95. *Nader Unleashes Attack Against Airbag Opponent*, GALVESTON DAILY NEWS, Aug. 28, 1980, at 7.

96. *Id.* Nader had tried to prevent Dingell's appointment to the House Energy and Commerce Chair in 1981, disseminating a highly unusual personal attack in the form of a twenty-five page diatribe focusing on Dingell's well-known opposition to the airbag.

97. Jack Anderson, *Auto Industry Has a Friend in Congress*, FREE LANCE STAR, Dec. 12, 1989, at 17.

rulemaking powers: Al Gore of Tennessee, Tim Wirth of Colorado, Ed Markey of Massachusetts, James Scheurer of New York, and Henry Waxman of California, among others. “The Truck,” as Dingell was known, simply flattened them. For example, when Scheurer came to the defense of the air bag (at the top of Dingell’s hit list), Scheurer found that he lost his subcommittee chairmanship in a “reorganization.”<sup>98</sup>

*D. Bad Luck, Checks and Balances, and the Rule of Law*

Although there are other candidates—1974 for example—1981 was, no doubt, *annus horribilis* for the rulemaking office at NHTSA. Surveying the wreckage wrought a decade earlier by judicial reversals, the rulemakers could be forgiven for feeling cursed by the simultaneous appearance in 1981 of a newly elected President who seldom met a regulation he liked and a newly appointed House Energy and Commerce Chair who regarded congressional oversight as a golden opportunity to protect the very industry NHTSA was supposed to regulate. This was random bad luck, plain and simple. But legal culture has much to say about how bad the bad luck is, the duration of its impact, and the prospect of palliatives to soothe the misfortunes it brings.

At one end of Pennsylvania Avenue, the Reagan Administration was in a hurry to do nothing at NHTSA. To be sure, it did not get everything it wanted. NHTSA’s rescission of its most important safety rule, FMVSS 208 on passive restraints, was overturned by the Supreme Court in the *State Farm* case after the Agency’s failure to offer a plausible explanation for its action.<sup>99</sup> From the Administration’s perspective, *State Farm*’s application of “hard look” judicial review to the rescission of rules was hardly good news. But the Reagan team could take comfort in that opinion’s reminder that regulators who never make up their minds have little to fear from the judiciary. Although the Court affirmed the proposition that courts should review rescissions of rules with the same intensity as they review a new rule’s promulgation, it implicitly agreed that, had the rule not been promulgated in the first place, judicial review would be extremely deferential, bordering on non-justiciability. Safety partisans wishing to provoke more aggressive rulemaking were unlikely to receive much assistance from the judiciary.<sup>100</sup>

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98. *Id.*

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

100. That said, NHTSA’s perfectionist strategy during the Reagan Administration was sometimes sufficiently transparent that safety partisans were able to get a reviewing court to force continued regulation—at least where, as in *State Farm*, the agency was “suspending” an existing rule rather than merely failing to act. *See Pub. Citizen v. Steed*, 733 F.2d 93 (D.C. Cir. 1984) (rejecting as arbitrary, capricious, and “silly” NHTSA’s suspension of treadwear grading requirements of FMVSS 210). At the end of its ruling, the Court in *Steed* made clear that it was exasperated with the Agency’s failure faithfully to execute the law:

NHTSA’s rationale for suspending the treadwear grading requirements read like a “how to” manual for the compulsive perfectionist. No grading procedure could meet

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The interplay of NHTSA's cumbersome, judicially driven, internal rulemaking procedures and the Reagan Administration's rescission of FMVSS 208, at issue in *State Farm*, illuminate another dynamic of legal culture in the Ice Age. Rescission of Standard 208 prior to its implementation was available to the Reagan Administration because of procedural delays inside NHTSA. Moreover, the "midnight rules" that were delayed and then cancelled had a similar history. NHTSA may never have had an administrator more committed to the 1966 vision of auto safety than Carter's appointee, Joan Claybrook. A Nader protégé, Claybrook was present at the creation of the original Act (as a congressional staffer working on the issue) and served as an assistant to NHTSA's first administrator in the earliest days of the Agency's operations.

Rulemaking activity at NHTSA was frenetic during her 1976-1980 term. But activity is not output, and many of Claybrook's initiatives were still pending at the time Reagan took office. As a practical matter, the internal rulemaking process made it difficult for even the most ardent regulator to complete rules within a single presidential term. And the protective shield of *State Farm*'s hard look approach to regulatory rescissions applied only to final rules, not pending proposals. Much of Claybrook's legacy was thus easy prey for her successors.

On Capitol Hill, what might be called the "internal law" of Congress provided support for the Administration's policies. Legislative oversight is a core element of legal culture's system of checks and balances, a principal means by which Congress holds executive officials accountable for the implementation of delegated authority. It is an implied constitutional power: "[T]he power to make laws imp[li]e[s] the power to see whether they are faithfully executed."<sup>101</sup> But legislative oversight is largely operationalized through the congressional system of standing committees. That system is governed by an obscure body of internal standards and practices, a sort of subculture of legal culture, which in many respects does not fit comfortably with majoritarian values. There is no "Due Process of Lawmaking,"<sup>102</sup> and congressional failure to follow even the procedures prescribed in the

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the standards now embraced by the agency commanded by Congress to provide consumers with useful information on the performance of tires. NHTSA's approach to fulfilling an undisputed statutory mandate is to withhold any regulation until every i is dotted and t is crossed. That is not what Congress commanded the agency to do, nor is it reasonable behavior by an agency established to execute policy, rather than achieve quantitative perfection in its execution. The agency itself, as well as a reviewing court, have given an altogether different reading than the one now advanced in defense of the agency's do-nothing administration of section 203 of the Act. We cannot imagine a more complete flouting of the statutory scheme.

*Id.*

101. WALTER J. OLESZEK, CONG. RESEARCH SERV., R41079, CONGRESSIONAL OVERSIGHT: AN OVERVIEW 5 n.15 (2010).

102. Hans A. Linde, *Due Process of Lawmaking*, 55 NEB. L. REV. 197 (1976).

Constitution will not be judicially scrutinized unless a statute reveals a procedural failure on its face.<sup>103</sup>

Each house creates its own rules governing the seniority system, the chair's prerogatives, committee organization and appointments, allocations of jurisdiction, and conflicts of interest. Longstanding unwritten internal norms presume the legitimacy of partisan and electoral self-interest. The committee process thus runs a high risk of capture by special or parochial interests; a risk that is in tension with oversight's grand role in the constitutional framework. Any corrective mechanisms for these potential distortions of the will of the legislature lay almost exclusively in the political, not the legal realm.

Dingell was surely not the first or last elected official to treat a congressional committee chairmanship as an exercise in constituent service. Nor was he unique in mastering the inner workings of the legislative world for this purpose. At the same time, Dingell's leadership of the subcommittee on oversight, as it relates to oversight of NHTSA, can hardly be characterized as an effort to determine whether officials were obeying the law and complying with legislative intent. Nor, as head of the Energy and Commerce Committee, was he prepared to go to the whole House with proposed or Senate-approved legislation designed to re-energize NHTSA's rulemaking. That may have been his approach to other health and safety topics, but not to auto safety regulation.

Dingell was, of course, but one extreme example of the autocracy of the chair that pervades congressional decision making. And autocrats can eventually be unseated. The Gingrich revolution of 1995 ended Dingell's fourteen-year reign. And although his influence over automobile safety regulation continued in one form or another until he was dislodged once again from the chairmanship of the House Energy and Commerce Committee in 2008, the times were changing. The legal and political environment that produced the Ice Age appeared to be abating. Thaw was in the air. How would NHTSA respond? Could it turn a new page, or would the Agency continue to be haunted by it past?

#### IV. Climate Change: An Ambivalent Congress Acts

Paralysis of rulemaking was not an unavoidable consequence of judicial review or the broader legal culture in which NHTSA found itself. Although Dingell blocked virtually all of the agency-forcing legislation directed at NHTSA during his tenure as chairman,<sup>104</sup> Congress could act when the Truck's

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103. See *Field v. Clark*, 143 U.S. 649 (1892).

104. See S. REP. NO. 102-83, at 2 (1991) (noting that in the past nine years, the Senate approved without opposition three reauthorization packages containing numerous agency-forcing provisions that all died in House). By contrast, the reauthorization measure introduced by Dingell contained no agency-forcing provisions whatsoever. See H.R. 1497, 100th Cong. (1987); see also *Reauthorization of the National Highway Traffic Safety Administration: Hearing Before the Subcomm. on the Consumer of the S. Comm. on Commerce, Sci. & Transp.*, 102d Cong. 26 (1991) (statement of Joan Claybrook, President, Public Citizen) (stating that House Energy and Commerce Committee



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vetogate was finally removed. Moreover, congressional choices generally do not require rational justification before the judiciary. As a court reviewing and partially invalidating NHTSA's rule on tire retread labeling commented, "No administrative procedure test applies to an Act of Congress" when upholding the only parts of the rule that were legislatively mandated.<sup>105</sup> If Congress required action on particular performance or equipment standards, industry would be hard pressed to mount a successful assault against them. During NHTSA's first two decades, Congress had, albeit on rare occasions, mandated the adoption of specific motor vehicle safety standards.<sup>106</sup> Beginning in 1991 but especially after 2000, Congress seemed to have had a change of heart. Its efforts to revitalize NHTSA's rulemaking mandate through legislative direction appear far more consistently pro-rulemaking and far more ambitious than those adopted during NHTSA's earlier years.

### *A. Overview of Agency-Forcing Statutes: 1991-2012*

NHTSA's hibernation during the Ice Age did not go unnoticed on Capitol Hill. Between 1991 and 2012—and especially after Dingell lost his chairmanship in 1995—Congress enacted eight statutes directing NHTSA to adopt a wide variety of safety standards in specific areas. Not only did the statutes collectively mandate action on a long and detailed list of items, they also typically required the Agency to commence rulemaking proceedings within a tight timetable.

Broadly speaking, agency-forcing statutes enacted during this period conformed to one of two models. The first template could be called the omnibus directive, and appeared, at least on its face, to be aimed at reenergizing NHTSA's technology-forcing mission. The omnibus directive model, adopted in three statutes, featured multiple rulemaking mandates often involving some of the most complex and promising safety technologies that NHTSA had ever considered: side impact protection, electronic stability

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leadership had prevented reauthorization of NHTSA since 1982, creating "almost a decade of neglect and obfuscation"); Paula Dwyer, *Fearless Crusader or Self-Serving Kingpin?*, BLOOMBERG (Oct. 28, 1991), <http://www.bloomberg.com/news/articles/1991-10-27/fearless-crusader-or-self-serving-kingpin> (reporting that Dingell prevented debate on safety standards, blocked long-term reauthorization of NHTSA, and stymied measures to require air bags and improve fuel economy); Anderson, *supra* note 97 (reporting that since 1981, Dingell had used his position as chairman of the House Energy and Commerce Committee to stall almost every important piece of proposed auto safety legislation).

105. *Nat'l Tire Dealers & Retreaders Assoc. v. Brinegar*, 491 F.2d 31, 37 (D.C. Cir. 1974).

106. For example, the 1966 Act directed the Agency to issue its first generation of rules "based upon existing safety standards," which were understood to be the GSA standards then in effect for government vehicles, not later than January 31, 1967. MVSA, § 103(h). Similarly, the 1974 amendments required the Agency to promulgate safety standards in eight areas of school bus safety design. Motor Vehicle and Schoolbus Safety Amendments of 1974, Pub. L. No. 93-492, § 202, 88 Stat. 1,470 (codified as amended at 15 U.S.C. § 1,392 (2012)).

control, ejection mitigation, anti-lock brakes, improved passive restraints, and others.<sup>107</sup>

The second template could be called the single-purpose directive. The five agency-forcing statutes<sup>108</sup> conforming to this model were more modest in their ambition. Single-purpose measures tended to be narrowly drawn and typically contemplated the protection of a special population—children, the elderly, short-statured women, and the sight impaired and other disabled persons. Single-purpose measures rarely, if ever, envisioned the development of novel technologies. The means of complying with them were usually well within industry’s reach and often already available as options on many models. Single-purpose directives fell squarely within the tradition of the 1974 school bus amendments mandating safety rules for the protection of school children and, more broadly, the equal protection legacy of the 1966 Act.

## 1. Omnibus Directives

### a. ISTEA (1991)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was the first and in some respects most sweeping of the period’s agency-forcing statutes.<sup>109</sup> Enacted by a Democratically controlled House and Senate in the second half of George H.W. Bush’s Presidency, ISTEA required NHTSA to conduct rulemaking proceedings in eight specific areas: (1) rollover prevention in passenger cars, light trucks, and multipurpose vehicles (MPVs); (2) the extension of side impact protection from passenger cars to light trucks and MPVs; (3) improved child booster seat design; (4) improved seat belt design for children and other short people; (5) improved head impact protection from interior components; (6) mandatory air bags; (7) improved brake performance in passenger cars, including anti-lock brakes; and (8) improved brake performance for heavy trucks, also including anti-lock brakes.<sup>110</sup> For each of

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107. See Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Pub. L. No. 102-240, 105 Stat. 2,083, 2,083-87 (codified as amended at 15 U.S.C. § 1,392 (2012)); Transportation Recall, Enhancement, Accountability, and Documentation (TREAD) Act of 2000, Pub. L. No. 106-414, 114 Stat. 1,800 (codified at 49 U.S.C. § 30170 (2012)); Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub. L. No. 109-59, 119 Stat. 1,144, 10,301-10 (2005) (codified at 49 U.S.C. § 30,128 (2012)).

108. Transportation Equity Act for the 21st Century (TEA-21), Pub. L. No. 105-178, 112 Stat. 107, 7,103 (1998) (codified as amended at 49 U.S.C. § 30,127 (2012)); Anton’s Law, Pub. L. No. 107-318, 116 Stat. 2,772 (2002) (codified as amended at 49 U.S.C. § 30,127 (2012)); Cameron Gulbransen Kids Transportation Safety Act of 2007, Pub. L. No. 110-189, 122 Stat. 639 (codified as amended at 49 U.S.C. § 30,111 (2012)); Pedestrian Safety Enhancement Act of 2010, Pub. L. No. 111-373, 124 Stat. 4,086 (codified as amended at 49 U.S.C. § 30,111 (2012)); Moving Ahead for Progress in the 21st Century Act (MAP-21), Pub. L. No. 112-141, 126 Stat. 757 (2012) (codified in scattered sections of 23 U.S.C., 26 U.S.C., 29 U.S.C., 33 U.S.C., 42 U.S.C., and 49 U.S.C. (2012)).

109. See ISTEA, 105 Stat. at 2,081-87.

110. *Id.* at 2,083-87, 2,157.

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these areas, ISTEA specified when the Agency should commence rulemaking proceedings and how long they should last.

ISTEA's treatment of air bags and anti-lock brakes was especially noteworthy. At the time of ISTEA's passage, Standard 208 required passive restraints but not air bags. Manufacturers could comply with the regulation by installing automatic belts or passive interiors as alternatives. While the Senate version of ISTEA had contemplated a legislative mandate directly requiring airbags,<sup>111</sup> the conference committee for ISTEA stopped short of that approach. Still, the committee otherwise left little maneuvering room respecting NHTSA's statutory obligation to require air bags by rule in both front outboard positions.<sup>112</sup>

ISTEA spoke with similar clarity on antilock brakes for heavy trucks and buses.<sup>113</sup>

Congress demanded that the Agency resume rulemaking on antilock brakes for commercial trucks, a proceeding that had been stymied by judicial invalidation of NHTSA's stopping distance performance standard thirteen years earlier. From a technological perspective there was, of course, nothing new here. Air bags and antilock brakes were the two great technology-forcing initiatives of the 1970s. And although both technologies were in widespread use, requiring them in all vehicles had been mired in controversy and litigation for nearly two decades. Now it appeared Congress was determined to break the logjam. And yet, ISTEA was not a critical inflection point in Congress's approach to auto safety regulation. Its next major piece of omnibus legislation did not appear until nearly a decade later.

### b. TREAD (2000)

The Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act of 2000 was passed by a Republican-controlled Congress and signed by President Clinton in the final days of his Administration.<sup>114</sup> TREAD directed NHTSA to take regulatory action in five areas: (1) tire endurance and resistance; (2) tire labeling, (3) dynamic testing on rollover resistance; (4) tire monitoring to alert drivers of underinflated tires; and (5) improved child restraints.<sup>115</sup> Political support for TREAD was overwhelming. It passed by voice vote without opposition.

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111. See S. REP. NO. 102-83, at 6 (1991).

112. ISTEA directed NHTSA to amend Standard 208 no later than September 1, 1993, to require airbags in front positions in accordance with a fixed timetable: ninety-five percent of new cars by Model Year (MY) 1997, and all new cars thereafter; and eighty percent of light trucks and other multipurpose vehicles by MY 1998 and all thereafter. ISTEA, 105 Stat. at 2,084-85.

113. See *id.* at 2,157.

114. TREAD Act, Pub. L. No. 106-414, 114 Stat. 1,800 (2000) (codified at 49 U.S.C. § 30,101 (2012)).

115. TREAD Act, 114 Stat. at 1,805-06.

## c. SAFETEA-LU (2005)

Provisions of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), enacted in 2005, comprised Congress's third and final omnibus agency-forcing directive.<sup>116</sup> SAFETEA-LU was passed by a Republican-controlled House and Senate and signed by President G.W. Bush in the first half of his second term. The provisions applicable to NHTSA were part of a massive funding and authorization bill that allocated \$286.4 billion to improve and maintain the surface transportation system of the United States.

SAFETEA-LU contained three sets of provisions requiring NHTSA to issue new safety standards.<sup>117</sup> The first set addressed rollover crashes and instructed the Agency to issue standards to (1) reduce the incidence of rollovers; (2) reduce the ejection of vehicle occupants taking into account "various ejection mitigation systems"; (3) strengthen door locks and door retention; and (4) improve roof strength.<sup>118</sup> The second set of provisions directed NHTSA to enhance side impact protection, and the third set mandated that the Agency to require switches for power windows that raise the window only when the switch is pulled up or out.<sup>119</sup> All of the provisions set specific deadlines for final agency action.

## 2. Special Purpose Directives

Congress passed five statutes aimed at fairly particularized targets between 1998 and 2012. Their eclectic subject matter required NHTSA to mandate advanced airbag technology to minimize risks to children and small passengers; develop performance standards for restraints for children weighing more than fifty pounds; consider standards requiring power windows that automatically reverse if they detected an obstruction; and assess the imposition of minimum sound requirements for hybrid and electric cars. The Agency was also required to undertake rulemaking proceedings within a prescribed timetable to address child safety seats and child restraint anchorage systems, as well as the provision of seat belt warning systems for designated seating positions in the rear seat.<sup>120</sup>

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116. SAFETEA-LU, Pub. L. No. 109-59, 119 Stat. 1144, 1939-43 (2005) (codified at 23 U.S.C. § 101 (2012)).

117. SAFETEA-LU, 119 Stat. at 1,939-40, 1,942.

118. *Id.*

119. *Id.*

120. *See* session laws cited in *supra* note 108.

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### *B. Deciphering the Message*

Imagine you are the NHTSA Administrator in 2012 contemplating the torrent of agency-forcing legislation that has engulfed your agency over the past twenty years. What was the legislative bottom line? Do these statutes constitute a message that the Agency should return to the technology-forcing vision of 1966?

Your first thought might be recognition that the statutes were enacted over a period during which the pendulum of American regulatory politics swung wildly.<sup>121</sup> The statutes spanned four presidencies: George H.W. Bush, Bill Clinton, George W. Bush, and Barack Obama—not an era distinguished by bipartisan consensus on regulatory policy. The prospect that NHTSA’s legislative and executive overseers had reached a unified vision of auto safety over such a prolonged and polarized period, let alone a vision resurrecting the Great Society, seems dim. In that case, the search for coherence might be a fool’s errand. Perhaps the statutes comprised little more than a grab bag of compromises occasioned by contingencies unique to each statute. On the other hand, the lavish use of deadlines was a common thread unifying the statutes. Seen in this light, they did seem to convey at least a basic, if vague, pro-regulatory message: “do something, and do it soon.”

Much of the congressional debate surrounding the statutes tended to reinforce this impression. For example, several provisions of the omnibus agency-forcing statutes were explicitly directed at reviving rulemaking proceedings that had commenced many years before, but had then been abandoned during the Reagan years. This was obviously an exercise in resuscitating, not repudiating, initiatives begun in the Agency’s rulemaking heyday.<sup>122</sup> Similarly, an implicit theme in the legislative history was that, absent congressional intervention—more specifically, without legislative mandates accompanied by explicit deadlines—NHTSA could not be relied upon to deliver on the promise of the 1966 Act.<sup>123</sup> The tone of such discussions

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121. At the beginning, Democrats were firmly in control of both the House and Senate; four years later, the “Gingrich Revolution” swept the Republicans into control of the House for the first time since 1952. Instability reached the Senate not much later. In the 107th Congress (2001-2003), control of the Senate switched parties three times.

122. Examples of agency-forcing provisions that sought to revive or strengthen rulemaking initiatives from the 1970s that had been dropped or neglected during the Reagan Administration include: the TREAD Act’s tire labeling provision, see *Firestone Tire Recall: Hearing Before the S. Comm. on Commerce, Sci. & Tech.*, 106th Cong. 88 (2000) (statement of Joan Claybrook, President, Public Citizen), the TREAD Act’s tire pressure monitoring rule, see *The Recent Firestone Tire Recall Action, Focusing on the Action as It Pertains to Relevant Ford Vehicles: Hearing Before the Subcomm. on Telecomm., Trade & Consumer Prot. & the Subcomm. on Oversight & Investigations of the H. Comm. on Energy & Commerce*, 100th Cong. 54 (2000) [hereinafter *2000 House Firestone Tire Recall Hearing*] (statement of Sue Bailey, Administrator, NHTSA), and ISTEA’s provision on side impact protection, see S. REP. NO. 101-49, at 2 (1989). ISTEA’s air bag mandate was perhaps the most dramatic affirmation in the agency-forcing statutes of the 1966 vision of auto safety.

123. See, e.g., *Reauthorization of the National Highway Traffic Safety Administration: Hearing Before the Subcomm. on the Consumer of the S. Comm. on Commerce, Sci. & Transp.*, 102d Cong. 31 (1991) (statement of Clarence Ditlow, Director, Center for Auto Safety) (arguing that

suggested that the original vision of auto safety regulation was not an historical relic.

Upon closer examination, however, a different picture emerges. Considered in the contextual circumstances of each legislative command, many of the implicit messages embedded in the statutes were far more ambivalent, tentative, opaque, nuanced, and even conflicted than the simple statutory texts or the tone of congressional discourse conveyed.

### 1. Message One: You're on Your Own

While imposing numerous and varied rulemaking deadlines on the Agency, Congress did nothing to increase the Agency's capacity to deal with them. The problem was not just limited NHTSA resources, a lament echoed by virtually every federal regulatory agency that has ever existed. The more fundamental issue was that Congress did not revise—in fact, it did not even consider revising—the statutory criteria that had tormented NHTSA in court. Congress demanded action but it did not relax or supplement in any way the statutory commands of “reasonableness,” “practicability,” and “objectivity” that inhabited the original act and had proven so troublesome earlier on judicial review.

In fact, some of the agency-forcing statutes made the problem of legislative indeterminacy considerably worse. The statutes imposed deadlines for their implementation that could short-circuit the elaborate fact finding and analysis that the Agency believed essential to sustain its rules on judicial review. At the same time, Congress did nothing to equip the Agency with new tools to deal with the burdens the courts had imposed in construing these criteria, to exempt its safety rules from any of the congressionally or presidentially imposed analytic requirements, or to rethink the timing of judicial review that had made the industry's full court press so effective. NHTSA's standards adopted pursuant to the agency-forcing statutes remained subject to immediate legal challenge for “impracticability,” “inappropriateness” for the covered vehicles, or “unreasonableness” (usually meaning excessive cost) before anyone even attempted to comply. As NHTSA had learned in its early years, safety technologies that had not been subjected to considerable on-the-road experience had great difficulty passing these tests.

In addition, these mandates were agency-forcing but not responsibility-taking. Congress rarely specified exactly what it wanted the Agency to do or

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congressional mandates imposing rulemaking deadlines were vital “to get NHTSA to do the right thing”); *NHTSA Authorization Request: Hearings Before the Subcomm. on Transp., Tourism & Hazardous Materials of the H. Comm. on Energy & Commerce*, 100th Cong. 478 (1987) (statement of Joan Claybrook, President, Public Citizen) (stating that statutory deadlines were needed to “force” the agency to “behave”); *Reauthorization of the National Highway Safety Administration: Hearing Before the Subcomm. on the Consumer of the S. Comm. on Commerce, Sci. & Transp.*, 102d Cong. 89-90 (1991) (statement of Joan Claybrook, President, Public Citizen) (noting that statutory deadlines were “essential” to enable parties outside the Agency to sue and to limit interference from OMB).

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what technologies it sought to have the Agency compel. Apart from the air bag mandate, and possibly the power windows up-or-out switch, the only exception was a provision directly requiring a brake transmission system interlock (BTISI). But it was difficult to see BTISI as a model for more generalized rulemaking, let alone technology forcing. BTISI was the subject of a pre-existing voluntary agreement between the Agency and industry. By the time of the Act's passage, eighty percent of all cars already incorporated BTISI technology, and ninety-eight percent were expected to include it before the Act's legislative mandate took effect.<sup>124</sup> Every other rulemaking mandate imposed by Congress left NHTSA to its own devices to determine whether there were technologies that could "reasonably," "appropriately," and "practicably" be deployed to satisfy its statutory commands.

Moreover, whatever the congressional rhetoric surrounding their passage, not all of these mandates were really mandatory. Critically, a number of provisions in the agency-forcing statutes explicitly preserved the Agency's discretion to conclude, after due deliberation in accordance with a prescribed timetable, that a final rule was not warranted. Hence, if NHTSA did adopt a rule in these areas, it would not be protected by a legislative mandate that eliminated "hard look" judicial review, as such a mandate had done in the *Tire Retreaders* case.

Perhaps sensing the exposed position in which Congress thrust it, NHTSA opposed many of the agency-forcing provisions.<sup>125</sup> It argued, among other

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124. S. REP. NO. 110-275, at 4 (2008). The BTISI statutory requirement merely codified a voluntary agreement reached by NHTSA with the automobile industry a year and a half earlier in August 2006. Ninety-eight per cent of all MY 2009 cars were expected to have BTISI before the statutory requirement even took effect in 2010. *Id.*

125. See, e.g., *NHTSA Reauthorization Request: Hearings Before the Subcomm. on Transp., Tourism & Hazardous Materials of the H. Comm. on Energy & Commerce*, 100th Cong. 30 (1989) (statement of Diane Steed, Administrator, NHTSA) (noting that NHTSA deemed the Senate-passed provision imposing a one year time limit for side impact rulemaking to be "impractical"); *NHTSA Oversight: Hearing Before the Subcomm. on Transp., Tourism & Hazardous Materials of the H. Comm. on Energy & Commerce*, 102d Cong. 9, 20 (1991) [hereinafter *1991 House ISTEA Hearing*] (statements of Jerry Ralph Curry, Administrator, NHTSA) (opposing air bag mandate and other proposed deadlines for agency action as "micromanagement legislation" and noting that rules via legislation may cause "irreparable damage"); *Reauthorization of the National Highway Traffic Safety Administration: Hearing Before the Subcomm. on Commerce, Trade & Consumer Prot. of the H. Comm. on Energy & Commerce* 109th Cong. 11, 15, 18 (2005) [hereinafter *2005 House SAFETEA-LU Hearing*] (statement of Jeffrey W. Runge, Administrator, NHTSA) (noting that the Agency opposes "legislatively mandated rulemaking actions that displace deliberative research," that the Agency's flexibility is "severely impaired" by Congressional mandates, and that NHTSA has "bigger fish to fry than worrying about those deadlines"); see also discussion of ARS power windows *infra* notes 276-285 and accompanying text.

Unsurprisingly, industry also opposed rulemaking mandates. *Reauthorization of the National Highway Traffic Safety Administration: Hearing Before the Subcomm. on Commerce, Trade & Consumer Prot. of the H. Comm. on Energy & Commerce* 109th Cong. 37 (2005). *Id.* at 37 (statement of Frederick L. Webber, President, Alliance of Automobile Manufacturers) (stating that as a matter of policy the auto industry opposed rulemaking mandates "requiring that final rules must be issued regardless of information provided to the Agency through its public notice and comment process"). More recently, the industry has affirmed its opposition to legislative rulemaking mandates. See *Improving Highway and Vehicle Safety: Reauthorization of the National Highway Traffic Safety*

things, that it could not fulfill its procedural obligations under the APA and still meet the deadlines imposed by Congress; that it needed more time to develop testing criteria (especially in relation to various kinds of dummies) that would meet reviewing courts' earlier demands for objectivity and repeatability; and that rulemaking actions taken prematurely would produce wasteful, time-consuming litigation.<sup>126</sup> The Agency pleaded with Congress not to drive it back into the arms of a hostile legal culture. To a significant extent,<sup>127</sup> those pleas fell on deaf ears.

## 2. Message Two: Think Small (Less Is More)

Even in areas where Congress demanded that NHTSA act—air bags, antilock brakes for trucks, and head impact protection from interior components—the statutory commands, understood in context, seemed cautious to the point of timidity. For example, at the time of the enactment of ISTEA in 1991, its two most consequential mandates were already forgone conclusions. Industry was already planning to install airbags in both front outboard positions in ninety percent of all passenger vehicles by MY 1995, and the Agency had announced it would extend Standard 208 to light trucks and vans.<sup>128</sup> With respect to head-impact protection, Congress shied away in ISTEA from the more stringent approach requiring dynamic testing contemplated by the Senate. Instead, ISTEA only directed NHTSA to issue a rule to improve head protection from interior components. Compliance with this measure required little more than the addition of some padding, a low-tech approach that industry had been pursuing for decades.<sup>129</sup>

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*Administration: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety & Ins. of the S. Comm. on Commerce, Sci. & Transp.*, 112th Cong. 47 (2011) (statement of Robert Strassburger, Vice President, Alliance of Automobile Manufacturers) (expressing concern over process of legislatively mandated rules).

126. See 1991 House ISTEA Hearing, *supra* note 125, at 44 (statement of Jerry Curry, Administrator, NHTSA); *NHTSA Authorizations: Hearing Before the Subcomm. on the Consumer of the S. Comm. on Commerce, Sci. & Transp.*, 100th Cong. 238, 251 (1987) (statement of Erika Jones, Chief Counsel, NHTSA); *NHTSA Authorization Act of 1989: Hearing Before the Subcomm. on the Consumer of the Comm. on Commerce, Sci. & Transp.*, 101st Cong. 34, 40, 82-83 (statement of Barry Felrice, Associate Administrator for Rulemaking, NHTSA).

127. It is also true, however, that many of the agency-forcing provisions required rulemaking proceedings, but not necessarily final rules. A recurring pattern was that the Senate proposed strong mandates and the House watered them down. In the House, Dingell strongly opposed mandates with deadlines, arguing that “every time Congress mandates that NHTSA promulgate a rule on a specific subject, there are fewer resources for NHTSA to spend on other safety priorities.” 2005 House SAFETEA-LU Hearing, *supra* note 125, at 19 (statement of Rep. John Dingell). Dingell argued that mandates should be written in a way that required only consideration of a rule, not its promulgation. *Id.* at 20.

128. See 1991 House ISTEA Hearing, *supra* note 125, at 9 (statement of Jerry Curry, Administrator, NHTSA); Laurie McGinley, *U.S. Will Toughen Safety Standards for Vans, Trucks*, WALL ST. J., May 21, 1991, at A4.

129. See S. REP. NO. 102-83, at 5, 7 (1991); H.R. REP. NO. 102-404, at 394-97, 403-04 (1991) (Conf. Rep.).



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As for antilock brakes, by the time of ISTEA's passage, Europe and Japan already required them in all heavy trucks.<sup>130</sup> In effect, ISTEA was only requiring NHTSA to mandate technologies that were already in widespread use elsewhere in the world. Moreover, when it came to antilock brakes in passenger cars, Congress struck an even more cautionary note. It merely required the Agency to consider the issue, not necessarily issue a final rule, in proceedings that were allowed to drag on for four years or more. And if NHTSA did decide to issue a rule on antilock brakes for cars, ISTEA instructed that the Agency must "as part of the rulemaking, consider any such brake system adopted by a manufacturer."<sup>131</sup> Congress expected NHTSA to base any rule on systems already in use. A repeat of the Agency's earlier technology-forcing adventure on truck braking distances, invalidated in the *PACCAR* decision, was not wanted. In sum, while ISTEA might be characterized as instructing NHTSA to resume its 1966 technology-forcing mission, when viewed in the context of 1991's technological environment and industry practices, it was a pretty mild version of that strategy.

The provisions of the TREAD Act cast further doubt on the depth of Congress's commitment to re-invigorate the technology-forcing vision of auto safety. Three of the TREAD Act's five agency-forcing provisions addressed only the narrow area of tire safety.<sup>132</sup> Collectively, they set an extremely low bar for rulemaking. For example, Section 10 required the Agency to upgrade its standards on tire endurance and resistance.<sup>133</sup> At the time of TREAD's passage, NHTSA's passenger car tire standards had not been updated for over thirty years, and its standard for tires used on light trucks had not been updated for over twenty-five years.<sup>134</sup>

During this period, tire design had evolved dramatically (from bias belted tires to radials). At the time of the TREAD Act's passage, the existing standard arguably was incoherent when applied to the now universal tire technology, and industry itself supported an upgrade.<sup>135</sup> In fact, FMVSS 109 was so obviously obsolete that NHTSA declined to enforce it and withdrew the only action ever brought to do so.<sup>136</sup> The TREAD Act's mandate that the standard be updated was the functional equivalent of requiring NHTSA to adapt to existing industry technology and cease committing regulatory malpractice.

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130. See *Reauthorization of the National Highway Traffic Safety Administration: Hearing before the Subcomm. on the Consumer of the S. Comm. on Commerce, Sci. & Transp.*, 102d Cong. 28 (1991) (statement of Joan Claybrook, President, Public Citizen).

131. ISTEA, Pub. L. No. 102-240, § 2,507, 105 Stat. 2,082 (1991) (codified as amended at 15 U.S.C. § 1,392 (2012)).

132. See TREAD Act, Pub. L. No. 106-414, §§ 10-11, 13, 114 Stat. 1,800, 1,805-06 (2000) (codified at 49 U.S.C. § 30,123 (2012)).

133. *Id.* § 10.

134. *2000 House Firestone Tire Recall Hearing*, *supra* note 122, at 7, 123 (statement of Sue Bailey, Administrator, NHTSA).

135. See *id.* at 124.

136. See *id.* at 197 (statement of Clarence Ditlow, Director, Center for Auto Safety).

The TREAD Act's provision requiring new tire-labeling rules was no more ambitious. The TREAD Act required the placement of the tire identification number on the outside tire sidewall rather than inside, as the existing standard contemplated.<sup>137</sup> The purpose of mounting the ID number outside was to make it easier for consumers to see the number and thus to determine whether the tire was subject to recall.<sup>138</sup> This was the recall-tail wagging the rulemaking-dog. And the dog was not being wagged very vigorously. When Congress, inspired by NASA's success, conceived NHTSA's technology-forcing mission in 1966, it had asked, if we can get a man to the moon, why can we not make motor vehicles safer—not why can we not relocate the tire ID number from the inside to the outside of the tire sidewall.

The only TREAD Act provision contemplating that the industry be required to do something remotely novel was the section mandating action on a warning system for under-inflated tires. In fact, NHTSA had been investigating such a system since the 1970s,<sup>139</sup> and by the time of the TREAD Act's enactment, Toyota had incorporated an "indirect" system of tire under-inflation warning in some models.<sup>140</sup> The tire companies were also working on the issue. The architects of the TREAD provision made clear that they wanted to see more progress, but not at a pace that might prove disruptive or uncongenial to industry. Congressman Ed Markey, the Democratic sponsor of the provision in the House, stated that Congress intended to allow the cheaper indirect monitoring systems as an interim measure, given that they were already available on the market, but that safer, albeit more expensive, direct systems in development should be used eventually.<sup>141</sup> Presumably that meant when the industry was ready.

SAFETEA-LU, the third and final omnibus agency-forcing directive, also seemed an odd prescription for the paralysis that Congress had diagnosed. Except for the rulemaking on power windows, SAFETEA-LU authorized unlimited extensions of the deadlines for all the other proceedings it mandated, provided the relevant congressional oversight committees were notified and new deadlines were set.<sup>142</sup> None of these provisions specified a timetable for actually implementing the contemplated requirements. In some cases, the deadlines for rulemaking were considerably more generous than the Agency's own internal schedules. For example, SAFETEA-LU required NHTSA to adopt final rules on roof strength and improved side impact protection by 2008; the

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137. TREAD Act, 114 Stat. at 1806.

138. See *2000 House Firestone Tire Recall Hearing*, *supra* note 122, at 204 (2000) (statement of Clarence Ditlow, Director, Center for Auto Safety).

139. *Id.* at 54 (statement of Sue Bailey, Administrator, NHTSA).

140. *Id.* at 1,278.

141. *The Implementation of the TREAD Act: One Year Later: Hearing Before the Subcomm. on Commerce, Trade & Consumer Prot. of the H. Comm. on Energy & Commerce*, 107th Cong. 44 (2002) [hereinafter *TREAD Implementation Hearing*] (statement of Rep. Ed Markey).

142. SAFETEA-LU, Pub. L. No. 109-59, §§ 10,301-02, 119 Stat. 1144, 1939-40 (2005) (codified at 49 U.S.C. § 30,128 (2012)).

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Agency was already planning to do so by 2006.<sup>143</sup> SAFETEA-LU seemed to be inviting the Agency to slow down, not speed up. When asked about the proposed timetables, the Agency's administrator reported that with one exception, the deadlines were "certainly workable."<sup>144</sup> When the legislation was finalized, the troublesome deadline was relaxed.<sup>145</sup>

The lack of urgency underlying the statutory deadlines was especially perplexing because NHTSA had been procrastinating for decades on many of the key issues addressed by SAFETEA-LU. In some cases, this delay involved explicitly promising to take action and then repeatedly failing to do so. The standards on door locks and door retention and on roof strength had not been upgraded for well over thirty years.<sup>146</sup> NHTSA first announced it would consider a rollover-prevention standard in 1973.<sup>147</sup> No action was taken until 1991, when Congress ordered NHTSA to resume work on the issue in ISTEA. But rollover prevention was one of the issues on which ISTEA left NHTSA discretion not to act. In due course, the Agency invoked that discretion, terminating the rulemaking and finding that no single standard could prevent rollovers and might lead to the elimination of popular (but rollover-prone) compact SUVs.<sup>148</sup> NHTSA subsequently promised to move ahead on roof strength and door lock standards, but it did not carry through on those promises either.<sup>149</sup>

The overall structure of SAFETEA-LU differed from that of ISTEA and the TREAD Act in one key respect. SAFETEA-LU was far more research oriented than those earlier statutes. On a wide variety of issues, SAFETEA-LU directed the Agency not to engage in rulemaking, but to study the issue further and report back to Congress. NHTSA was directed to (1) study technologies to reduce injuries and deaths caused by cars and trucks backing up; (2) prepare reports to Congress on tire aging and the risks associated with glare; (3) examine new systems for reminding passengers to wear seat belts; and (4) undertake a study of front impact crash protection, with a particular emphasis

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143. *Id.* §§ 10,301(d), 10,302(2); 2005 House SAFETEA-LU Hearing, *supra* note 125, at 61-62 (statement of Janette Fennell, President, Kids and Cars); *id.* at 11 (statement of Jeffrey Runge, Administrator, NHTSA).

144. *Id.* at 18 (statement of Jeffrey Runge, Administrator, NHTSA).

145. *Id.* at 18 (statement of Jeffrey Runge, Administrator, NHTSA); H.R. REP. NO. 109-203, at 1,105 (2005) (Conf. Rep.). The relaxed deadline concerned disclosure of safety ratings rather than vehicle safety standards.

146. 2005 House SAFETEA-LU Hearing, *supra* note 125, at 61 (statement of Janette Fennell, President, Kids and Cars); *Reauthorization of the National Highway Traffic Safety Administration: Hearing before the Subcomm. on Commerce, Trade & Consumer Prot. of the H. Comm. on Energy & Commerce*, 108th Cong. 47 (2004) [hereinafter 2004 SAFETEA-LU House Hearing] (statement of R. David Pittle, Senior Vice President & Technical Director, Consumers Union).

147. 2004 SAFETEA-LU House Hearing, *supra* note 146, at 48 (statement of R. David Pittle, Senior Vice President, Technical Policy, Consumers Union).

148. *Why Not a Standard?*, NHTSA (2004), <http://www.nhtsa.gov/cars/rules/rulings/rollover/Chapt06.html>.

149. 2004 SAFETEA-LU House Hearing, *supra* note 146, at 87 (statement of Joan Claybrook, President, Public Citizen).

on vehicle compatibility issues.<sup>150</sup> Shades of the Reagan Administration; these provisions could have been written by Diane Steed.

The Moving Ahead for Progress in the 21st Century Act (MAP-21), the most recent of the agency-forcing statutes, strongly reinforced the emphasis in SAFETEA-LU on the need for further research to support rulemaking. MAP-21's rulemaking mandate, typical of the single purpose agency-forcing measures, was very modest in its ambitions. It addressed only improvements in child seating and anchorage systems, and safety belt use warning systems for rear seating positions.<sup>151</sup> In preference to specific rulemaking, MAP-21 emphasized the importance of NHTSA conducting longer-term research on new and emerging technologies that impact or may impact motor vehicle safety. Towards this end, MAP-21 directed the Agency to establish a "Council for Vehicle Electronics, Vehicle Software, and Emerging Technologies" to "build, integrate, and aggregate the Administration's expertise in passenger motor vehicle electronics and other new and emerging technologies."<sup>152</sup> If lawyers and economists had wrested control of the Agency from safety engineers in the 1970s, maybe the future belonged again to the engineers—so long as they were in the research and development branch. It was almost as if NHTSA was being asked to *develop* safety technologies, or merely to report on what was available, not to adopt performance standards demanding that automakers come up with engineering solutions that would ensure compliance.

### 3. Message Three: Beware the Perils of Force

Unlike statutes providing that NHTSA only consider certain requirements or do further research, the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) demanded action. TEA-21 directed NHTSA to (1) issue new rules requiring advanced air bags that would improve occupant protection for occupants of different sizes; (2) conclude the rulemaking not later than March 1, 2000; and (3) fully implement its mandate as rapidly as practicable, but not later than September 1, 2006.

TEA-21 sounded as if Congress was determined to compel NHTSA to force further innovation in passive protection. As in other cases of the agency-forcing statutes, however, appearances were deceiving. In fact, the discussions leading to TEA-21 contemplated that NHTSA should consider revising its passive protection rule in a manner that could actually weaken it and reduce the security of many passengers. Moreover, far from reaffirming the Agency's technology-forcing mission, TEA-21 signaled deep disquiet in Congress as to

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150. SAFETEA-LU, Pub. L. No. 109-59, §§ 10,303-04, 10,306, 119 Stat. 1144, 1,940-41 (2005) (codified at 49 U.S.C.A. § 30,128 (2012)); H.R. REP. NO. 109-203, at 404 (2005) (Conf. Rep.).

151. MAP-21, Pub. L. No. 112-141, §§ 31,501-03, 126 Stat. 757, 773-75 (2012) (codified at 49 U.S.C. § 30,127 (2012)).

152. *Id.* §§ 31,401-02.

how far it or the Agency should go in deploying the law to compel auto safety innovation.

To understand how Congress and NHTSA arrived at this point, we flash back to ISTEA's mandate seven years earlier that the Agency require full front airbags for both the driver and passenger sides. The Agency and industry had long been aware of the risks that air bags could present to infants, children, and other "out of position" occupants, such as short-statured women and the elderly, who tend to sit close to the steering wheel. The fundamental problem for small people is their proximity to airbags when the airbags deploy, because they do so with monumental speed and force. Before 1990, the risk from airbag deployment had been largely theoretical, but in the early 1990s, industry began in large numbers to install air bags rather than automatic belts as the preferred means of complying with Standard 208's passive restraint requirements. Even then, however, most manufacturers were installing air bags mainly on the driver side, not the passenger side.

At about that moment, Congress jumped on the bandwagon and enacted ISTEA, requiring NHTSA to amend Standard 208 to require airbags not only on the driver's side but also on the passenger side, where many parents placed their small children (often unrestrained or inadequately restrained). This meant that infants and children, as they moved about, were often less than ten inches away from the dashboard and the airbag, the minimum safe distance advised by experts. The Agency nonetheless followed Congress's instructions and amended Standard 208 in accordance with ISTEA in September 1993.<sup>153</sup>

By 1994 reports began to flow in of infants, children, and other small people being crushed by airbags. The mechanisms of injury were vivid and gave rise to compelling imagery in congressional testimony.<sup>154</sup> By the time of congressional hearings leading to TEA-21, NHTSA reported that air bags had been associated with fifty-two deaths, including thirty-two infants and children.<sup>155</sup> Needless to say, NHTSA's critics were outraged and used congressional hearings to vent their anger.<sup>156</sup>

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153. Occupant Crash Protection, 58 Fed. Reg. 46,551, 46,563 (Sept. 2, 1993) (codified at 49 C.F.R. pts. 571, 585).

154. An especially gruesome incident, recognized to be a catalyst for the hearings, was reported by a Boise, Idaho newspaper: "Air Bag Kills Baby Girl." *Air Bag Safety: Hearing Before the S. Comm. on Commerce, Sci. & Transp.*, 105th Cong. 16 (1997)) [hereinafter *Air Bag Safety Hearing*]. The accompanying story reported that a one-year old girl in the front passenger seat was decapitated when an air bag deployed in a "fender bender." *Id.* (statement of Sen. Dirk Kempthorne).

155. *Id.* at 7 (statement of Sen. Bryan). By the time of the rulemaking proceedings contemplated in TEA-21, the Agency had identified 158 fatalities induced by air bags, including ninety-two children, sixty drivers, and six adult passengers. An additional thirty-eight fatalities were under review. 65 Fed. Reg. 30,681 (May 12, 2000).

156. See, e.g., *Reauthorization of the National Highway Traffic Safety Administration: Hearing before the Subcomm. on Telecomm., Trade & Consumer Prot., H. Comm. on Energy & Commerce*, 105th Cong. 32-36 (1997) (statement of Sam Kazman, General Counsel, Competitive Enterprise Institute); James Bovard, *Killing and Lying for Safety: Airbags and the Salvation State*, FUTURE OF FREEDOM FOUND. (Dec. 1, 1997), <http://fff.org/explore-freedom/article/killing-lying-safety-airbags-salvation-state>.

The perception was widespread that the Agency's standard was to blame, even though, as NHTSA pointed out, the industry had known of the problem for decades and Standard 208 had long given manufacturers "significant freedom" to "develop and install means of protecting the wide variety of occupants under a broad range of conditions."<sup>157</sup> But the standard did not require attention to subpopulations, and industry fingered the performance demands of Standard 208 as the culprit, arguing that it required excessive and unjustified air bag inflator power.<sup>158</sup> Other testimony reinforced the impression of regulatory malfeasance. Senator Dirk Kempthorne of Idaho (the state in which a one-year-old girl had been decapitated by an airbag) was especially outspoken. He asked: "Is Alexandra's death a tragedy? Yes. Is this tragedy the result of government regulation? Yes. Is this regulation killing children? Yes."<sup>159</sup> In short, Congress reverted easily to its standard practice of blaming the implementer, not the congressional decision. The hearings on TEA-21 morphed into an occasion for sober reflection on the hazards of forcing technology. A key member of the House put it simply: "Manufacturers need time to design and produce new equipment, and we need to be cautious about new technology so we do not end up in the same situation we are in today because we have prematurely forced a new technology on the American people without fully understanding some of the consequence."<sup>160</sup>

#### 4. Message Four: Blessed Are the Information Providers

While none of the agency-forcing statutes strengthened NHTSA's capacity to deal with the new rulemaking mandates being imposed upon it, the same was not true of its recall powers. Two of the eight agency-forcing statutes—TREAD in 2000 and MAP-21 in 2012—might be better described as recall-empowering statutes. TREAD, for example, imposed stringent new reporting requirements on manufacturers with respect to recalls conducted abroad; directed the Agency to establish an "early warning system" under

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157. Occupant Crash Protection, 65 Fed. Reg. 30,741 (May 12, 2000). The Agency noted that the provisions of Standard 208 mandated by ISTEA "permitted but did not require vehicle manufacturers to develop and use advanced air bag technologies in designing their air bags to minimize the risks from air bags, in particular, the risks of serious injury to unbelted, out-of-position occupants, including children and small drivers." *Id.*

158. See *Air Bag, Car Seats and Child Safety: Hearing Before the Subcomm. on Telecomm., Trade & Consumer Prot. of the H. Comm. on Energy & Commerce*, 105th Cong. 79-80 (1997) [hereinafter *Child Safety Hearing*] (statement of Andrew Card, President, American Automobile Manufacturers Association).

159. *Air Bag Safety Hearing*, *supra* note 154, at 16 (statement of Sen. Dirk Kempthorne).

160. *Child Safety Hearing*, *supra* note 158, at 2 (statement of Rep. W.J. Billy Tauzin, Chairman, Subcomm. on Telecomm., Trade & Consumer Prot.); see also *Air Bag Safety Hearing*, *supra* note 154, at 13-14 (1997) (statement of Sen. Spencer Abraham) (suggesting that the root of the air bag problem was the "very specific" performance standard that auto companies were "forced to meet," and arguing that the executive branch and Congress must be careful not to draft laws and regulations so rigid that they do not give manufacturers flexibility).

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which manufacturers were obliged to provide extensive information at periodic intervals to assist the agency in identifying defects as promptly as possible; increased the cap on civil penalties to fifteen million dollars; lengthened the period of consumers' entitlement to free repair of auto defects from eight to ten years; and imposed criminal penalties (including terms of imprisonment up to fifteen years) for falsifying or withholding information relating to suspected defects.<sup>161</sup>

MAP-21 further upped the recall ante. Among other measures, it increased the cap on civil penalties to thirty-five million dollars; extended the prohibition on importing defective vehicles; required the Agency to disseminate recall information on the Internet in a manner that is searchable; and empowered the Agency to require senior corporate officials responsible for safety to certify the accuracy and completeness of information on safety defects submitted to it. MAP-21 also protected whistleblowers from being penalized by their employers for submitting information to regulators concerning motor vehicle defects; gave priority to manufacturers' recall obligations in bankruptcy proceedings; and directed the Agency to require manufacturers to affix a label to the glove compartment or other accessible location explaining how to submit a defect complaint.<sup>162</sup>

The legislative appetite for strengthening NHTSA's recall powers—while doing nothing to enhance its rulemaking authority (even when imposing sweeping new rulemaking mandates)—cannot have been lost on the Agency. In terms of regulatory technique, recalls are a form of information disclosure. Recalls are coercive with respect to the disclosures manufacturers must make and the corrective action they must take *if* consumers elect to return their vehicles for repair. But that election is entirely up to the consumer. Unlike safety standards, recalls do not require anyone to provide or purchase safety technology that they would not have installed or bought absent safety regulation.

### 5. Message Five: Equal Protection Triumphant

NHTSA could hardly have overlooked another major theme of the agency-forcing era. Equal protection emerged as the prevalent, even dominant ideology of congressional intervention from 1991 to 2012. Recall that five of the eight agency-forcing statutes enacted in this twenty-year period were basically single purpose measures aimed at ensuring that especially vulnerable populations were no less protected than the general population.

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161. TREAD Act, Pub. L. No. 106-414, §§ 3-5, 114 Stat. 1,800, 1,800-04 (2000) (codified at 49 U.S.C. § 30,170 (2012)).

162. MAP-21, Pub. L. No. 112-141, §§ 31,203, 31,207, 31,301, 31,304, 31,306-7, 31,312, 126 Stat. 405, 758-72 (2012) (codified at 49 U.S.C. §§ 30,165, 30,112, 30,166, 30,203, 30,171, 30,120 (2012)).

In fact, even the three omnibus measures—seemingly designed to revive technology forcing—contained provisions resembling the special purpose statutes’ equality focus. Section 2503 of ISTEA, for example, contained a general mandate to improve booster seats and seat belt design for children. Section 14 of the TREAD Act directed NHTSA to initiate the rulemaking process to improve child restraints in various respects not covered by ISTEA.<sup>163</sup> Like its counterpart in ISTEA, the TREAD Act provision sailed through Congress without opposition. The power window provisions of Section 10308 of SAFETEA-LU were also directed at protecting children. Indeed, when it came to protecting children, legislative infatuation with equal protection as a rationale for auto safety sometimes produced puzzling results. For example, Anton’s Law (2002) required NHTSA to undertake rulemaking proceedings that were already underway and that had been mandated in the TREAD Act (2000), enacted only two years earlier.<sup>164</sup>

Congressional concern with vulnerable populations demanded action almost irrespective of either costs or the extent of the problem. Section 2(b) of The Kids Transportation Safety Act of 2007 (KTSA) required NHTSA to undertake a rulemaking to improve rear visibility through the addition of mirrors, cameras, sensors, and other similar technologies. The purpose of the provision was to “enable the driver of a motor vehicle to detect areas behind the motor vehicle to reduce death and injury resulting from backing incidents, particularly incidents involving small children and disabled persons.”<sup>165</sup> Advocacy for the “back-over bill” was driven by the poignant account of a Long Island parent who had backed over his own son.<sup>166</sup>

When NHTSA finally issued a rule in 2014 implementing the mandate, it found that back-over protection (to be provided by rear video systems) would save some thirteen to fifteen lives a year, principally children under the age of five and adults over the age of seventy, once the systems were installed in the entire fleet. The cost was \$132 to \$142 per car for an overall fleet cost of \$546 million to \$620 million. Simple division yields an estimated net cost per life saved of \$15.9 million to \$26.3 million, three to four times the Agency’s standard value of life when conducting rulemaking cost-benefit analyses.<sup>167</sup>

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163. TREAD Act, Pub. L. No. 106-414, § 14, 114 Stat. 1,800, 1,806-08 (2000) (codified at 49 U.S.C. § 30,170 (2012)).

164. Anton’s Law, Pub. L. No. 107-318, § 3, 116 Stat. 2,772, 2,772-73 (2002) (codified as amended at 49 U.S.C. § 30,127 (2012)); *Booster Seats and the Forgotten Child: Closing A Safety Gap: Hearing before the Subcomm. on Consumer Affairs, Foreign Commerce & Tourism of the S. Comm. on Commerce, Sci. & Transp.*, 107th Cong. 5 (2001) (statement of L. Robert Shelton, Executive Director, NHTSA) (describing NHTSA’s implementation of child passenger safety improvements under the TREAD Act).

165. KTSA, Pub. L. No. 110-189, § 2(b), 122 Stat. 639, 639-40 (2008) (codified as amended at 49 U.S.C. § 30,111 (2012)).

166. See 153 CONG. REC. H16873 (daily ed. Dec. 19, 2007) (statement of Rep. Schakowsky).

167. Rear Visibility, 79 Fed. Reg. 19,178, 19,191 (Apr. 7, 2014) (codified at 49 C.F.R. pt. 571).



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Here, as in other circumstances, NHTSA received signals from Congress that contradicted its instructions from its overseers in the executive branch. A rule with that cost-benefit ratio would never have satisfied the regulatory review analysts at OMB.<sup>168</sup>

### 6. Message Six: Don't Call Us, We'll Call You

One peculiarity of the agency-forcing era is especially striking: its prolonged duration and the frequency with which Congress felt it necessary to set the Agency's agenda. One might reasonably assume, after all, that NHTSA would at some point take notice, perhaps within the first decade after the passage of ISTEA, TEA-21, and the TREAD Act, such that further prodding for another twelve years and five more statutes would be unnecessary. Taken at face value, the agency-forcing era seemed to depict NHTSA as something of a dim-witted pupil, its learning curve so flat that even after twenty years it still needed to be reminded at regular intervals that its main mission was issuing rules. But legislative mandates may have had an entirely different political dynamic. Rather than a general message of "do something," the interpretation of these interventions should perhaps have been "agencies are to be seen, not heard—adopt rules only when asked."

Some flavor of this sort of inter-institutional understanding appears in the testimony of NHTSA Administrator Sue Bailey in the context of the TREAD Act. She testified that the Agency welcomed "legislative support" to upgrade its tire resistance and endurance standards<sup>169</sup>—support that was wholly gratuitous given the Agency's obvious legislative authority to undertake the upgrade without congressional involvement. Equally suggestive was the testimony of Representative Shimkus, again in the context of the TREAD Act's passage, warning NHTSA not to regulate motorcycle helmets or equipment, something that was well within the Agency's statutory authority. Shimkus advised, "[W]hen Congress has an intent to do that we will pass legislation to direct that."<sup>170</sup>

Given Congress's proclivity for abruptly reversing course with little or no explanation, waiting for instructions may well have been the path of prudence. Both in 1978 and 1979, for example, Congress included language in DOT

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168. NHTSA has made it clear that it hears the congressional message on equal protection loud and clear, however dissonant it may be with the executive's insistence on cost-benefit analysis. Only a few years ago, the NHTSA Administrator told Congress, "We develop our research and rulemaking priorities by focusing on the most significant safety risks, particularly vulnerable populations and high occupancy vehicle issues." *Improving Highway and Vehicle Safety: Reauthorization of the National Highway Traffic Safety Administration: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, and Ins. of the S. Comm. on Commerce, Sci. & Transp.*, 112th Cong. 7 (2011) (statement of David L. Strickland, Administrator, NHTSA) (emphasis added).

169. 2000 House Firestone Tire Recall Hearing, *supra* note 122, at 1,277 (statement of Sue Bailey, Administrator, NHTSA).

170. TREAD Implementation Hearing, *supra* note 141, at 7 (statement of Rep. John Shimkus).

appropriations bills that barred the Agency from using appropriated funds to enforce Standard 208.<sup>171</sup> From a technology standpoint, little had changed when, roughly twelve years later, Congress demanded that NHTSA amend Standard 208 to require air bags in both front positions.

Rollover protection presented a similar case of congressional flip-flopping. Following its 1994 abandonment of rulemaking to establish a performance standard on the issue, the Agency shifted its attention to gathering data on the rollover tendencies of various models for dissemination to prospective vehicle purchasers under the NCAP program. Congress promptly responded by adopting an appropriations rider barring the Agency from using appropriated funds for this purpose until the National Academy of Sciences had studied the issue.<sup>172</sup> Then in 2000, Congress enacted the TREAD Act, directing NHTSA to develop “a dynamic test on rollovers by motor vehicles for the purposes of a consumer information program” within two years and promptly to determine “how best to disseminate test results to the public.”<sup>173</sup> In the period of about five years, NHTSA had effectively gone from being prohibited from disseminating information on rollover tendencies to being ordered to do so.

Looking back, the Agency undoubtedly understood that the political winds could shift at any time. After all, this had been the lesson of 1974. Now, as the Ice Age drew to a close, the Agency faced an even starker contrast: the shift from the do-nothing zeitgeist of the Reagan-Dingell era to multiple demands for action of the agency-forcing era. But NHTSA was making its way up legal culture’s learning curve. The Agency would take steps to protect itself from the political and legal hazards that potentially lay ahead in implementing the mandates of a fickle Congress while simultaneously being subject to a cost-conscious OMB and the demands for scientific certainty of a skeptical judiciary.

## V. The Post-Glacial, Co-Regulatory Rebound

Prodded by legislative demands to rule quickly, the Agency adopted eight “major” rules between 2003 and 2013. All eight rules largely codified technology that industry had already implemented, was in the process of implementing, had voluntarily promised to implement in the near future, or could implement easily based on existing technologies. In effect, faced with repeated congressional demands to act, NHTSA pivoted to demand that

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171. See DOT and Related Agencies Appropriations Act, Pub. L. No. 95-335, § 317, 92 Stat. 435, 450 (1978); DOT and Related Agencies Appropriations Act, Pub. L. No. 96-131, § 317(a), 93 Stat. 1,023, 1,039 (1980).

172. See Nat’l Highway Traffic Safety Admin., *Rulemaking History*, U.S. DEP’T TRANSP., <http://www.nhtsa.gov/cars/rules/rulings/rollover/Chapt03.html> (last visited Nov. 6, 2016).

173. TREAD, Pub. L. No. 106-414, § 12, 114 Stat. 1,800, 1,806 (2000) (codified at 49 U.S.C. § 30,117(c)(1)(A) (2012)).

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industry do what it had already done, was in the process of doing, or had promised to do to a greater extent. From the perspective of 1966, this strategy is a form of illusory rulemaking that betrays MVSA's technology-forcing purposes. More fundamentally, it suggests that the Agency's rulemaking activities may at this point have become largely superfluous. Apart from possible accelerative effects, the gains being made in auto safety may have occurred whether or not NHTSA had adopted these rules.

Nudging the status quo forward in this way was, however, an adroit move in the Agency's long quest for "public acceptability" and conflict avoidance with its overseers. It also plugged directly into the historic egalitarian rationale for auto safety regulation. For many years, safety innovations have tended to be introduced first in luxury cars and then to spread slowly into lower priced lines. By accelerating this process, NHTSA was able to place itself on the side of the angels, ensuring that persons of modest or middling means would enjoy some of the same protections initially afforded only to their more affluent compatriots.

Neither the public, nor Congress, nor the executive branch was likely to object. In effect, the Agency combined technology forcing and equal protection into a new hybrid regulatory strategy of technology diffusion that was well suited to survival in its turbulent legal and political environment. This strategy also proved to be an effective adaptation to the challenges of pre-enforcement judicial review. How could a company plausibly complain that NHTSA's measures were impractical or unreasonable when much of the industry was already implementing them? Rules codifying widespread industry practice might come at the cost of more ambitious innovation, but they provided a safe harbor from courts' disruptive interference.

That is the story in broad outline, but details matter. Counting an agency's major rules does not reveal much about regulatory ambitions or effects. Strangely enough, neither does attention to general reports calculating the costs and benefits of rules nor the number of lives supposedly saved by their adoption. Without looking at the substance of the rules and the technological and market contexts in which they were adopted, analysts can easily misinterpret how much is being accomplished when an agency adds "Final Rule" pages to the *Federal Register*.

### A. Overview

In 2013, the Office of Management and Budget (OMB) released a report to Congress covering the "major" rules issued by NHTSA during the period October 1, 2002 to September 30, 2011.<sup>174</sup> It reported (based on NHTSA's

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174. OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES (2013),

estimates) that the eight major safety rules promulgated by the Agency in that period had in the aggregate imposed annual costs between \$3.687 to \$7.261 billion and yielded annual benefits in the range of \$11.158 to \$19.086 billion.<sup>175</sup> OMB reported precisely the same data with respect to NHTSA's major safety rules in its 2014 and 2015 reports. No new major rules were issued in those subsequent years; hence the cost and benefit data on NHTSA's major safety rules reported in 2013 apply to the period from October 1, 2002 to September 30, 2013.<sup>176</sup>

Taken at face value, these numbers suggest that NHTSA today is an energetic rulemaking agency generating standards that might impress even the most ardent proponents of cost-benefit analysis. A closer look at the data chronicled in the OMB report, however, suggests a different conclusion. It is hardly an exaggeration to suggest that the technology of vehicle safety in America in the second decade of the twenty-first century might have looked almost the same had the rebound never occurred.

Seven of the eight standards were in direct response to congressional mandates. An eighth (the tightening of braking distances for trucks) was closely tied to an agency-forcing statute. And as noted, all of the standards largely codified technology that industry had implemented, was in the process of implementing, or had voluntarily promised to implement in the near future. In some cases, the rulemaking record only makes clear that the technology was, according to NHTSA, "mature" and already in widespread use. In other cases, the record is specific as to the degree of penetration already being achieved or promised, occasionally approaching one hundred percent.

We are doubtful that many of the costs and benefits attributed to the rules in the OMB report meet a "but-for" test of causation. Two standard practices by OMB and NHTSA explain why these numbers are almost certainly grossly inflated. First, OMB in its yearly reports on regulatory actions, as required by the Unfunded Mandates Act, simply reports agency cost-benefit estimates, without further analysis, provided the Agency monetizes them in its regulatory analysis. Second, NHTSA declines to predict voluntary behavior in the future for which it has no direct evidence. It thus ignores what industry might have

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[https://www.whitehouse.gov/sites/default/files/omb/inforeg/2013\\_cb/2013\\_cost\\_benefit\\_report\\_updated.pdf](https://www.whitehouse.gov/sites/default/files/omb/inforeg/2013_cb/2013_cost_benefit_report_updated.pdf)

175. *Id.* at 101-02 tbl.A-2. The cost and benefit estimates are expressed in 2001 dollars.

176. The data on NHTSA's major safety rules in the 2014 OMB report can be found at OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES 100 tbl.A-2 (2014), [https://www.whitehouse.gov/sites/default/files/omb/inforeg/2014\\_cb/2014-cost-benefit-report.pdf](https://www.whitehouse.gov/sites/default/files/omb/inforeg/2014_cb/2014-cost-benefit-report.pdf).

The data on HNTSA's major safety rules in the 2015 OMB report can be found at OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND UNFUNDED MANDATES ON STATE 91 tbl.A-2 (2015), [https://www.whitehouse.gov/sites/default/files/omb/inforeg/2015\\_cb/2015-cost-benefit-report.pdf](https://www.whitehouse.gov/sites/default/files/omb/inforeg/2015_cb/2015-cost-benefit-report.pdf) [hereinafter 2015 OMB REPORT].

done absent its rules. In short, without a closer look, these numbers cannot be taken as reflecting vigorous rulemaking at NHTSA, and certainly not as demonstrating that the Agency was back in the technology-forcing business. A more granular inquiry is required.

### *B. Survival of the Meekest—Some Case Studies*

Properly understood, the major rules cited by OMB reflect an agency energetically and imaginatively adapting by developing a form of rulemaking that was modest in its safety impact but exquisitely responsive both to congressional commands and potential legal risks. Mandating what the status quo has established as a practicable, even dominant, addition to vehicle safety design or equipment is a strategy for the meek, but it was also one that enabled NHTSA to avoid judicial review and inherit the earth in the post-Glacial period. Moreover, a closer look at the rules reveals that the Agency's adaptive mechanisms were multifaceted. NHTSA developed several variations on the theme of litigation avoidance and evasion of conflict with its legislative and executive supervisors.

#### 1. Variation One: Codifying Industry Practice

##### a. Electronic Stability Control (ESC)

The predominant form of NHTSA's low-to-no-risk rulemaking model was the codification of existing industry practice. The standard on electronic stability control (ESC), FMVSS 126, provides a case study in the development of this model. FMVSS 126 was mandated by Section 10301 of SAFETEA-LU.<sup>177</sup> In its final form, the standard required the installation of automatic computer-controlled braking of individual wheels, which would assist drivers when they were at risk of losing directional stability and control. The standard applied to all passenger cars, multiple purpose vehicles, trucks, and buses weighing 10,000 pounds or less ("light vehicles" in auto-safety speak). FMVSS 126 accounted for *over half* of the benefits (\$5.987-\$11.282 billion per year) claimed by NHTSA for the *entire* decade from 2003 to 2013, but only a modest portion of the costs (\$913-\$917 million per year).

FMVSS 216 made it seem as if NHTSA had at last found the Holy Grail of rulemaking. The standard was completed in record time. The Agency issued its notice of proposed rulemaking (NPRM) in September 2006<sup>178</sup> and its final

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177. SAFETEA-LU, Pub. L. No. 109-59, § 10,301, 119 Stat. 1,144, 1,939-40 (2005) (codified at 49 U.S.C. § 30,128 (2012)).

178. Electronic Stability Control Systems, 71 Fed. Reg. 54,712 (Sept. 18, 2006) (codified at 49 C.F.R. pts. 571, 585).

rule in April 2007, only seven months later.<sup>179</sup> The anticipated safety benefits of the standard were breathtaking. The installation of ESC systems in all light vehicles would save 5,300 to 9,600 lives and prevent 156,000 to 238,000 injuries in all types of crashes annually.

Even better, FMVSS 126 was among the most cost-effective rules NHTSA had ever issued. The Agency estimated that the production-weighted average cost per vehicle to meet the proposed requirements was only fifty-eight dollars (\$90.3 per passenger car and \$29.2 per light truck). Most impressive of all was the tight three-year phase-in implementation schedule that NHTSA demanded: fifty-five percent compliance by 2009; seventy-five percent compliance by 2010; and ninety-five percent compliance by 2011. After 2011, all light vehicles produced by manufacturers for sale in the United States were required to include ESC.

While scattered opposition existed, NHTSA noted cheerfully that “the overwhelming majority of the commenters supported establishing a safety standard for ESC systems as required equipment on new light vehicles.”<sup>180</sup> One reason for the nearly universal popularity of the standard might have been that it required very little, if any, improvement in the “mature and effective technology” that industry was already deploying.<sup>181</sup> As NHTSA noted, at the time of the rule’s preparation, manufacturers had already installed ESC in twenty-nine percent of MY 2006 light vehicles sold in the United States, and they intended to increase that proportion to seventy-one percent by MY 2011, the final year of the rule’s phase-in period.

FMVSS 126 modestly accelerated the schedule by requiring installation of ESC in all light vehicles by MY 2012, albeit with exceptions for some vehicles manufactured in stages or by small volume manufacturers. But this deadline was unlikely to cause any inconvenience. As the agency noted, the phase-in matched the normal manufacturers’ production cycle.<sup>182</sup> Moreover, the definition of an ESC system was taken from the Society of Automotive Engineers (SAE) Surface Vehicle Information Report J2564,<sup>183</sup> while the performance test was based on the actual performance of ESC systems already installed in MY 2006 vehicles.<sup>184</sup> Using the industry’s own voluntary standards and ratifying its almost uniform practice is unlikely to be controversial—at least with the “regulated” parties.

Of course, this meant that the lives-to-be-saved attributable to the rule were far fewer than the lives that were being saved anyway due to industry practice and plans. NHTSA stated that it “would attribute 1,547 to 2,534

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179. Electronic Stability Control Systems; Controls and Displays, 72 Fed. Reg. 17,236 (Apr. 6, 2007) (codified at 49 C.F.R. pts. 571, 585).

180. *Id.* at 17,250.

181. *Id.* at 17,242.

182. *Id.* at 17,251-52.

183. *Id.* at 17,238, 17,248.

184. *Id.* at 17,239 n.9.

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prevented fatalities . . . to this rulemaking, in addition to the prevention of 46,896 to 65,801 injuries,” apparently on the rationale that it was increasing the percentage of light vehicles with ESC from 71% to 100%.<sup>185</sup> But, of course, even this pro rata attribution involved a peculiar assumption.

The Agency could only claim ongoing annual credit if it assumed that industry would have stopped at seventy-one percent implementation forever, absent the intervention of FMVSS 126. In fact, the record clearly establishes that would not be the case. Ford, for example, announced well before the standard was issued that it was proceeding to one hundred percent installation of ESC in its fleet.<sup>186</sup> Given ESC’s extremely modest cost and the possibility of design defect liability for not installing a technology that would be the overwhelming industry standard, it is hard to construct a scenario in which manufacturers would not have followed Ford’s lead. In fact, simply extrapolating the trend line from the industry’s past uptake of ESC from 2003 through 2006, through the estimated penetration rate of seventy-one percent by 2011, suggests that industry would have reached full adoption anyway sometime between 2012 and 2015 without regulation.<sup>187</sup>

NHTSA could, however, be certain of one thing concerning its ESC rule. Manufacturers were unlikely to sue the Agency for requiring them to do what they were already doing. Under the rule it framed, ninety-eight percent of existing stability control systems met the Agency’s technical standards.<sup>188</sup> Clearly, courts were unlikely to find a rule that was based on an industry consensus standard and codified such widespread industry practice arbitrary, capricious, unreasonable, or impracticable. And the cost-benefit numbers made the rule a poster child for “efficient” regulation. OMB could hardly object. Nor could Congress—it asked for a rule and got one. NHTSA had found the perfect formula for avoiding trouble with political or judicial overseers: responding to a specific legislative mandate with insistence on the status quo in a way that drained industry of any motive to sue and drastically reduced the prospect of success if it did. It was a formula that NHTSA would use more than once.

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185. *Id.* at 17,236.

186. *Id.* at 17,251 n.38.

187. It is difficult to reach this conclusion with certainty because manufacturers’ production plans submitted to NHTSA are treated as trade secrets, and the Agency has not divulged them to us, notwithstanding the passage of time. We would note that the final rule actually accelerated the implementation schedule that the Agency initially had proposed; the Agency itself acknowledged that this was due to the production plans submitted by six manufacturers. While the NPRM proposed thirty percent compliance in MY 2009, sixty percent in MY 2010, ninety percent in MY 2011, and full adoption in MY 2012, the updated rule required fifty-five percent compliance in MY 2009, seventy-five percent in MY 2010, ninety-five percent in MY 2011, and full adoption in MY 2012. *Id.* at 17,239-40240; *see also* NHTSA, Final Regulatory Impact Analysis, FMVSS No. 126 Electronic Stability Control Systems, at V-22 to V-23 & n.49 (March 2007) (listing the proposed phase in schedule).

188. Electronic Stability Control Systems, 71 Fed. Reg. 54,722 (Sept. 18, 2006) (codified at 49 C.F.R. pts. 571, 585).

## b. Ejection Mitigation

The efficacy, from NHTSA's perspective, of demanding the existing or anticipated status quo is also demonstrated by the second-most beneficial measure cited by OMB, FMVSS 226, which regulates side impact protection.<sup>189</sup> The Agency was frank that compliance would probably be achieved using "existing technology" that had been introduced in 2002, initially by Ford, and that FMVSS 214 now required on-side impact protection. The Agency stated that it "anticipat[ed] that manufacturers [would] meet the standard by modifying existing side impact airbag curtains and possibly supplementing them with advanced glazing."<sup>190</sup> Under FMVSS 226, manufacturers would be given *seven* more years (until September 2017) to make necessary improvements to their side curtains (principally by making them larger, extending inflation times, and tethering them more tightly to the vehicle's pillars) and install them in all cars.<sup>191</sup>

To be sure, the ejection mitigation rule was not an exact rerun of the ESC rule, where ninety-eight percent of existing systems already met the standard NHTSA was imposing. The ejection mitigation rule did require industry to up its game, modestly. NHTSA provided data indicating the number of vehicles that industry already planned to equip with certain elements of the rule. For example, by MY 2011, fifty-five percent of manufacturers vehicles would be equipped with combination air bags, perhaps the most expensive part of the cost of meeting the ejection mitigation test. In MY 2007, rollover sensors were available on sixty-five percent of models.<sup>192</sup> And NHTSA significantly relaxed the final rule specifically to accommodate "existing designs."<sup>193</sup> It also dropped plans to apply the rule to convertibles, following what might reasonably have been interpreted as a threat of litigation.<sup>194</sup>

During the comment period on the rule, certain glazing manufacturers and consumer groups commented that NHTSA was not satisfying the congressional

189. Ejection Mitigation; Phase-In Reporting Requirements, 76 Fed. Reg. 3,212 (Jan. 19, 2011) (codified at 49 C.F.R. pts. 571, 585) [hereinafter 76 Fed. Reg. 3,212]. NHTSA estimated that the Ejection Mitigation rule would generate benefits in the range of \$1.5 billion to \$2.375 billion per year at a cost of \$419 million to 1.373 billion per year. See 2015 OMB REPORT, *supra* note 176, at 91 tbl.A-2.

190. 76 Fed. Reg. 3,212, *supra* note 189, at 3,212.

191. Office of Regulatory Analysis & Evaluation, *Final Regulatory Impact Analysis, FMVSS No. 226, Ejection Mitigation*, NAT'L CTR. FOR STATISTICS & ANALYSIS, 4-7 (2011), <http://www.regulations.gov/document?D=NHTSA-2011-0004-0003>.

192. *Id.* at iii, 2.

193. 76 Fed. Reg. 3,221, 3,287 (Jan. 19, 2011) (codified at 49 C.F.R. pts. 571, 585) (concluding that lowering the speed test for the 1.5 second impact from 24 km/h to 20 km/h would require "fewer changes" to "existing designs").

194. Scott Schmidt, Director, Alliance of Automobile Manufacturers, Comment Letter on Proposed Rule for Ejection Mitigation at 10 (Feb. 1, 2010) (citing *Chrysler v. U.S. Dep't of Transp.*, 472 F.2d 659 (6th Cir. 1972)), <http://www.regulations.gov/document?D=NHTSA-2009-0183-0029> (urging that convertibles could not meet ejection mitigation standard and noting *Chrysler* court's finding that standards must not be used to bring about the extinction of classes of vehicles like convertibles).



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direction in SAFETEA-LU because the rulemaking did not address ejections through sun roofs, moon roofs, and rear windows. The Agency responded by reminding the commentators that the Act's reasonableness, practicability, and appropriateness standards had not been relaxed, and that NHTSA lacked real world data concerning the injuries and deaths that are associated with ejections from vehicles other than through the side windows.<sup>195</sup> Whether or not persuaded by these observations, no consumer group, or anyone else, sued.

### c. Side Impact Protection

The upgrade of FMVSS 214, yet another “major” rule,<sup>196</sup> took the model of codifying industry practice and plans to new heights. In December 2003, the Alliance of Automobile Manufacturers (industry's principal trade association) and the Insurance Institute for Highway Safety announced a “new voluntary industry safety commitment to meet new performance criteria designed to enhance occupant protection in front- and side-impact crashes.”<sup>197</sup> The participating companies promised that by September 1, 2007, at least half of the vehicles offered by them for the U.S. domestic market would meet the front-to-side performance criteria, and that by September 1, 2009, all such vehicles would do so.

Industry's voluntary agreement precipitated a race between Congress and the Agency to see who would be first to order industry to do what it was already promising to do voluntarily. Six months after industry's voluntary undertaking, NHTSA issued a notice of proposed rulemaking,<sup>198</sup> stating its intention to upgrade FMVSS 214 to improve protection in side impact crashes. Fourteen months later, Congress adopted SAFETEA-LU. Section 10302 required the Agency to complete a rulemaking no later than July 1, 2008 that would “establish a standard designed to enhance passenger motor vehicle occupant protection, in all seating positions, in side impact crashes.”<sup>199</sup>

In September 2007, the Agency published its revision of FMVSS 214, which added a pole test that, in practical terms, required the deployment of air bag curtains, torso airbags, and other similar devices.<sup>200</sup> In announcing its final rule, NHTSA was careful to assure industry that nothing in the rule would upset

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195. 76 Fed. Reg. 3,218-19 (Jan. 19, 2011) (codified at 49 C.F.R. pts. 571, 585).

196. NHTSA estimated that the benefits of the side impact protection rule would range from \$736 million to \$1.058 billion per year, and cost from \$401 million to \$1.051 billion per year. 2015 OMB REPORT, *supra* note 176, at 91 tbl.A-2.

197. *Automakers Enhance Occupant Safety with New Voluntary Commitment*, PRNEWswire (Dec. 4, 2003), <http://www.prnewswire.com/news-releases/automakers-enhance-occupant-safety-with-new-voluntary-commitment-73209802.html>.

198. Side Impact Protection; Side Impact Phase-In Reporting Requirements, 69 Fed. Reg. 27,990, 27,992 (May 17, 2004) (codified at 49 C.F.R. pts. 571, 598).

199. SAFETEA-LU, Pub. L. No. 109-59, § 10,302, 119 Stat. 1,144, 1,940 (2005) (codified at 49 U.S.C. § 3,010 (2012)).

200. Reporting Requirements, 72 Fed. Reg. 51,908 (Sept. 11, 2007) (codified at 49 C.F.R. pts. 571, 585).

what industry was already doing. The rule would “broaden and fortify” industry’s voluntary efforts.<sup>201</sup> NHTSA’s own analysis indicates that it was not really bringing much to the party.

To be sure, the rule did somewhat more than simply codify what industry had already promised to do. The prescribed test dummy was a new model developed by European vehicle safety agencies and the industry’s 2003 commitment concerned only the driver’s seating position and head injuries. NHTSA’s new rule applied to the front seat passenger position and measured forces exerted on the thoracic and abdominal regions as well. But again, it is difficult to imagine manufacturers only installing driver protections given obvious liability issues and a market in which they seemed to be competing to see how many airbags they could cram into a vehicle. Thirty-eight percent of passenger cars had side airbags that would protect the thoracic and abdominal regions as early as 2002.<sup>202</sup>

NHTSA’s preamble to the side impact protection rule seemed also to advance this cooperative regulatory model as the preferred approach to setting vehicle safety standards. Industry would be in the lead, picking the safety technology targets, with NHTSA providing standardized testing procedures and regulatory incentives to diffuse safety technologies more broadly or on a somewhat faster timetable. The preamble explained:

Through voluntary efforts, manufacturers are able to begin equipping vehicles with advanced technologies and are able to advance safety more quickly than through the regulatory process. In formulating this regulation, we have been mindful to remain consistent with the technological advances upon which the industry’s voluntary commitments were based so as not to discourage further implementation while manufacturers develop designs and technologies that are able to comply with this regulation. This regulation builds on the same technologies that will be used by the industry to meet its voluntary commitment, and takes them even further.<sup>203</sup>

Indeed, events were moving so quickly that the Agency decided to shorten the lead time by half, to two years. Ordinarily, halving the compliance period and making it shorter than the normal design period for introducing new models would have caused an industry uproar. Not here. After making multiple technical objections to many aspects of the rule and questioning its “practicability,”<sup>204</sup> the industry then generally supported the phase-in schedule.<sup>205</sup>

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201. *Id.* at 51,910.

202. 69 Fed. Reg. at 27,993 n.10.

203. 72 Fed. Reg. at 51,910.

204. *Id.* at 51,938.

205. *See id.* at 51,945. The manufacturers subsequently rethought their acquiescence and were granted a year’s delay in starting the phase-in and additional year to complete compliance.

### 2. Variation Two: Codifying Foreign Rules

The revision of FMVSS 121, another of the eight major rules cited by OMB in the post-Glacial period, was estimated to have generated benefits of \$1.25 to \$1.52 billion at a cost of \$23 to \$164 million.<sup>206</sup> FMVSS 121 was among NHTSA's most ambitious technology-forcing standards of early 1970s. Its supposed "upgrade" thirty years later to require a thirty percent improvement in the mandatory stopping distances of heavy vehicles was the culmination of one of the most tortured proceedings in NHTSA history.

The saga of FMVSS 121 goes back to 1967, when the Agency grew concerned about accidents involving large trucks and other heavy vehicles. In 1970, the Agency announced its intention to require manufacturers to equip heavy vehicles with brakes (air brakes or hydraulic brakes) that were capable of stopping from a speed of sixty miles per hour within a distance of 216 feet, without locking. The Agency anticipated that that compliance would be achieved by means of antilock braking systems (ABS), a new and evolving technology. ABS was widely used on commercial aircraft, but not on motor vehicles.

From the very start, the Agency encountered stiff industry resistance, which it sought to address by weakening requirements and extending the compliance deadline.<sup>207</sup> Notwithstanding NHTSA's concessions, on January 1, 1975, PACCAR, a heavy vehicle manufacturer, and others sued the NHTSA in the Ninth Circuit, arguing that various provisions of the standard were not objective, reasonable, or practicable. In its judgment, rendered three years later, the court agreed with the plaintiffs.<sup>208</sup> It wrote, "We hold only that more probative and convincing data evidencing the reliability and safety of vehicles that are equipped with antilock and in use must be available before the agency can enforce a standard requiring its installation."<sup>209</sup>

The Court may have thought this was a limited ruling, but in context it left NHTSA in an evidentiary black hole. As NHTSA later remarked, "As a result of the *PACCAR* decision, U.S. manufacturers chose to halt development and production of ABS for heavy vehicles. For instance, before the 1978 ruling, A-C Sparkplug, a domestic manufacturer of ABS, produced about 180,000 units per year. By 1984, it was producing only about 500 units annually."<sup>210</sup>

The court's demand for real-world proof of the standard's practicability removed industry's incentive to produce the very technologies that could

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Safety equipment that some manufacturers had begun installing in 1996 would be in the entire fleet by 2015.

206. 2015 OMB REPORT, *supra* note 176, at 91 tbl.A-2.

207. See *Stability and Control of Medium and Heavy Vehicles During Braking*, 60 Fed. Reg. 13,216, 13,219 (Mar. 10, 1995) (codified at 49 C.F.R. pt. 571).

208. *PACCAR v. NHTSA*, 573 F.2d 632 (9<sup>th</sup> Cir. 1978).

209. *Id.* at 643.

210. 60 Fed. Reg. at 13,219.

ultimately generate the proof the court required. All was not lost however. The court's judgment did not apply beyond the United States, and manufacturers in the rest of the world, most notably in Europe and Australia, continued to develop ABS technology. By 1991, thirteen years after *PACCAR*, the Agency informed Congress that it was now able to evaluate in-use experience with ABS in Europe (1.5 million units deployed) and Australia (900,000 units deployed). Manufacturers were reporting that the systems were "generally reliable."<sup>211</sup> Congress responded by mandating that NHTSA revisit the issue.

In March 1995, pursuant to ISTEA, NHTSA adopted an ABS standard for air brakes and hydraulic brakes that effectively mandated the ABS technology required by an European Economic Community (EEC) Directive.<sup>212</sup> Stopping distances were again relaxed, and the Agency assured industry that the new requirements could be distinguished from those invalidated in *PACCAR* because manufacturers would not need to significantly redesign the brakes in use or use overly aggressive brakes to comply with the rule.

Nearly fifteen more years passed. Then, in 2009, NHTSA decided to tweak the distance stopping requirements further in a rulemaking cited in the OMB report as one of the eight "major" rules adopted by NHTSA from 2003 to 2013.<sup>213</sup> The new requirements applied only to air brakes on tractor trailers, and provided for a thirty percent reduction of the stopping distances adopted in 1995. Thus, under the new rule, ninety-nine percent of the tractor-trailer fleet would be required to meet the stopping distance it had first effectively proposed in 1971.<sup>214</sup>

The Agency again reassured industry that there was no need to fret about the new requirements because "[t]here are a number of simple and effective manufacturing solutions that vehicle manufacturers can use to meet the requirements of this final rule."<sup>215</sup> No new technology would be required. NHTSA "tentatively concluded that truck tractors are capable of achieving a reduction in stopping distance within this range [250 feet from a speed of sixty miles per hour] with existing technologies."<sup>216</sup> Industry was generally supportive of the upgrade and tended to agree it would not be disruptive.<sup>217</sup> The regulation gave manufacturers until 2011 or 2013 (depending on the number of

211. *Id.* at 13,220.

212. *See id.* at 13,216.

213. 74 Fed. Reg. 51,910 (July 27, 2009).

214. The tortured history of the early standard is recounted in detail in *Paccar v. NHTSA*, 573 F.2d 632 (1978). The agency initially proposed a stopping distance of 217 feet, which was extended to 245 feet in 1971, to 258 feet in 1974, to 277 feet in 1975, and then to 293 feet in 1976. This last rendition of the standard was the one challenged in the *PACCAR* case.

215. Air Brake Systems, 74 Fed. Reg. 37,122, 37,122 (July 27, 2009) (codified at 49 C.F.R. pt. 571).

216. Air Brake Systems, 70 Fed. Reg. 74,270, 74,270 (Dec. 15, 2005) (codified at 49 C.F.R. pt. 571).

217. *See, e.g.*, Jim Tipka, Vice President, American Trucking Associations, Inc., Comment Letter on Federal Motor Vehicle Safety Standard No. 121, (Apr. 14, 2006), <https://www.regulations.gov/document?D=NHTSA-2005-21462-0028>.

axles on their vehicles) to comply, almost forty years after NHTSA had first proposed effectively the same stopping distance.

### 3. Variation Three: Take a Page from *State Farm*

To understand NHTSA's next innovation in adapting to legal culture, we need to step back once again to the Supreme Court's *State Farm* decision<sup>218</sup> as a reference point. Some readers will remember that *State Farm* was brought by safety proponents seeking implementation of Standard 208 (the lead plaintiff was State Farm Mutual Insurance Company), rather than manufacturers resisting regulation. The version of Standard 208 at issue had required passive protection of vehicle occupants, but left the choice of technology to manufacturers.

When manufacturers opted for passive seat belts with a buckle release mechanism much like manual seat belts, the Reagan Administration kept its campaign promise to provide regulatory relief to the automobile industry and rescinded the rule. The articulated rationale was that the same vehicle drivers who had hated the ignition interlock and failed to use the manual belts already in their cars would likely disable the passive belts by simply unbuckling them. At that point, they effectively became manual belts. The Agency reasoned that there was thus no clearly predictable safety gain from requiring passive restraints and therefore no reason to go forward with the passive restraints rule.

As the plaintiffs in *State Farm* pointed out, however, an available passive technology already existed—the air bag—that imposed no visible restrictions to infuriate drivers. Even better, air bags were virtually indefeasible. Moreover, the Agency, acting at the direction of its political overseers, never explained why it had to live with the manufacturers' choice. Both airbags and continuous spool belts were available technologies that would avoid the unbuckled, automatic-belt problem. The Court therefore invalidated the rescission in part because the Agency had given no reason why the standard should not require either of these technologies.

With this background, we now turn to another of the rules cited by OMB as “major,” the tire pressure warning rule.<sup>219</sup> To see how this rule tracks the *State Farm* experience, fast forward to November 2000. The TREAD Act required NHTSA to commence a rulemaking requiring tire inflation warning systems. NHTSA was thus back in business on a topic it had dropped nearly

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218. *Motor Vehicle Mfrs. Assoc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983).

219. NHTSA estimated that the benefits of the rule on tire pressure warning would run from \$1.012 billion to \$1.316 billion per year and would cost from \$938 million to \$2.282 billion per year. 2015 OMB REPORT, *supra* note 176, at 91 tbl.A-2.

two decades earlier because systems then available were considered either unreliable or too expensive.<sup>220</sup>

In response to the TREAD Act, NHTSA issued an NPRM in July 2001.<sup>221</sup> By then, NHTSA had evidence that motorists seldom checked the pressure of their tires and that perhaps twenty percent of passenger vehicles and light trucks had at least one tire that was under-inflated. Conspicuously absent was any data on the contribution of under-inflated tires to vehicular deaths and injuries. NHTSA's research center, however, had issued a report in May 2001 which found that during the two decades following the termination of NHTSA's earlier rulemaking proceedings, the technology of tire pressure warning devices had substantially improved.<sup>222</sup> Whether or not there was a problem, there was a solution, now coupled with a congressional mandate to do something.

The final rule, issued in June 2002, contemplated the use of two different technological approaches.<sup>223</sup> The so-called "direct technology" option relied on sensors in the tires themselves. The "indirect" method worked in conjunction with ABS braking systems, already installed in sixty-seven percent of passenger vehicles and light trucks.<sup>224</sup> From a safety perspective, the direct alternative was obviously superior. It provided warnings in all circumstances and was estimated to save 124 lives and reduce the severity of 8,722 injuries annually.<sup>225</sup> The indirect system would provide warnings in only about fifty percent of cases of under-inflation<sup>226</sup> and would save only seventy-nine lives and reduce the severity of only 5,176 injuries.<sup>227</sup> But the indirect system had an advantage: it was cheaper.<sup>228</sup>

In the final rule, as it had done in the version of FMVSS 208 whose rescission was under review in *State Farm*, NHTSA gave manufacturers the discretion to choose between the two options during the first three years of implementation. After that initial period, NHTSA believed that the direct technology was superior and should be required, but it promised to revisit the issue in 2005 on the basis of further real-world experience with the two systems. Meanwhile, if manufacturers chose the indirect route, they were

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220. Low Tire Pressure Warning Devices, 46 Fed. Reg. 43,721 (Aug. 31, 1981) (codified at 49 C.F.R. pt. 571).

221. Tire Pressure Monitoring Systems, 66 Fed. Reg. 38,982 (July 26, 2001) (codified at 49 C.F.R. pt. 571).

222. *Id.* at 38,987 n.9.

223. See Tire Pressure Monitoring Systems, 67 Fed. Reg. 38,704 (June 5, 2002) (codified at 49 C.F.R. pts. 571, 590).

224. 66 Fed. Reg. 38,997 (data reported as of July 2001).

225. 67 Fed. Reg. 38,740.

226. *Id.* at 38,718-19.

227. *Id.* at 38,740.

228. *Id.* at 38,741.

required to put a warning in the owner's manual that the system might not work fifty percent of the time.<sup>229</sup>

Safety activists, consumer groups, and tire manufacturers objected to the prospect of a compliance option that, whatever its cost virtues, worked only half the time.<sup>230</sup> Disappointed by the final rule, they sued. In an August 2003 ruling, the Second Circuit struck down the indirect option as arbitrary, capricious, and in violation of the TREAD Act.<sup>231</sup> Among other things, the court noted that it was not NHTSA's job only to consider costs and embrace the cheapest solution.<sup>232</sup> The Agency was to consider costs in relation to benefits. By saving more lives at relatively modest cost, the four-tire/twenty-five percent approach was more cost effective, and hence to be preferred as the only compliance option.

Superficially, this holding looked like another judicial loss reminiscent of the 1970s, but in fact, it was nothing of the kind. This decision was more like *State Farm's* invalidation of the rescission of FMVSS 208. Indeed, it was a more constraining decision concerning the Agency's duty on remand. The Second Circuit held that the TREAD Act required a system that could determine when "a tire" was underinflated. A system that could do so only fifty percent of the time did not comply with the Act. Once the court found that the statute required the costlier and more stringent option, the agency had to adopt it. Under the TREAD Act's mandate, inaction was not an option. And there was no chance industry could then successfully sue to overturn it.<sup>233</sup> The Agency's task on remand could not have been simpler. All it needed to do was excise the indirect option and reissue the rule, which is essentially what it did.<sup>234</sup>

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229. *Id.* at 38,705-6.

230. *See id.* at 38,709-10.

231. *See Pub. Citizen v. Mineta*, 340 F.3d 39 (2d Cir. 2003).

232. *Id.* at 58.

233. To be sure, industry had some reasonable arguments. The Agency's information suggesting that there was a safety problem was quite sketchy. In the end, it relied on a single study by Indiana University for evidence of how often tire under-inflation caused accidents while admitting that it had no accident data linking accidents to under-inflated tires. Moreover, even on the expectation that manufacturers would use the most cost-effective means of compliance with the rule, the expected costs per life saved outweighed the benefits. In short, the Agency might be charged with regulating a risk that was not, in the statute's term, an "unreasonable risk," and doing so in a manner that was impracticable because unreasonably costly. It had lost a suit back in the 1970s on precisely these grounds. *See Nat'l Tire Dealers & Retreaders Ass'n v. Brinegar*, 491 F.2d 31 (D.C. Cir. 1974). But the manufacturers did not raise these sorts of claims concerning the tire pressure monitoring rule for good reason. While the D.C. Circuit Court of Appeals in 1974 had struck down parts of the Agency's tire labeling rules concerning retreaded tires on the grounds just suggested, it left in effect two congressionally mandated parts of the rule. As was mentioned earlier, the court somewhat laconically opined, "No administrative procedure test applies to an act of Congress." *Id.* at 37. The TREAD Act mandated rules concerning tire pressure monitoring systems. That the rule might solve a non-problem at significant expense was irrelevant so long as Congress required it.

234. But rulemaking is never really simple. It took two years and forty-eight pages in the *Federal Register* to get the job done. *See Tire Pressure Monitoring Systems*, 70 Fed. Reg. 18,136 (Apr. 8, 2005) (codified at 49 C.F.R. pts. 571, 585).

One constituency however remained discontented. Perhaps emboldened by its success in overturning significant portions of the original rule, Public Citizen (joined by tire companies and their trade association) challenged the revised version as well.<sup>235</sup> The plaintiffs urged that the revised rule was not as strong as it could be, or as strong as the TREAD Act purportedly required. Among other features, the plaintiffs challenged the revised rule's criterion for determining "significant" under-inflation, the time permitted (twenty minutes) to activate the warning, and the absence of requirements applicable to replacement tires.

Now it was the safety activists' turn to be reminded of some of legal culture's most basic lessons. The Court never reached the merits of the plaintiffs' claims; instead it focused on standing. The Court first noted that "standing is built on a single basic idea—the idea of separation of powers" and was instrumental in helping "ensure that the Judicial Branch does not perform functions assigned to the Legislative or Executive Branch."<sup>236</sup> Noting that the standard regulated the conduct of auto companies, who had not challenged it, rather than tire companies, who had, the court in due course found the tire companies' claims of injury (the prospect of increased warranty and product liability claims) far too attenuated to satisfy the requirements for standing to seek judicial review of the rule.

The Court then turned to the petition of Public Citizen, which had based its claim to organizational standing on the assertion that the revised standard placed its members at "higher risk of injury" than the version of the standard that Public Citizen preferred. The Court was deeply skeptical that such risks constituted "actual or imminent harm" sufficient to satisfy the requirements of Article III standing. If accepted the court feared that "increased-risk-of-harm claims" would pave the way for challenging virtually any agency rule perceived by someone to be less rigorous than desired. The Court permitted Public Citizen to submit an affidavit and additional briefing to seek to establish its members' injury in fact. These submissions failed to make the requisite showing. When dismissing Public Citizen's complaint the court emphasized anew the broader institutional issues at stake:

remote and speculative claims of possible future harm . . . are properly left to the policymaking Branches, not the Article III courts . . . . Allowing such claims . . . would expand the proper—and properly limited—constitutional role of the Judicial Branch beyond deciding actual cases or controversies; and would entail the Judiciary exercising some part of the

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2007). 235. Pub. Citizen v. Nat'l Highway Traffic Safety Admin., 489 F.3d 1279 (D.C. Cir.

236. *Id.* at 1289.



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Executive's responsibility to take care that the law be faithfully executed.<sup>237</sup>

### VI. Evaluating the Co-Regulatory Rebound<sup>238</sup>

The five rules discussed above account for ninety-two to ninety-four percent of the benefits reported by OMB as attributable to NHTSA's "major" rules during all of the post-Glacial rebound (2003 to 2013). Taken together, the rules are most notable for what they did not accomplish or even try to accomplish. They did not force technology but, rather, inched it forward at a pace sufficiently congenial to industry that, after the usual fog of objections in the rulemaking proceedings, it simply complied. Judged by the ambitious standards of the original Act, NHTSA's rulemaking strategy in the post-Glacial rebound has something of an illusory quality.

Labeling NHTSA's rulemaking efforts in the post-Glacial period "illusory" may seem harsh. We readily acknowledge that the Agency adopted a handful of post-Glacial rules that modestly accelerated the diffusion of technologies in areas where industry had, at home or abroad, already made considerable progress. That said, rules that codify existing industry practice or plans, mandate proven technologies that are required in other jurisdictions, and give manufacturers a choice of existing technologies even when some of them are demonstrably inadequate, seem vastly less ambitious than the objectives contemplated by the 1966 Act. And it may well be that many of these technologies would have diffused anyway, due to product liability concerns and market pressures.

NHTSA's new, more deferential approach to setting safety standards has certainly allowed the Agency to move beyond its rulemaking torpor in the late-twentieth century. But the Agency's adaptive strategy raises an obvious question. Are the rules adopted in the post-Glacial rebound accomplishing something with respect to safety that otherwise would not occur but for NHTSA's intervention? Do these standards "force technology" by requiring safety features that manufacturers would not have supplied voluntarily? The answer to both questions seems to be "probably not." Technology forcing in the context of the enactment of the 1966 Act meant mandating vehicle safety performance that would force manufacturers to develop and deploy technologies that they otherwise would not have brought to market. NHTSA's rebound rules at most mandate diffusion of existing technologies, but it is

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237. Pub. Citizen v. Nat'l Highway Traffic Safety Admin., 513 F.3d 234, 237 (D.C. Cir. 2008).

238. Co-regulation or cooperative regulation are terms that encompass a series of differing techniques for sharing regulatory authority between regulators and the regulated. For a general overview, see Edward J. Balleisen, *The Prospects for Effective Coregulation in the United States: A Historian's View from the Early Twenty-First Century*, in EDWARD BALLEISEN & DAVID MOSS, GOVERNMENT AND MARKETS: TOWARD A NEW THEORY OF REGULATION 443 (Edward Balleisen & David Moss eds., 2010).

unclear the extent to which they do even that, and what reductions in the fatality rate can be said to have occurred “but for” NHTSA’s efforts. Let’s take a look at some recent numbers.

### A. *Quantitative Perspectives*

In 2015, NHTSA issued an update of its 2004 “Lives Saved” study.<sup>239</sup> The new study examines lives saved in motor vehicle accidents through 2012 by safety technologies in some way “associated with” NHTSA’s safety standards.<sup>240</sup> It confirms the findings of the 2004 study in all material respects, both with respect to the overall quantum of lives saved through 2002 and the attribution of those lives to specific technologies associated with the Agency’s standards.<sup>241</sup> The 2015 study then picks up where the 2004 study left off, assessing the additional lives saved from 2003 to 2012, both by the technologies evaluated in the 2004 study and by new technologies adopted thereafter.<sup>242</sup>

Consistent with the 2004 report, the conclusion of the 2015 update seems to be that nearly seventy-five percent of the reduction in the risk of driving would have occurred without NHTSA’s standards.<sup>243</sup> Further, about sixty percent of the reduced fatalities that NHTSA ties to technologies associated with its standards really should be ascribed to one standard, Standard 208, mostly because it requires a rudimentary technology, seat belts, albeit with subsequent improvements, that all states now require motorists to use.<sup>244</sup> This

239. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., DOT-HS-812-069, LIVES SAVED BY VEHICLE SAFETY TECHNOLOGIES AND ASSOCIATED FEDERAL MOTOR VEHICLE SAFETY STANDARDS, 1960 TO 2012 (2015).

240. *Id.* at xvii.

241. The 2015 Study presents a slight upward revision of the lives saved as reported in the 2004 study (from 328,551 to 332,495) to account for technologies that began to appear in production vehicles in 2002 (the last year covered in the 2004 study) but had not yet been evaluated. *Id.* at xvii.

242. The Study reports an additional 281,042 lives saved from 2003 through 2012, either by technologies implemented “post FMVSS” or voluntarily, for a grand total of 613,501 lives saved for the period 1960 through 2012. *See id.* at xvii.

243. *Id.* at 240 tbl.2-6 (noting a reduction in the fatality rate from 4.57 per 100 million miles in 1966, to 0.82 in 2012; without safety technologies, however NHTSA estimated that the rate would have fallen in the same period from 4.61 to 1.96, meaning that 73% of the reduction would have occurred, by NHTSA’s calculation, without any of the safety technologies). The report identifies a broad range of factors apart from vehicle technologies that contribute to reducing the fatality rate: safer roads; behavioral programs, such as initiatives to reduce drunk driving; better medicine, for example, improved trauma care; and demographic shifts, such as trends toward urbanization and suburbanization with a corresponding increase in lower risk commuting, as well as an increase in the proportion of female drivers with lower fatal crash rates. *Id.* at x, 239-243. In effect, the study finds that a large number of lives saved by safety technologies, whether or not associated with NHTSA’s standards, would have been saved anyway as a result of non-technological factors.

244. The study reports that a total of 329,715 lives saved from 1960 to 2012 can be tied to seat belts and an additional 42,856 lives saved can be tied to air bags, *id.* at 245 tbl.2-7, representing 60.7% of the total lives saved (613,501) during the period. These figures have not been adjusted to account for voluntary measures; we estimate that doing so would marginally increase the estimated impact of Standard 208.

suggests that only about ten percent of the overall risk reduction can be attributed on a “but for” basis to safety standards other than Standard 208.

Of course, had other developments—improved roads, better medicine, less drunk driving, and the like—not occurred to reduce the fatality rate, NHTSA could reasonably argue that its standards were there to save the day. But it is surprising how few of those standard can be shown, even today, to have had any demonstrable, significant effect. The 2015 study makes clear that, together with Standard 208, the same six pre-1974 standards discussed earlier<sup>245</sup> continue to account for the lion’s share of lives saved (that can be tied to standards at all) in the post-Glacial period. Of all the lives saved in the last year (2012) of the study and attributed to standards (25,370) as opposed to voluntary measures, the study suggests that some ninety percent are attributable to Standard 208 and the pre-1974 standards.<sup>246</sup> That said, the 2015 report indicates that help—of a sort—may be on the way.

The report addresses four of the eight rules issued during the rebound that OMB and NHTSA deemed “major.”<sup>247</sup> They are (1) Standard 126 on ESC; (2) Standard 226 on ejection mitigation; (3) Standard 214 on the upgrade of side impact protection; and (4) Standard 208, as amended to require rear center lap and shoulder belts. In each case, the technologies contemplated by these standards were available on vehicles years before the standards took effect. More telling, in almost every case, the “median” installation date (the date by which fifty percent of new cars are equipped with the technology) also preceded the effective dates of the standards.<sup>248</sup> In order to believe that NHTSA’s recent standards are doing much work, one has to assume that diffusion of these technologies in new motor vehicles would have stopped just at the point that NHTSA intervened to adopt a rule.

NHTSA can indulge that assumption because of two critical features of its accounting methodology. First, NHTSA is careful to characterize safety benefits from the new technologies canvassed in its study as benefits from technologies “associated with,” not produced by, its standards.<sup>249</sup> Lives saved by pre-standard, voluntary installation of those technologies generally are not

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245. See *supra* Section II.B .

246. See *id.* at 228 tbl.2-3; *id.* at 245-47 tbs.2-7 to 2-9. We adjusted these data to account for voluntary measures using the same approach we employed with respect to the 2004 study. See *supra* note 49.

247. With respect to the other rules classified by OMB as major, the 2015 Lives Saved Study does not include (1) the reduced braking distances set forth in the “upgrade” of Standard 121, because the Agency could not establish any statistical correlation between that standard and fatality reduction; (2) the upgrade of Standard 202 on head restraints, because that standard essentially addresses whiplash injuries which are generally not life threatening, and the Agency found no evidence of fatality reduction; (3) the upgrade of roof crush resistance in Standard 216a, because the Agency has not yet conducted a safety assessment of the effectiveness of that standard; or (4) the TPMS standard, because the Agency has not yet conducted a safety assessment of that standard either, although it notes “on the road performance augurs well for the future safety evaluation.” *Id.* at 53.

248. See *id.* at 220 tbl.2-1 (passenger cars); *id.* at 225 tbl.2-2 (LTVs).

249. See, e.g., *id.* at I, xvii.

treated as “associated with” NHTSA’s efforts. But, second, because vehicles that contained these technologies prior to the standards’ effective dates will slowly disappear from the roads, ultimately all the lives saved and injuries avoided by these technologies will be “associated with,” *i.e.*, post-date, NHTSA’s new standards. As with the 2004 study, industry voluntarism will disappear from the accounting.<sup>250</sup>

We have no independent data that permits a confident projection of what automobile manufacturers would have done absent NHTSA’s return to standard setting in the past decade. We can only note that motorists have come to expect safety and other features that are widespread in the motor vehicle fleet. Vehicles that fail to provide these features lose their attractiveness in the marketplace. Moreover, where safety features plausibly save lives and prevent serious injury, manufacturers risk tort liability—including punitive damages—for failure to include them in their new motor vehicles. Design defect litigation uses industry practice as the standard by which to determine whether a particular design is reasonable. Failure to provide safety features that are prevalent in competitor’s models is risky business.

## *B. Qualitative Perspectives*

### 1. Peace in Our Time

NHTSA’s venture into cooperative rulemaking may seem disappointing from the standpoint of the 1966 Act. But from a variety of other perspectives, illusory rules have been a resounding success. Industry could hardly complain. There was the usual carping in the notice-and-comment period, but the Agency was not requiring industry to go much further or faster than it wished. Apart from the usual posturing, Congress had little to complain about, either. The Agency appeared to be complying with the lion’s share of its commands and was doing little that Congress had not mandated. The Executive treated the Agency gently as well. After all, OMB reported the Agency’s rules were generating benefits nearly three times their costs. With one exception, discussed below, OMB did not return any of NHTSA’s post-Glacial rules for a rethink.

Safety activists—some of them, anyway—had victories as well. Consumer and parents’ groups could point to multiple legislative victories compelling NHTSA to secure the equal protection of especially vulnerable cohorts—toddlers, short-statured women, the aged, and the disabled. The

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250. Standard 126 on electronic stability control, which the 2015 study highlights as a major life-saving technology coming online, illustrates this accounting approach. ESC was first introduced in passenger cars in 1998 and reached fifty percent penetration in new cars in 2010. *See id.* at 220 tbl.2-1. The standard was phased in from 2009 to 2012. As this occurred, the Agency increasingly allocated ESC installations to the standard rather than to voluntary industry action. *See id.* at 282 tbl.2-26.

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number of lives saved by those measures might be extremely modest, but they responded to irresistible political demands. To be sure, other activists might be restive, but they had limited resources to do much about it, and faced an uphill legal battle petitioning courts to force the Agency to act more aggressively. In short, relative calm appeared to have descended on the rulemaking battlefield after the sound and fury of the Agency's early rulemaking efforts.

### 2. Restoration Prospects

But what about the Great Society vision of 1966? Were the forces that assembled then forever defeated, or simply awaiting reinforcement? From what we have seen so far, it is hard to imagine the post-Glacial rebound merely as an interlude before a resurgence of more ambitious rulemaking at some future point. The effects on NHTSA's internal culture caused by judicial skepticism, executive obstruction, and legislative neglect were long in the making. The bureaucratic pathologies that Professor Golden and we diagnosed inside NHTSA were chronic and deeply embedded. The agency-forcing statutes—with their ambivalent, opaque, nuanced, and sometimes even conflicting subtext—hardly seemed up to the task of restoring the Agency's rulemaking vigor.

Whether the public desires NHTSA to engage in ambitious technology forcing is surely an open question. But if we were to want the Agency to go beyond nudging industry to do more of what it is doing—or if you prefer, beyond the co-regulatory practice of modestly diffusing safety technologies that industry selects—something fundamental would need to change in the way the judiciary, the executive, and the legislature interact with it. Judging by the safety goals of the still-intact 1966 Act, oversight of the Agency by legal and political monitors has been dysfunctional. It has limited rather than enhanced NHTSA's capacity to make vehicular travel safer, and agency-forcing statutes have done little to speed progress toward those goals. In fact, as NHTSA has embarked on implementing the agency-forcing statutes, it has continued to encounter many of the same dynamic forces that gave rise to the Ice Age. Let us consider a few cases in point.

### 3. The Clash of Legal and Political Logics

While industry, Congress, and the executive may have settled comfortably into the safety world defined by the Agency's policy of accommodation, NHTSA's bureaucratic life has not been so tranquil. And to the extent NHTSA has been found to be "arbitrary and capricious," or to have pursued peculiar regulatory objectives, the reasons can often be traced back to Congress or the Executive. Neither the public health perspective of the 1966 Act nor the demands of reviewing courts for scientific rigor, as internalized by NHTSA's own bureaucratic culture, necessarily bind the agency's political overseers.

## a. Bumbling OMB Review

As we have seen, only one “major” post-Glacial rule was challenged in court: the TREAD Act’s mandated standard on tire pressure monitoring systems (TPMSs). The reviewing court bluntly reported that it had “searched the rulemaking record in vain for some ‘rational connection between the facts found and the choice made.’”<sup>251</sup> What the court did not say, and perhaps did not fully appreciate, was that the champion of the indirect option was not NHTSA, but none other than the guardian of regulatory rationality itself, the Office of Information and Regulatory Affairs (OIRA) at OMB.

OIRA’s rationale for favoring that option featured prominently in hearings before a subcommittee of the House Energy and Commerce Committee to consider the TREAD Act’s implementation a year after its passage.<sup>252</sup> At the time of the hearing, the TPMS rule was still pending, and was the subject of a dispute between OMB and the Agency. In its original proposal in July 2001,<sup>253</sup> NHTSA had been pushing for standards that many of the less efficacious indirect monitoring methods did not meet.<sup>254</sup> After taking public comment, the Agency then prepared a final rule that was even more restrictive and sent it to OMB for review. The draft final rule permitted only direct systems after a four-year phase-in period.<sup>255</sup> OMB disagreed. OMB saw two reasons to favor the indirect method. First, it was cheaper, since it relied on ABS systems, which were then installed in only about two-thirds of new passenger cars. Second, allowing it as a compliance option would induce manufacturers to improve safety by equipping more vehicles with anti-lock brakes.<sup>256</sup>

The compromise position was the short-term option that the Second Circuit invalidated.<sup>257</sup> But NHTSA did not leave the OMB position unchallenged. Explaining in its rulemaking notice why it allowed the indirect method as only a short-run solution, the Agency first observed that the TPMS

251. Pub. Citizen, Inc. v. Mineta, 340 F.3d 39, 58 (2d Cir. 2003).

252. See *The Implementation of the TREAD Act: One Year Later: Hearing Before the Subcomm. on Commerce, Trade & Consumer Prot. of the H. Comm. on Energy & Commerce*, 107th Cong. (2002).

253. Tire Pressure Monitoring Systems, 66 Fed. Reg. 38,982 (July 26, 2001) (codified at 49 C.F.R. pt. 571).

254. The Agency proposed two alternative sets of criteria. Only direct TMP systems could meet the first set, and only direct or upgraded indirect TPM systems could meet the second. The Agency reported that it had tested four different ABS-based indirect systems and that none of them met either set of its proposed criteria. See *id.* at 38,989, 38,996-97.

255. *TREAD Implementation Hearing*, *supra* note 141, at 10 (statement of Rep. Billy Tauzin, Chairman, H. Energy & Commerce Comm.).

256. See *id.* at 19 (statement of John D. Graham, Administrator, OIRA) (arguing that a standard that permits indirect systems “encourages vehicle manufacturers to install anti-lock braking systems in vehicles that currently do not have them”); *id.* at 46-48 (letter from John D. Graham, Administrator, OIRA to K.K. Van Tine, General Counsel, U.S. Dep’t of Transp., dated Feb. 12, 2002) (returning for reconsideration NHTSA draft final TPMS rule on the grounds that the Agency had not shown it had selected the best regulatory method to achieve the statutory goal).

257. Pub. Citizen v. Mineta, 340 F.3d 39 (2d Cir. 2003).

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rule did not mandate installation of anti-lock brakes and that the Agency had “analyzed ABS and determined that there is currently no statistically reliable basis for concluding that ABS reduces fatalities in light vehicles.”<sup>258</sup> In short, there was no evidence that OMB’s goal of increasing the installation of ABS in light vehicles had any safety payoff. But, even if there were such evidence, OMB’s position made no sense.

The Agency patiently reviewed the basics of auto safety economics, explaining why using the TPMS rule to leverage greater industry acceptance of ABS brakes was unlikely to be effective:

[I]t is not economically reasonable for manufacturers to install ABS voluntarily on significantly more vehicles in response to being permitted to install current indirect TPMSs . . . . NHTSA may not simply assume that manufacturers will elect to spend \$240 per vehicle to install ABS to save \$53, the difference between the cost of a direct TPMS (\$66) and an indirect TPMS (\$13). The market for ABS has been static for several years, with the installation rate of about 63 percent. Absent a market demand for more installations, a manufacturer would not gain a market advantage by increasing the percentage of its vehicles with ABS.<sup>259</sup>

Asked about the TPMS litigation at a congressional hearing not long after the suit was brought, NHTSA’s Administrator glumly commented, if the original proposal “had gone through, all vehicles would have TPMS’s in them now, and we wouldn’t be having this conversation.”<sup>260</sup>

The TPMS episode is perhaps best seen as a conflict between the political demands of the executive (dressed here in the garb of economic/analytic arguments) and the legal demands of the judiciary. In effect, NHTSA was caught in the crossfire between a judiciary that required sensible explanations, a Congress that demanded action on what may have been a vanishingly small problem, and an executive overseer fixated on a form of microeconomic analysis that tended to conflate abstractly imagined incentives with real-world behaviors. Just around the corner loomed another struggle, this one between Congress and the Executive for control of the Agency’s agenda, priorities, and allocation of resources. NHTSA would again be caught in the vice of its overseers’ conflicting demands.

### b. Congressional Agenda Setting: Act One

Congress labored long and hard over its mandate in the Cameron Gulbransen Kids Transportation Safety (KTSA) Act of 2007 that NHTSA

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258. Tire Pressure Monitoring Systems, 67 Fed. Reg. 38,704, 38,719 (June 5, 2002) (codified at 49 C.F.R. pts. 571, 590).

259. *Id.*

260. 2005 House SAFETEA-LU Hearing, *supra* note 125, at 26 (testimony of Jeffrey Runge, Administrator, NHTSA).

adopt a standard to prevent back-over accidents.<sup>261</sup> For some four years up to and including the passage of KTSA, Congress visited and revisited the issue.<sup>262</sup> NHTSA over and over again endeavored to persuade Congress that back-over accidents were a relatively infrequent occurrence with no readily available cost effective solution.<sup>263</sup>

In hearings before a House subcommittee in 2005, NHTSA Administrator Jeffrey Runge, fully attuned to the delicacy of opposing a law to protect toddlers and wheelchair occupants from being inadvertently backed over, often by other family members, began by explaining that “unfortunately” the Agency had to “give a lower priority to proposals not inspired by sound data, or that involve large costs to consumers with minimal impact on the safety numbers.”<sup>264</sup> Runge concluded, perhaps mindful of the unhappy conversations he was likely to have with OMB analysts: “So you know, when you look at costs and benefits here, it gets a little tough to justify.”<sup>265</sup> Runge also reminded Congress of prior instances in which congressional mandates had produced limited safety gains at enormous cost, or unintended side effects, as in the passenger-side airbags episode.<sup>266</sup>

Neither the Administrator’s lessons from the history of congressional mandates, nor his facts and figures, were, however, a match for the small platoon of grieving parents. They came before Congress armed with images of ice cream trucks crushing five-year-olds and seventeen children crouching undetected behind a SUV, illustrating its expansive blind spot for all viewers of *Good Morning America* to see.<sup>267</sup> In due course, KTSA passed, leaving NHTSA to ponder how it should formulate a rule that it could defend to OMB. The Agency issued an ANPRM in March 2009, but then failed to meet the 2011 statutory deadline for final action. Further action was delayed five

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261. See Pub. L. No. 110-189, 639 Stat. 122 (2007) (codified at 49 U.S.C. § 30,111 (2012)).

262. The legislation was first introduced in 2003 in response to advocacy by a Long Island parent who backed over his son. 153 CONG. REC. H16873 (daily ed. Dec. 19, 2007) (statement of Rep. Schakowsky).

263. In 2006, responding to a Congressional request, NHTSA issued a report that was critical of back-over avoidance technologies. See NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., VEHICLE BACKOVER AVOIDANCE TECHNOLOGY STUDY, REPORT TO CONGRESS (2006). The Congressional Budget Office estimated that the cost of implementing a mandate would be \$350 per car. S. REP. NO. 110-275, at 5 (2008). NHTSA wanted to leave the issue to market forces, reasoning that people without kids should not be made to purchase the camera equipment. 2005 House SAFETEA-LU Hearing, *supra* note 125, at 15 (statement of Jeffrey Runge, Administrator, NHTSA).

264. *Id.* at 9.

265. *Id.* at 15-16.

266. *Id.* at 10.

267. See “Big Vehicle Blind Spots Leaving Kids Dead,” ABC NEWS, <http://abcnews.go.com/GMA/story?id=128111> (last visited Nov. 6, 2016) (noting an ABC affiliate’s demonstration that a “whopping” seventeen children were not visible from the driver’s seat when they were standing in the blind spot of one vehicle.)



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separate times; in 2014, consumer groups sued to force NHTSA to implement KTSA's mandate.<sup>268</sup>

The Agency's announcement of the final rule came a day before the Second Circuit was scheduled to hear that lawsuit. The rule<sup>269</sup> was almost certainly among the most cost-inefficient safety standards ever issued by NHTSA.<sup>270</sup> But procrastination had its virtues. In 2005, when the back-over debate began in earnest, only five percent of cars could be purchased with a rearview camera built in; by 2014, when the final rule was belatedly adopted, rear cameras were standard or optional on eighty-five percent of vehicles.<sup>271</sup> Consumers wanted the technology to help them reverse out of their driveways and successfully parallel park their vehicles. The Agency anticipated that back-up cameras would be installed voluntarily in seventy-three percent of the fleet by MY 2018, even if it took no action.<sup>272</sup> As a result, in issuing the final rule, the Agency would not be adding much cost to what the industry would do anyway and could report that "we anticipate that many manufacturers will be able to meet the phase-in schedule with little adjustment to their current manufacturing plans."<sup>273</sup>

### c. Congressional Agenda Setting: Act Two

Meanwhile, back on the Hill, rear visibility was not the only issue on Congress's mind as it pondered what to order NHTSA to do next. If the back-over mandate illustrated Congress's determination to address a marginal problem, KTSA's mandate to install power window automatic reversal systems (ARS) showed it was prepared to insist that NHTSA address an issue that presented essentially no safety problem at all.

Power windows were not a new preoccupation for Congress or for NHTSA. In SAFETEA-LU, Congress had already directed NHTSA to mandate

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268. See Pete Bigelow, *After Years of Delays, NHTSA Issues Backup Cameras Rule*, AUTOBLOG (Mar. 31, 2014, 3:03 PM), <http://www.autoblog.com/2014/03/31/nhtsa-issues-backup-camera-rules>; Gabe Nelson, *DOT Sued Over Delayed Backup Camera Mandate*, AUTOMOTIVE NEWS (Sept. 25, 2013, 12:09 PM), <http://www.autonews.com/article/20130925/OEM11/130929952/dot-sued-over-delayed-backup-camera-mandate>.

269. See 79 Fed. Reg. 19,178 (April 7, 2014).

270. NHTSA estimated that cameras would cost between \$15.9 and \$26.3 million per life saved, substantially in excess of the value of life of \$6.1 million that the Agency was then using in its cost-benefit analyses. *Id.* at 19,181. The Agency noted, however, that the rule was required to address "a safety risk identified by Congress." *Id.* at 19,178. The Agency then reasoned that back-over victims were among "the most vulnerable members of our society" (children, the elderly, and the disabled); that "most people place a high value on the lives of children"; and that "as back-over crash victims are often struck by immediate family members or caretakers, an exceptionally high emotional cost," not easily monetized, "is often inflicted on the families of crash victims." *Id.* at 19,180-81.

271. Cheryl Jensen, *Rearview Cameras by 2018 for Cars and Light Trucks*, N.Y. TIMES (Mar. 31, 2014), <http://www.nytimes.com/2014/04/01/automobiles/us-to-require-rearview-cameras-in-new-cars-by-2018.html>.

272. 79 Fed. Reg. 19,180.

273. Rear Visibility, 79 Fed. Reg. 19,718, 19,181 n.14 (Apr. 7, 2014) (codified at 49 C.F.R. pt. 571).

up-or-out switches for power windows, so that a child could not step on a window switch and crush herself in the closing window. Even before SAFETEA-LU, two years earlier, NHTSA had acted on that very concern by finalizing a rule requiring that power window activation switches be recessed.<sup>274</sup> The agency considered up-or-out switches as unnecessary given its earlier rule, but Congress demanded a final rule requiring them by April 1, 2007. NHTSA duly obliged, adopting the up-or-out rule in April 2006, even though its own studies indicated that child fatalities involving power windows were an “extremely rare occurrence,” involving between one and two children each year.<sup>275</sup>

NHTSA also used the occasion of that rulemaking to reject a petition filed in 2004 by consumer associations (mainly parents’ groups) urging the Agency, among other things, to require ARSs for power windows. Given the fatality data, and the steps the Agency had already taken—first to recess the activation switch and then to mandate an up-or-out design—the Agency concluded it simply could not justify an ARS requirement on cost-benefit grounds.<sup>276</sup>

Congress nonetheless mandated in KTSA that the Agency revisit the power window issue once again. The political dynamics of ARS were essentially the same as those of the back-over issue. NHTSA’s arguments about cost-benefit analysis went nowhere. On September 1, 2009, the Agency published its proposal, which was in many ways a thread-the-needle classic.<sup>277</sup> NHTSA’s notice reflects in exquisite detail the complexity of the Agency’s effort to mediate between the rational demands of the executive and the emotive demands of its legislative overseer, in search of a rule that the Agency, not just a reviewing court, might view as directed towards an “unreasonable risk.”

The Agency began by noting, with a whiff of exhaustion, that it had already addressed the issue of power windows and child safety “numerous times,” and reviewed once more the steps it had taken in 2004 and 2006 to require recessed activation switches and up-or-out switch design. Once again, the Agency pointed out that the “data indicate that there are few if any fatalities and serious injuries remaining.”<sup>278</sup> NHTSA nonetheless pressed ahead in what can only be described as a heroic search-and-rescue mission—all it needed was a victim. The Agency acknowledged that its customary databases might not

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274. Power-Operated Window, Partition, and Roof Panel Systems, 69 Fed. Reg. 55,517, 55,517 (Oct. 21, 2004) (codified at 49 C.F.R. pt. 571).

275. *Vehicle Safety for Children: Hearing Before the Subcomm. on Consumer Affairs, Ins. & Auto. Safety of the S. Comm. on Commerce, Sci. & Transp.*, 110th Cong. 6 (2007) (statement of Ronald Medford, Senior Administrator for Vehicle Safety, NHTSA). This point was repeated in the preamble to the agency’s final rule. 71 Fed. Reg. 18,673-83 (Apr. 12, 2006) (codified at 49 C.F.R. 571).

276. Power-Operated Window, Partition, and Roof Panel Systems, 71 Fed. Reg. 18,679 (Apr. 12, 2006) (codified at 49 C.F.R. pt. 571).

277. Power-Operated Window, Partition, and Roof Panel Systems, 74 Fed. Reg. 45,143 (Sept. 1, 2009) (codified at 49 C.F.R. pt. 571).

278. *Id.* at 45,144.

have captured the full extent of the problem because power window incidents are typically non-crash events often taking place on private property (driveways) and hence not captured by its fatal accident reporting system. The Agency thus scoured death certificates, emergency room admissions, and other mortality data, reporting that power windows were now thought to be involved in six fatalities and 1,953 injuries annually.

Based on its now more refined analysis, the Agency distinguished between two types of power window accidents. The first was the one that had bedeviled Congress: “inadvertent actuation,” the source of most fatalities and serious injuries. Inadvertent actuation typically involved a child’s accidental trigger of the window closure. The evidence was overwhelming that the Agency had already dealt with this problem through the rules adopted in 2004 and 2006.<sup>279</sup>

The second injury scenario involved “obstructed closing,” in which the operator of a power window activates it intentionally, unaware that another person’s body (most often a hand or finger) is obstructing the window. Safer switches of the kind already required were obviously not protective in these cases, because the operator intentionally activated them. However, the Agency found that incidents of obstructed closing, while far more common, also involved, overwhelmingly, very minor injuries, most often pinched fingers.<sup>280</sup>

Moreover, because all “one-touch” or “express up” power windows, windows that rolled all the way up or down with one flick of the power switch, already had ARS that complied with the European ARS standard-ECE R21, NHTSA could not identify a single injury resulting from an express up power window. That left the improbable scenario in which a victim or someone else continued to activate a manual switch notwithstanding the fact that fingers, necks, or torsos were being trapped or crushed by the window. The Agency was staring at a non-problem and a congressional demand to fix it.

NHTSA thus proposed to require ECE-compliant ARS on all power windows with express functionality. Because this was what industry—and by “industry” we mean effectively all of industry—was already doing, the Agency reported that both the costs and benefits of its proposal were zero.<sup>281</sup> Public comment poured in from industry associations, suppliers, safety advocacy organizations, members of Congress, and individuals. Only industry supported the proposal. Safety organizations wanted ARS to apply to all power windows. Members of Congress complained that the Agency’s proposal to require the

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279. *Id.* at 45,146-47 (suggesting that the problem of inadvertent actuation was “largely alleviated” by prior rulemakings).

280. *Id.* at 45,148.

281. *Id.* at 45,155. Some ARS systems then on the market might not have met ECE specifications, but NHTSA did not seem to think this was much of an issue since the effectiveness of ARS in preventing serious injury did not seem to turn on “the exact specifications.” *Id.* at 45,151.

status quo “would not sufficiently achieve the Congressional intent” underlying KTSA.<sup>282</sup>

Congressional outrage took center stage at an oversight hearing before a subcommittee of the House Energy and Commerce Committee, shortly after the close of the comment period and before the Agency had finalized its rule. As Congresswoman Schakowsky put the matter:

So the preferred alternative to protect children was a no-cost, no-benefit solution. I would have thought it embarrassing actually not only to put that in writing but to choose that as the preferred option. I would hope that nothing like that happens again.<sup>283</sup>

An indignant Congress may have been exasperated by a rule that seemed to be a cavalier implementation of its mandate. But what options did NHTSA really have in the ARS proceeding? All the alternatives it considered to the zero-cost, zero-benefit option had a cost of lives saved and injuries avoided many multiples greater than the values prescribed by OMB’s cost-benefit guidance and NHTSA’s standard practice when doing such analyses. When the benefit number is zero, the cost-benefit ratio is infinity to nothing. Nor was a reviewing court likely to find reasonable a rule that imposed costs without conferring any benefit. The problem was not NHTSA’s solution, but Congress’s choice of problem.

In early 2011, NHTSA withdrew its proposed ARS rule and terminated the rulemaking on the ground that there was not sufficient information to conclude that an ARS mandate would be reasonable, practicable, or appropriate.<sup>284</sup> Among other things, the Agency noted it did not know how to assess the costs and benefits of avoiding pinched fingers. Tossing Congress a bone, the Agency announced it would soon be using its five-star NCAP program to inform the public what particular models and makes have ARS. The bone was a bit short on food value, of course. So far as the Agency could determine, all vehicles with windows featuring express functionality already had ARS systems.

NHTSA thus narrowly avoided regulatory farce, but no one spoke of the costs that the proceeding had inflicted on the Agency—the thousands of staff hours futilely spent, the painstaking review of death certificates, emergency room admissions, and mountains of other data, the preparation for and attendance at multiple congressional hearings, the review and analysis of stacks and stacks of public comments, the distraction from other more pressing issues,

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282. Power-Operated Window, Partition, and Roof Panel Systems, 76 Fed. Reg. 11,415 (Mar. 2, 2011) (codified at 49 C.F.R. pt. 571).

283. *NHTSA Oversight: The Road Ahead: Hearing Before the Subcomm. on Commerce, Trade & Consumer Prot. of the H. Comm. on Energy & Commerce*, 111th Cong. 25 (2010) (statement of Rep. Jan Shkowsky).

284. 76 Fed. Reg. at 11,415.

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the effects of such a trivial pursuit on staff morale. The Agency quietly entered the safe harbor of inaction. Although agencies that have done a great deal of work on a rule and then abandoned it are somewhat more vulnerable to judicial review than agencies who simply do nothing,<sup>285</sup> no one sued NHTSA to try to force it to do the useless.

### VII. Judicial Review of Rulemaking: 1985-2015

An account of NHTSA in court over the past thirty years is a short story. The Ice Age, having produced no significant rules, produced almost no court cases. There wasn't much to litigate. Then came the post-Glacial rebound. For reasons we have explained, cooperative regulation featuring largely illusory rules—the distinguishing innovation of the period—virtually guaranteed that NHTSA would not be dragged back into court very often. And it was not. The Agency's strategic shift from technology forcing to diffusion nudging paid off handsomely in avoiding legal challenge or embarrassment.

During its first twenty years from 1966 to 1986, NHTSA was sued a total of seventeen times in cases challenging its rulemaking decisions on the merits.<sup>286</sup> Twelve of those challenges came from industry (individual companies or trade associations) seeking to invalidate all or part of a rule.<sup>287</sup> A thirteenth challenge came from a conservative foundation also seeking invalidation.<sup>288</sup> The Agency lost six of those thirteen challenges.<sup>289</sup> Apart from the passive restraints issue, there were only two cases reaching the merits brought by a public interest group seeking stronger agency action.<sup>290</sup>

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285. *Compare* Am. Horse Prot. Ass'n v. Lyng, 812 F.2d 1 (D.C. Cir. 1987) (reviewing abandonment of a proceeding after extensive research and consultation with affected interests), with *Conservancy of S.W. Fla. v. Fish & Wildlife Serv.*, 677 F.3d 1073 (11th Cir. 2012) (refusing to review simple denial of petitions for a rule).

286. *See Justice Denied Hearing*, *supra* note 3, at 88 tbl.3 (testimony of Cary Coglianesse, Professor of Law, University of Pennsylvania) (indicating NHTSA's rulemaking record comprising cases in which the courts reached the merits). To Professor Coglianesse's list, we have added an additional case: *Pub. Citizen v. Steed*, 733 F. 2d 93 (D.C. Cir. 1984) (striking down NHTSA's suspension of tire treadwear grading requirements).

287. The twelve cases were (1) *Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29 (1983); (2) *B.F. Goodrich v. United States Department of Transportation*, 592 F.2d 322 (6th Cir. 1979); (3) *PACCAR v. NHTSA*, 573 F.2d 632 (9th Cir. 1978); (4) *Goodrich v. United States Department of Transportation*, 541 F.2d 1178 (6th Cir. 1976); (5) *Chrysler Corp. v. United States Department of Transportation*, 515 F.2d 1053 (6th Cir. 1975); (6) *National Tire Dealers and Retreaders Ass'n v. Brinegar*, 491 F.2d 31 (D.C. Cir. 1974); (7) *Ford Motor Co. v. NHTSA*, 473 F.2d 1241(6th Cir. 1973); (8) *Chrysler Corp. v. United States Department of Transportation*, 472 F.2d 659 (6th Cir. 1972); (9) *H&H Tire Co. v. United States Department of Transportation*, 471 F.2d 350 (7th Cir. 1972); (10) *Wagner Electric Corp. v. Volpe*, 466 F.2d 1013 (3d Cir. 1972); (11) *Boating Industry Ass'n v. Boyd*, 409 F.2d 408 (7th Cir. 1969); and (12) *Automobile Parts & Accessories Ass'n v. Boyd*, 407 F.2d 330 (D.C. Cir. 1968).

288. *See* *Pac. Legal Found. v. U.S. Dep't of Transp.*, 593 F.2d 1338 (D.C. Cir. 1979).

289. *See supra* note 21 and accompanying text.

290. *See* *Ctr. for Auto Safety v. Peck*, 751 F.2d 1336 (D.C. Cir. 1985) (challenging NHTSA's revision of bumper standard, FMVSS 215, in part on safety grounds); *Pub. Citizen v. Steed* 733 F. 2d 93 (D.C. Cir. 1984). A third challenge brought by safety activists to strengthen a standard was dismissed on standing grounds. *See* discussions in *supra* notes 235-237. The passive restraints litigation

In the most recent thirty years, NHTSA has been sued only seven times in rulemaking challenges, the equivalent of more than a seventy percent caseload reduction.<sup>291</sup> Not one of those cases involved a major manufacturer or its trade association.<sup>292</sup> A majority of cases (four out of seven) involved public interest groups or individuals seeking stronger agency action<sup>293</sup>—not the result one would expect of an agency portrayed by OMB, based on NHTSA’s regulatory impact analyses, as imposing billions of dollars of costs on industry each year. The suggestion that NHTSA’s ability to adopt rules could not have been significantly inhibited by judicial review because it was seldom sued is facially plausible.<sup>294</sup> But it masks the regulatory transformation produced by the Agency’s adaptation to its early court experiences. After virtually abandoning rulemaking, NHTSA responded to congressional agitation to act by reimagining the regulatory process as one in which industry plays the dominant role in determining which safety measures to advance.

Of course, there was still the possibility that consumer groups could sue to force NHTSA to fulfill the aspirations of the original Act. Something remotely of that sort occurred in the case involving TPMS. But that was an isolated incident that was legally distinguishable from efforts to force the Agency to act. There, as in *State Farm*, the Agency had acted. The claim was that the Agency had chosen the wrong alternative.<sup>295</sup> In the other three cases, the courts rejected litigants’ efforts to force NHTSA to take stronger action.<sup>296</sup>

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went both ways, embracing an attempt by the auto industry to secure the rescission of Standard 208 and an attempt by the insurance industry to advance its protection. *See Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983); *State Farm Mut. Auto. Ins. Co. v. Dole*, 802 F.2d 474 (D.C. Cir. 1986). The last of the *Struggle* rulemaking cases involved a challenge by a state compact seeking to invalidate NHTSA’s safety rule on vehicle identification numbers. *See Vehicle Equip. Safety Comm’n v. NHTSA*, 611 F.2d 53 (4th Cir. 1979).

291. *See Nat’l Truck Equip. Ass’n v. NHTSA*, 711 F.3d 662 (6th Cir. 2013); *Pub. Citizen v. NHTSA*, 374 F.3d 1251 (D.C. Cir. 2004); *Pub. Citizen v. Mineta*, 340 F.3d 39 (2d Cir. 2003); *Wash. v. U.S. Dep’t of Transp.*, 84 F.3d 1222 (10th Cir. 1996); *Simms v. NHTSA*, 45 F.3d 999 (6th Cir. 1995); *Pub. Citizen v. Steed*, 851 F.2d 444 (D.C. Cir. 1988); *Nat’l Truck Equip. Ass’n v. NHTSA*, 919 F.2d 1148 (6th Cir. 1990).

292. Two cases were brought by the National Truck Equipment Association, a trade group representing small case producers of customized trucks. As mentioned in one of the cases, 240,000 such trucks were manufactured in the United States in 1987.

293. *See Pub. Citizen v. NHTSA*, 374 F.3d 1251 (D.C. Cir. 2004); *Pub. Citizen v. Mineta*, 340 F.3d 39 (2d Cir. 2003); *Simms v. NHTSA*, 45 F.3d 999 (6th Cir. 1995); *Pub. Citizen v. Steed*, 851 F.2d 444 (D.C. Cir. 1988).

294. *See Justice Denied Hearing*, *supra* note 3, at 80-81 (testimony of Cary Coglianese, Professor of Law, University of Pennsylvania) (claiming that judicial review cannot have suppressed NHTSA rulemaking because the risk of a rule being subject to such review was only two percent, and noting twenty-three cases challenging NHTSA rules from 1967 to present).

295. *See Mashaw, Law and Engineering*, *supra* note 88, at 147 (discussing litigation to force NHTSA to exercise its statutory authority to adopt mileage standards for automobile fleets, and noting that when the Agency does nothing, “it always wins”).

296. *See Pub. Citizen v. NHTSA*, 374 F.3d 1251 (D.C. Cir. 2004); *Simms v. NHTSA*, 45 F.3d 999 (6th Cir. 1995); *Pub. Citizen v. Steed*, 851 F.2d 444 (D.C. Cir. 1988).

## VIII. Recalls Today

### A. *The Orgy Rumbles On*

As NHTSA has groped to adapt its fragile rulemaking powers to the turbulent forces surrounding it during and after the Ice Age, its recall apparatus has displayed all the stamina and evolutionary resilience of a crocodile. During the Agency's first two decades (1966-1985), the industry recalled some 162 million defective vehicles and related equipment items; in the three decades thereafter (1986-2015), it recalled nearly four times that number, some 641 million defective vehicles and equipment items.<sup>297</sup>

The explosion of recalls in the post-*Struggle* period cannot be explained by the increase in the number of vehicles on the road. From 1966 to 1985, the average number of state motor vehicle registrations for private, commercial, and publicly owned vehicles in the United States was about 134 million per year; for the period, 1986 to 2015, the average was about 220 million per year, roughly a sixty-four percent increase.<sup>298</sup> In contrast, the average number of defective vehicles recalled per year jumped by almost 132%,<sup>299</sup> more than twice the rate of growth of registrations.

And this analysis masks the most recent trends. If we look at just the post-Glacial rebound (2002-2015), the average number of all defective vehicles recalled is nearly 21 million vehicles per year—over three times the average of the 1966-1985 period.<sup>300</sup> Focusing just on recalls directly “influenced”<sup>301</sup> by

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297. The foregoing figures cover recalls related only to safety defects, not failure to comply with safety standards. The overall figures include motor vehicles, equipment, child safety seats, and tires. All recall data are extracted from Nat'l Highway Traffic Safety Admin., *Annual Recalls Reports, 1966 to 2015*, U.S. DEP'T TRANSP. (2015), [www.safercar.gov/staticfiles/safercar/pdf/2015-annual-recalls-report.pdf](http://www.safercar.gov/staticfiles/safercar/pdf/2015-annual-recalls-report.pdf) [hereinafter NHTSA, *Annual Recalls Reports*]. For similar figures, see Daniel P. Malone & John F. Creamer, *NHTSA and the Next 50 Years: Time for Congress to Act Boldly (Again)* 3 (SAE Int'l, Technical Papers 2016-01-7000).

298. Motor vehicle registration data were taken from Fed. Highway Admin., *Welcome to the Office of Policy & Governmental Affairs*, U.S. DEP'T TRANSP., [www.fhwa.dot.gov/policy](http://www.fhwa.dot.gov/policy) (last visited Nov. 6, 2016). The registration data here cited here are for automobiles, trucks and buses, but not motorcycles. The trends cited here would not be materially affected by including motorcycles, as they constitute a tiny fraction (two to three percent) of all motor vehicle registrations. Data for 2015 were not yet posted on the Administration's website and were estimated based on the average increase in registrations over the preceding ten years. Data represent state registrations excluding Puerto Rico.

299. The average recall for the period 1966 to 1985 entailed approximately 6.6 million vehicles, while the average recall for the period 1986 to 2015 entailed approximately 15.35 million vehicles. See NHTSA, *Annual Recalls Reports*, *supra* note 297.

300. *Id.*

301. The agency classified recalls as either “voluntary,” signifying that the company undertook the recall at its own initiative, or “influenced,” meaning that the recall was undertaken following an agency investigation. *Id.* Manufacturers, of course, have a legal obligation to recall defective vehicles irrespective of whether the agency conducts an investigation. 49 U.S.C. §§ 30118(c), 30119-20.

The percentages of vehicle recalls influenced by NHTSA, in each of the five-year periods from 1966 to 2015, were 19% (1966-70), 61% (1971-75), 57% (1976-80, the period in which the per se theory was judicially approved), 72% (1981-85), 61% (1986-90), 73% (1991-95), 71% (1996-2000), 56% (2001-05), 50% (2006-10), and 38% (2011-15). NHTSA, *Annual Recalls Reports*, *supra* note 297.

NHTSA, the average recall was 3.918 million defective vehicles for the period 1966-1985; in the thirty years thereafter, the average more than doubled to 8.245 million vehicles.<sup>302</sup>

The five-year period from 2011 to 2015 was the most recall-intensive in NHTSA's history. The numbers are mind-boggling. Some 147 million vehicles were recalled during that period, an annual average of 29.4 million vehicles per year. In just the past two years (2014-2015), nearly 100 million vehicles have been recalled, almost two out of every five vehicles registered in the entire country.<sup>303</sup> To be sure, the percentage of influenced recalls has dipped to about thirty-eight percent.<sup>304</sup> But this may well be an artifact of the somewhat arbitrary manner in which "influence" is reported. In practical terms, every recall is "influenced" by NHTSA because companies can never be sure when the Agency will get wind of a defect, find that the companies failed to disclose it, and ignite a flash fire of adverse publicity, congressional hearings, and trial lawyer inquiries.

In these circumstances, industry-initiated recalls are the order of the day. Recalls are "voluntary" in the same sense as paying taxes— withhold disclosure at your peril.<sup>305</sup> A manufacturer's failure to initiate a recall when it knows of a defect is not just punishable by fines. It can cause the manufacturer to be accused of a cover up and callous disregard for the safety of its customers. And any whiff of scandal can subject management to Congress's usual gleeful pillorying of any firm that has failed to comply with a legal requirement that it and the public like. Finally, recalls are embedded in an enforcement system that is hard for a company to game. Over 45,000 complaints flood into the Agency's office of defects investigation every year,<sup>306</sup> as does a huge amount of information from other sources.

The entire recall apparatus has evolved into a kind of *in terrorem* confessional society. The earlier the confession, the better, especially since, pursuant to the FAST Act passed last year, "whistle blowers" are now being encouraged to propel confessors into the confessional stall.<sup>307</sup> And companies

302. *Id.*

303. *Id.* NHTSA, *Annual Recalls Reports*, *supra* note 297.

304. *See supra* note 301.

305. A former NHTSA official explained, "It is like saying I voluntarily paid my income tax. I did it because the law requires me to." Christopher Jensen, *Safety Recalls May Be 'Voluntary,' but Are Required by Law*, N.Y. TIMES (Sept. 21, 2010), <http://wheels.blogs.nytimes.com/2010/09/21/safety-recalls-may-be-voluntary-but-are-required-by-law>.

306. *Examining the GM Recall and NHTSA's Defect Investigation Process: Hearings Before the Subcomm. on Consumer Prot., Prod. Safety & Ins. of the S. Comm. on Commerce, Sci. & Transp.*, 113th Cong. 48 (2014) [hereinafter *2014 Senate Commerce Hearing*] (statement of David Friedman, Acting Administrator, NHTSA).

307. Recognizing that some company executives may be slow to acknowledge their sins, the Motor Vehicle Safety Whistleblower Act authorizes NHTSA in some circumstances to use a portion of civil penalty fines to pay a bounty to whistleblowers who assist in successful enforcement actions. Pub. L. No. 114-94 §§ 24,351-52, 129 Stat. 1716 (2015) (codified at 49 U.S.C.A. § 30,172 (2016)).



themselves are required to supply NHTSA with a constant stream of data that might suggest the existence of a defect. Pursuant to the TREAD Act, companies must submit quarterly Early Warning Reports (EWR) covering information on incidents involving death or injury, aggregate data on property damage claims, consumer complaints, warranty claims, and field reports on their investigation of specific incidents, among other information.<sup>308</sup> NHTSA receives an enormous amount of data.<sup>309</sup> NHTSA reports that it “uses sophisticated data-mining techniques to identify trends in the data that may be evidence of a safety defect.”<sup>310</sup> Obviously, these techniques are not foolproof.

When a company determines that a defect is safety related, the company must notify the Agency within five days in a submission known as a “573 report.”<sup>311</sup> The report is required to include a chronology of events that led to the recall determination. Intentional failure to disclose information, or affirmatively misleading the Agency, subjects the manufacturer to the possibility of penalties. The Agency routinely reviews 573 reports to ensure that companies are meeting their five-day reporting obligation. If the Agency has reason to believe a company has not done so, it opens a second investigation, known as a “timeliness query.” Between 2009 and 2014, automakers paid fines totaling more than \$85 million for lack of timeliness in reporting defects.<sup>312</sup> During 2015 alone, manufacturers were fined \$470 million for defect and recall reporting failures.<sup>313</sup> Commenting on a recent speech on recalls by the NHTSA chief counsel to defense attorneys, one observer distilled the message as follows: “Call us before we call you.”<sup>314</sup>

### *B. Encore, Legal Culture*

From a legislative perspective, the recall regime has become a sort of regulatory breeder reactor, generating more political energy to strengthen the regime than it takes to get the recall issue on the legislative agenda once again. Unlike the rulemaking side, legislation so far has only strengthened the regime,

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308. 49 U.S.C. § 30,166(l)-(m); 67 Fed. Reg. 45,822 (July 10, 2002) (codified at 49 C.F.R. pt. 579(C)).

309. See *GM Ignition Switch Recall: Why Did It Take So Long?: Hearing before the Subcomm. on Oversight & Investigations of the H. Comm. on Energy & Commerce*, 113th Cong. 64 (2014) (statement of David Friedman, Acting Administrator, NHTSA).

310. *Id.*

311. *Id.* § 573.6 (2016); see also *2014 Senate Commerce Hearing*, *supra* note 306, at 7 (statement of David Friedman, Acting Administrator, NHTSA) (describing the reporting requirements).

312. *2014 Senate Commerce Hearing*, *supra* note 306, at 50 (statement of David Friedman, Acting Administrator, NHTSA).

313. Malone & Creamer, *supra* note 297.

314. *NHTSA's Message to the Defense: Call Us Before We Call You*, SAFETY RES. & STRATEGIES, INC. (June 6, 2014), <http://www.safetyresearch.net/blog/articles/nhtsa's-message-defense-call-us-we-call-you>.

not weakened it.<sup>315</sup> Industry and the Agency struggle to keep pace with their respective obligations. Inevitably, they fail. The result in Congress is invariably fresh calls for further reforms. The legislative history of NHTSA's recall authority is a perpetual cycle of amendment, industry and/or Agency malfeasance, congressional outrage, and further amendment. The circle spirals ever upward in search of more recalls more quickly, more corrective justice, and more punishment.

There are, no doubt, cases where companies have dragged their heels, or worse, in reporting and rectifying recalls. Nor is the Agency's record unblemished by any means.<sup>316</sup> For example, Ralph Nader blasted NHTSA in a 2014 editorial, claiming it had not ordered a manufacturer to recall its vehicles for thirty-five years.<sup>317</sup> But Nader's complaint hardly tells the whole story. NHTSA generally negotiates the scope of a recall without the need for a formal administrative order. And as Fiat Chrysler and others have recently learned, and again hardly for the first time, the recall regime is not kind to those, including the Agency, who fail to meet Congress's expectations. Hearings with titles like, *Volt Vehicle Fire: What Did NHTSA Know, and When Did It Know It?*<sup>318</sup> and *The G.M. Ignition Switch Recall: Why Did It Take So Long?*,<sup>319</sup> tell the story without readers perusing the text. In an important sense, NHTSA does not regulate recalls—recalls regulate NHTSA.

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315. In addition to the 1974 Amendments, the TREAD Act, and MAP-21, Congress most recently passed legislation in late 2015, the Fixing America's Surface Transportation (FAST) Act, which contains a host of provisions seeking to strengthen the Agency's recall program. Pub. L. 114-94, 129 Stat. 1702 (2015). Among other things, the FAST Act requires improvements in the availability of recall information, *id.* § 24,103 (codified at 49 U.S.C. § 30,119); provides for notification of recalls by email, *id.* § 24,104 (codified at 49 U.S.C. § 30,119); calls for a pilot program to assess the use of state DMVs to assist with recall notifications, *id.* § 24,106 (codified at 49 U.S.C. § 30,119); requires rental car companies to remedy defects before renting their vehicles, *id.* § 24,109 (codified at 49 U.S.C. § 30,101); requires an assessment of the feasibility of technical devices in vehicles that would provide notice of open recalls; triples the maximum fines for recall violations from \$35 million to \$105 million, *id.* § 24,110 (codified at 49 USC § 30,165(a)); extends the obligation to provide free remedy of defects from ten to fifteen years, *id.* § 24,403 (codified at 49 U.S.C. § 30,117); and requires dealers to check for open recalls, *id.* § 24,107 (codified at 49 U.S.C. § 30,120(f)).

316. See, for example, the DOT Inspector General's report criticizing NHTSA's handling of the GM ignition switch recall and identifying seventeen recommendations to improve the Agency's defect investigation process. DEP'T OF TRANSP., OFFICE OF THE INSPECTOR GEN., DOT OIG REPORT ST-2015-063, INADEQUATE DATA AND ANALYSIS UNDERMINE NHTSA'S EFFORTS TO IDENTIFY AND INVESTIGATE VEHICLE SAFETY CONCERNS (2015). Six months later, Congress appropriated substantial funds for NHTSA for 2016 through 2020 on Department of Transportation certification that the Agency had implemented all of the recommendations.

317. Ralph Nader, *Safety in Name Only at NHTSA*, USA TODAY (Sept. 18, 2014), <http://www.usatoday.com/story/opinion/2014/09/17/ralph-nader-safety-nhtsa-investigation-regulation-congress-gm-stalled-column/15801047>.

318. *Volt Vehicle Fire: What Did NHTSA Know and When Did It Know It? Hearing Before the Subcomm. on Regulatory Affairs, Stimulus Oversight & Gov't Spending of the H. Comm. on Oversight & Gov't Reform*, 112th Cong. 111 (2012).

319. *The G.M. Ignition Switch Recall: Why Did It Take So Long? Hearing Before the Subcomm. on Oversight & Investigations of the H. Comm. on Energy & Commerce*, 113th Cong. 131 (2014).

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The per se defect theory approved by the courts in the 1970s has emerged from the post-Glacial rebound alive and well. It continues to be a vital cornerstone of the Agency's recall power. In contrast to its heavy procedural and evidentiary burdens in rulemaking, the Agency's burden in defects cases remains as light as the proverbial feather. Industry resistance to recalls is largely a futile act. Against the backdrop of the Agency's earlier successive judicial wins, industry has brought very few challenges. Writing in 2001, a retired enforcement attorney formerly working with the Agency's office of defects investigation wrote:

What is remarkable is . . . that there has been no further litigation contesting the agency's determination that a safety-related defect[] exists . . . . My own interpretation is that the basic law was settled in a manner very favorable to the Government in *Wheels* and *Pitman Arms*, and the manufacturers have grudgingly accepted those cases as the law. . . . [M]anufacturers have been unwilling, when push comes to shove, to contest a NHTSA safety-defect determination made in light of the *Wheels* and *Pitman Arms* precedents. In fact, what has been happening since the *Wheels* and *Pitman Arms* decisions is that the manufacturers have acquiesced to the agency's informal position by the end of a defect investigation, before a formal agency defect determination is made. With hardly any exceptions, when NHTSA and a manufacturer come eyeball-to-eyeball on a safety defect controversy, the manufacturer blinks first.<sup>320</sup>

To be sure, the agency "lost" two recall-related cases in the post-*Struggle* era, but the courts in both cases went out of their way to underscore the continued vitality of NHTSA's fulsome recall authority. In many respects, the two cases are more illuminating about the limitations of NHTSA's rulemaking power than its recall authority.

The first case was *United States v. Chrysler Corp.*,<sup>321</sup> handed down by the D.C. Circuit Court of Appeals, the same court that decided the recall-empowering *Wheels* (1975) and *Pitman Arms* (1977) cases.<sup>322</sup> The Chrysler case involved a recall for failure to comply with a safety standard, not for a safety-related defect. The court found that the Agency had violated the 1966 Act and Chrysler's Due Process rights because the standard at issue, FMVSS 201 on seat belt anchorage assemblies, did not specify with sufficient clarity the testing requirements that Chrysler needed to meet in order to demonstrate compliance.<sup>323</sup> As a result, Chrysler had been denied "fair notice" of what was expected of it. The problem lay in the rule, not the recall.

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320. Allan J. Kam, Director, Highway Traffic Safety Assocs., LLC, Address on NHTSA Safety Defect Investigations at the ATLA 2001 Annual Convention, Products Liability Section (July 17, 2001), [http://www.htsassociates.com/NHTSA\\_safety\\_defect\\_investigations.shtml](http://www.htsassociates.com/NHTSA_safety_defect_investigations.shtml).

321. *United States v. Chrysler*, 158 F.3d 1350 (D.C. Cir. 1998).

322. *United States v. General Motors Corp.*, 518 F.2d 420 (D.C. Cir. 1975) (*Wheels*); *United States v. General Motors Corp.*, 561 F.2d 923 (D.C. Cir.) (*Pitman Arms*).

323. 158 F.3d at 1354.

The second defect-related case that NHTSA lost, also handed down by the D.C. Circuit, presented a more direct challenge to the Agency's recall powers. In *United States v. General Motors*, the court ruled that the government had failed to meet its burden in seeking a recall of GM's "X platform" cars alleged by the Agency to be defective because their rear wheels were predisposed to lock up prematurely.<sup>324</sup> But the problem with NHTSA's position was that it had no evidence that a defect existed other than consumer complaints—complaints that the Agency's own publicity about the problem may have generated.

In the absence of any broken part, or any theory of how such a part might be failing, the court searched diligently for evidence that would meet even the lax standards of the *per se* theory. It failed to find it. Indeed, the evidence revealed that the problem in GM X cars was no worse than in comparable cars of other manufacturers. If the Agency wanted to establish the inadequacy of a component or aspect of vehicle performance that was general to industry, it could not do so by means of its recall powers. That was a task for rulemaking. The courts would not allow NHTSA to engage in a form of *de facto* rulemaking that exploited the strategic strengths of its recall powers. If NHTSA wanted to force technology, such as ABS brakes that would avoid "lock up," it needed to pass through the rulemaking paddle line.

Legal culture has been kind to recalls in other ways. Recently, the Agency and DOJ have been able to leverage recalls by negotiating far-reaching consent decrees to gain a foothold deep inside companies' internal management. Building off lessons learned in cases involving GM, Honda, and Takata, the Agency in July 2015 entered into a consent decree with Fiat Chrysler Automobiles (FCA) that contained no fewer than thirty "performance obligations." According to press accounts, "[c]entral to the pact is a top-to-bottom revamp of FCA's current recall and defect practices, a process that will be overseen by an independent monitor who will report to NHTSA and will have broad authority to hire staff and investigate safety issues."<sup>325</sup> One observer noted, "It doesn't have any teeth with other OEMs, but what it's trying to do is set up a model or a standard of behavior within the industry."<sup>326</sup> Through recalls, NHTSA seems to be gaining a seat at the internal management table in ways that it has never been able to achieve through standard setting.

Courts and Congress were not alone in driving the Agency upward and onward in its recall efforts. Product liability and shareholder derivative suits also contributed.<sup>327</sup> The plaintiffs' bar feasted on the ever-growing

324. 841 F.2d. 400, 400 (D.C. Cir. 1988).

325. Ryan Beene, *NHTSA Uses FCA Order to Clean Up Industry*, AUTOMOTIVE NEWS (Aug. 3, 2015, 12:01 AM), <http://www.autonews.com/article/20150803/OEM111/308039945/nhtsa-uses-fca-order-to-clean-up-industry>.

326. *Id.*

327. See, e.g., Mike Wood, *How the NHTSA Has Become a Great Witness for Product Liability Litigation*, LAWGURU (May 1, 2016), <https://www.lawguru.com/articles/law/how-the-nhtsa-has-become-a-great-witness-for-product-liability-litigation>; Jason. J. Thompson, *GM Recall Litigation is*

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informational disclosures that the recall regime forced industry to disgorge. Negative publicity and reputational damage further upped the ante. Explaining why companies shied away from resisting NHTSA in court, a former counsel to the defects office noted, “Challenging the agency’s recall order would bring more adverse media attention. General Motors’s experience with the X Cars litigation could be described as winning the battle and losing the war; the publicity negatively impacted sales of the vehicles at issue. There is no market share to be gained in fighting NHTSA.”<sup>328</sup> In sum, just about everything in the legal environment and beyond worked to nurture recalls. In good times and in bad, the crocodile prospered.

### C. Costs and Benefits

And what contribution have recalls made to the safety ecosystem in which they have proliferated? In 1976, NHTSA’s own advisory council concluded: “The question naturally arises—do the safety benefits of the program justify the cost? Curiously, no one knows. Indeed, the scarcity of facts and the abundance of unknown factors make any definitive evaluation of the defect-recall program very difficult.”<sup>329</sup> Very little has changed in the nearly forty years since the council’s pronouncement. NHTSA has declined to undertake a cost-benefit calculation of recalls; OMB has kept its distance; and the overall efficacy of the program remains a mystery.

That said, at least something is known, or suspected, about the costs of the recall program. NHTSA has estimated that the average cost of a recall is \$100 per vehicle.<sup>330</sup> If that estimate is valid, the direct costs of recalls in recent years (2002 to 2015) would total about \$2.1 billion annually, assuming all vehicles were returned.<sup>331</sup> A study of indirect recall costs, focusing in particular on the effects of recalls on share prices, has estimated that indirect costs in all likelihood exceed direct costs,<sup>332</sup> suggesting that total recall costs are running on average over \$4 billion annually, again assuming all vehicles were returned.

Of course, not all vehicles are recalled—the current overall completion rate is seventy-five percent. But Congress, the Agency, and industry are working hard to increase that rate,<sup>333</sup> and in some recent years, 2014 (49.8

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a *Battle on Three Sides*, SOMMERS SCHWARTZ BLOG (Aug. 13, 2014), <http://www.sommerspc.com/blog/2014/08/gm-recall-litigation-is-a-battle-on-three-sides> (reporting that a GM recall was tied to products liability, shareholder, and consumer fraud lawsuits).

328. Kam, *supra* note 320.

329. McDonald, *supra* note 19, at 12-13.

330. *Id.* at 13.

331. As previously indicated, an average of about 21 million vehicles was recalled each year from 2002 to 2015. See discussion *supra* note 300.

332. McDonald, *supra* note 19, at 16 (citing Nicholas G. Rupp, *The Attributes of a Costly Recall: Evidence from the Automotive Industry*, REV. OF INDUS. ORGS. 21 (2004)) (“[T]he indirect costs of automotive recalls are likely larger than the direct costs.”).

333. Increasing the recall completion rate is presently an Agency priority. The Agency held a workshop with industry representatives and others on April 28, 2015, for this purpose. See Press

million vehicles) and 2015 (49.2 million vehicles) for example,<sup>334</sup> the number of recalled vehicles has far exceeded the post-Glacial average. So \$4 billion in annual recall costs seems a plausible benchmark. By rough comparison, the midpoint of costs estimated by OMB to have been incurred by *all* of NHTSA's major safety rules (again without discounting for costs that would have occurred anyway through voluntary industry action) was about \$5.5 billion annually for the period 2002 to 2012.

As to recall benefits, apart from the occasional anecdote, essentially nothing is known.<sup>335</sup> There is certainly reason to doubt that recall safety benefits are appreciable. NHTSA itself has reported that vehicular defects rarely cause auto accidents. The most recent study suggests that in 2014, vehicle failures (excluding failures due to poor maintenance) accounted for less than one percent of accidents,<sup>336</sup> and there is concern many recalls do not deal with serious safety issues.<sup>337</sup> A leading consumer group recently acknowledged that "the fact is that the vast majority of recalls do not involve a single death or injury."<sup>338</sup>

In sum, the best that can be said is that the efficacy of the recall program is mysterious and dubious. We would be surprised if the vast majority of recalls could meet the cost-benefit criteria that NHTSA and OMB typically apply to auto safety rules. Yet, if anything, Congress and the public seem to want more aggressive recall activity, not less. NHTSA is happy to oblige. In 2014, the Agency collected from industry more in civil penalties (\$126 million) than in the previous forty-three years combined.<sup>339</sup> In July 2015, NHTSA levied its

Release, NHTSA, U.S. DOT Hosts Workshop To Boost Recall Completion Rates (April 28, 2015), <https://www.transportation.gov/briefing-room/us-dot-hosts-workshop-boost-recall-completion-rates>.

Several FAST Act provisions discussed above are designed to drive up completion rates. *See supra* note 307. In a set of "safety principles" recently reached with the DOT, industry has committed to aim for a one hundred percent completion rate. Nat'l Highway Traffic Safety Admin., *Proactive Safety Principles 2016*, U.S. DEP'T TRANSP. (last visited Nov. 6, 2016), <https://www.transportation.gov/briefing-room/proactive-safety-principles-2016>. One concern is that recalls are now so prevalent the public is suffering "recall fatigue."

334. NHTSA, *Annual Recalls Reports*, *supra* note 297.

335. One study has suggested that recalls may reduce the accident rate of affected vehicles by ten percent. *Bae and Silva U.S. Case Study*, *supra* note 19. Concern has been expressed, however, that the authors did not control for a number of confounding variables. McDonald, *supra* note 19, at 17.

336. *See Oversight of the National Highway Traffic Safety Administration: Hearing Before the Subcomm. on Commerce, Mfg. & Trade of the H. Comm. on Energy & Commerce*, 114th Cong. 69 (2016) [hereinafter *2016 NHTSA Oversight Hearing*] (remarks of Mitch Bainwol, President, Alliance of Automobile Manufacturers).

337. Ryan Beene, *Carlson Vows to Press NADA's Fight Against Regulation*, AUTOMOTIVE NEWS (Apr. 2, 2016, 9:06 PM), <http://www.autonews.com/article/20160402/RETAIL06/160409936/carlson-vows-to-press-nadas-fight-against-regulation> (citing analysis by Alliance of Automobile Manufacturers that only six percent of vehicle recalls are "hazardous").

338. Center for Auto Safety, Comment Letter on NHTSA Guidance Bulletin 2016-02: Safety-Related Defects and Emerging Automotive Technologies, at 1 (May 2, 2016), <https://www.regulations.gov/document?D=NHTSA-2016-0040-0031>.

339. Mark Rosekind, Administrator, NHTSA, Testimony Before the Subcommittee of Transportation, Housing, Urban Affairs and Related Agencies of the House Committee on

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largest-ever-to-date civil penalty against Fiat Chrysler: \$105 million.<sup>340</sup> Shortly thereafter, the Agency beat that record fining Takata, \$200 million, in connection with the recall of the company's defective airbags.<sup>341</sup> As these pages are being written, the Justice Department has announced that Takata will also plead guilty to wire fraud and pay \$1 billion in criminal penalties in connection with its airbag fiasco.<sup>342</sup>

### IX. Bureaucratic Adaptation in a Changing World

#### A. Review of the Bidding

Our story to this point is largely one of agency adaptation to a relatively stable legal culture. One constant is judicial review. Reviewing courts profess deference to agency expertise, but expertise must be demonstrated, not merely invoked. This has made technology-forcing difficult, if not impossible, when the evidence that would demonstrate the efficacy and reasonableness of new safety technologies is limited or unavailable. But evidence is not a problem when vehicles have demonstrable defects, and the legal system has long been solicitous of consumers who are the victims of defective products. In this legal environment, setting technology-forcing standards is highly problematic, while recalling defective vehicles is virtually unconstrained.

From this perspective alone, one might predict that NHTSA would find rulemaking troublesome and recalling defective vehicles rewarding. But, the Agency's legal environment is also inhabited by executive branch and congressional overseers who have the constitutional authority to empower, fund, staff, and oversee the Agency's operations. In a sense, the constant in this corner of the Agency's legal culture is inconstancy, but the messages from these constitutionally authorized political overseers concerning how NHTSA should deploy its resources have reinforced the lessons of judicial review.

Although Congress unanimously adopted the Motor Vehicle Safety Act in 1966, it has done almost nothing to aid the Agency in overcoming the limitations of its original standard-setting mandate. And when mandating

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Appropriations (Mar. 19, 2015), [http://www.nhtsa.gov/About-NHTSA/Congressional-Testimony/testimony\\_mr\\_house\\_04142016](http://www.nhtsa.gov/About-NHTSA/Congressional-Testimony/testimony_mr_house_04142016).

340. Ryan Beene, *Fiat Chrysler Hit with Record \$105 Million U.S. Penalty over Recalls*, AUTOMOTIVE NEWS (July 26, 2015), [http://www.autonews.com/article/20150726/OEM11/150729909/fiat-chrysler-hit-with-record-\\$105-million-u.s.-penalty-over-recalls](http://www.autonews.com/article/20150726/OEM11/150729909/fiat-chrysler-hit-with-record-$105-million-u.s.-penalty-over-recalls).

341. Of the \$200 million, \$70 million was payable in cash. The balance became due if the company violated its consent decree or additional legal violations were discovered. Press Release, Dep't of Transp., *U.S. DOT Imposes Largest Civil Penalty in NHTSA's History on Takata for Violating the Motor Vehicle Safety Act* (Nov. 3, 2015), <https://www.nhtsa.gov/press-releases/us-dot-imposes-largest-civil-penalty-nhtsa-history-takata-violating-motor-vehicle>.

342. Press Release, Dep't of Justice, *Takata Corporation Agrees to Plead Guilty and Pay \$1 Billion in Criminal Penalties for Airbag Scheme* (Jan. 13, 2017), <https://www.justice.gov/opa/pr/takata-corporation-agrees-plead-guilty-and-pay-1-billion-criminal-penalties-airbag-scheme>.

standard setting on particular topics, Congress has imprudently doubled down on existing requirements (the passenger-side airbag fiasco) and sent the Agency on strange safety quests having vanishingly small effects on the overall public health mission contemplated in 1966. Legislation has strengthened the Agency's hand significantly only with respect to the administration of the defects program.

At the other end of Pennsylvania Avenue, executive oversight has largely emphasized concern about the costs of regulation. While only the Reagan Administration sought systematically to dismantle the Agency's standard-setting program, every administration since Jimmy Carter's has imposed or reinforced regulatory analysis requirements that apply only to rulemaking, not to recalls.

During its first three-and-a-half decades, NHTSA responded to these signals by virtually abandoning its effort to force technology by rules in favor of an increasingly aggressive and popular recall program. The story thereafter has been somewhat different. Rulemaking of a sort has to some degree been reenergized. But standard setting has taken a new form—one that we have characterized as co-regulation or cooperative regulation. By setting standards that require the dissemination of safety technologies already in widespread use, the Agency has entered into an implicit partnership with the motor vehicle industry. The industry now sets the safety performance agenda by developing and deploying new safety technologies. The Agency's role has become one of setting standards that largely accept the performance characteristics of the technologies the industry is already deploying. It seeks mainly to universalize those technologies' availability to all motorists.

That, at least, is the story on the standard-setting side of the regulatory ledger. Reinforced by both its legal and political overseers, the Agency remains aggressively in the defect-investigation and vehicle-recall business. It gets into legal trouble only if it tries to use the recall program as a substitute for rulemaking. And it has political trouble, largely with Congress, only when it fails to act quickly and vigorously enough with respect to some particular safety defect.

We should be clear, however, that while the legal culture shapes regulatory technique, it does not determine it. Agencies can adapt in differing ways to legal and political goals or constraints, and NHTSA has done so over its fifty-year history. To take an obvious example, NHTSA has over time taken two radically different approaches to the constraints on its standard-setting functions. Having first virtually abandoned standard setting with any measurable safety impact, the Agency returned to the field with the co-regulatory strategy just described. Reinterpreting its mandate as one of technology diffusion rather than technology forcing may not be terribly ambitious, but it would be hard to maintain that these efforts have no safety benefit. And rulemaking in this form has proven to be legally invulnerable and politically unobjectionable.



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Nor are we arguing that the aforementioned adaptations are solely the result of creative adjustments to the Agency's legal environment. Agency regulatory technique is shaped by many other factors as well. In NHTSA's case, for example, it seems clear that some of the basic behavioral, market, and technological assumptions on which the 1966 Act was predicated are highly questionable in today's world. The Agency's strategic vision seems to be premised, at least in part, on these new understandings. In this section we provide a sketch of this revised vision of the vehicle safety world and how it reinforces the adaptive strategy that we have described.

### *B. A Changed World*

When America embarked on its experiment in auto safety regulation in 1966, that initiative was premised on a number of critical beliefs. One was that the behavioral technique of regulating automotive safety by enforcing traffic laws was a failed strategy. State and local enforcement campaigns against speeding, drunk driving, and other traffic offenses were ubiquitous. Driver education was mandatory in most high schools, and motorists were constantly exhorted to behave responsibly through advertising campaigns, sermons, and bumper stickers. That road carnage continued unabated led to a simple conclusion: changing driver behavior was suboptimal, perhaps even a fool's errand.

Second, it was widely believed both inside and outside the automobile industry that safety did not sell.<sup>343</sup> To be sure, it would be bad for business for an automobile to be recognized as less safe than its competitors. But attempts to market safety technologies seemed to have effects only at the extreme high end of the automotive market. Optional safety features were chosen only by those whose budgets were relatively unconstrained. Making safety technologies a standard feature added costs that most potential customers were unwilling to pay. The carnage on the highways may have been imposing high social costs, but the market did not seem capable of factoring those costs into individual transactions.

Finally, the proponents of auto safety regulation were convinced that the big payoff from safety regulation would come through making vehicles more crashworthy. In an increasingly mobile society, and one in which driver error or irresponsibility seemed intractable, the relatively high volume of crashes was seen as unavoidable. But the deaths and injuries from those crashes might be avoidable if the "second collision"—the contact between vehicle passengers and the vehicle or its external physical environment—could be made less forceful. NHTSA's safety regulatory mandate included efforts both to improve

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343. Diana T. Kurylko, *Ford Had a Better Idea in 1956, But It Found That Safety Didn't Sell*, AUTOMOTIVE NEWS (June 26, 1996), <http://www.autonews.com/article/19960626/ANA/606260836/ford-had-a-better-idea-in-1956-but-it-found-that-safety-didnt-sell>.

crash avoidance and vehicle crashworthiness. But the big payoffs were thought to come from the latter. It was those technologies that were the important ones to force by performance standards.

NHTSA's most important initiative, its passive restraints rule, was premised on all of these assumptions. Vehicles already had lap and shoulder belts, but usage rates were abysmally low. Driver behavior in this regard seemed thoroughly incorrigible. Passive restraints, whether motorized automatic belts or airbags, were likely to have extremely modest market penetration. Mercedes buyers would pay the tariff, but this equipment was unlikely to be found in Fords and Chevrolets. And this was the technology that had the greatest promise for limiting the effects of the second collision.

Yet the history of the passive restraints rule and the reaction to it seemed to belie the once conventional assumptions concerning driver behavior and the marketability of safety technologies. Secretary Dole's creative reissuance of the passive restraints rule, with its incentives both for the adoption of state mandatory seat belt use laws (MULs) and the use of airbags as the preferred passive restraints technology, set off a series of responses, both at the state level and in the automobile industry, that had surprising effects.<sup>344</sup>

Because of a campaign that in practical effect brought together vehicle manufacturers and vehicle safety partisans,<sup>345</sup> many states that had been resistant to mandatory use laws adopted them. Even more surprisingly, the utilization rates of manual lap and shoulder belts doubled almost immediately and have been increasing ever since. Average utilization rates have gone from around fourteen percent in 1983, at the time of the MUL campaign, to nearly eighty percent nationally two decades later.<sup>346</sup> For 2015, NHTSA reported national usage rates of 88.5%.<sup>347</sup> At least in this regard, motorist behavior seems to have been malleable.

Second, a decision by Ford Motor Company to comply with the passive restraints rule by installing airbags in its vehicles had a remarkable snowball effect. The press began to report on motorists in Fords, and other vehicles equipped with airbags, who walked away from serious collisions with hardly a

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344. MARTIN ALBAUM, INS. INST. FOR HIGHWAY SAFETY, SAFETY SELLS: MARKET FORCES AND REGULATION IN THE DEVELOPMENT OF AIRBAGS 130-145 (2005), <http://www.safetysells.org/contents.html>. The Dole Decision provided that a passive restraints rule would be phased in from 1986 to 1989, but would be rescinded if, no later than April 1, 1989, states representing two-thirds of the U.S. population enacted mandatory seat belt use laws meeting certain minimum criteria (the so called "trap door" provision). The rule also provided special credits for the implementation of phase-in requirements using airbags as opposed to automatic belts. *Id.* at 134.

345. The industry and safety partisans were, in fact, at odds with one another, but the dynamics of their strategies ended up complementing one another in practical terms. Industry wanted MULs that could be counted against the trap door requirement. Safety advocates also supported MULs, but wanted them formulated in a way that prevented their being counted against the two-thirds rule. Thus, in effect, both groups were lobbying for some form of mandatory seat belt law.

346. ALBAUM, *supra* note 344, at 151, 183.

347. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., DOT-HS-812-243, TRAFFIC SAFETY FACTS: RESEARCH NOTE, SEATBELT USE IN 2015—OVERALL RESULTS (Feb. 2016), <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812243>.

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scratch. Airbags worked, motorists wanted them, and vehicle manufacturers seemingly began to compete to see how many airbags they could cram into a vehicle. Safety could sell.<sup>348</sup>

Manufacturers' marketing strategies began to change, and not just with respect to airbags. The story that we have been telling in this paper about NHTSA's diffusion strategy would be unthinkable without a market for vehicle safety. The Agency could not piggyback on the industry's development and deployment of new safety technologies if there were not a market for those technologies. Without a population receptive to the lure of safer vehicles, automobile companies would not be marketing blind spot warning devices, 180-degree rear visibility cameras or driver-assisted braking and lane-holding technologies.<sup>349</sup>

This latter point brings us to the final assumption underlying the 1966 Act: the promise of crashworthiness over crash avoidance. Notice that the technologies just mentioned are all crash-avoidance technologies. Moreover, the motoring public is increasingly exposed to the prospect of the so-called self-driving (autonomous) vehicle.<sup>350</sup> If and when they are perfected,<sup>351</sup> autonomous vehicles suggest an astonishing new world—one in which there

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348. See ALBAUM, *supra* note 344, at 137-43. We do not, of course, mean to suggest that the Dole Decision alone "created" a market for auto safety. There is some evidence that public perceptions began changing even before, in the late 1970s and early 1980s. See *id.* at 104 (noting that during this period, a manufacturer for the first time cited safety performance in mass advertising and public opinion surveys recorded increasing public concern over vehicle safety).

349. Industry has stated repeatedly that market competition is a driving force in safety innovation and that companies are implementing features voluntarily in advance of mandates. See *2005 House SAFETEA-LU Hearing*, *supra* note 125, at 33 (statement of Fred Weber, President and CEO, Alliance of Automobile Manufacturers) ("[S]afety is an area in which manufacturers compete and seek competitive advantage. Safety 'sells' and manufacturers are leveraging their safety performance and equipment in efforts to distinguish their products from competitors. . . . [N]ine of the top 10 features most desired by consumers in their next new vehicle are designed to enhance vehicle or occupant safety . . . ."); *Hearing Before the Subcomm. on Consumer Prot., Prod. Safety & Ins. of the S. Comm. on Commerce, Sci. & Transp.*, 112th Cong. 41 (2010) (statement of Robert Strassburger, Vice President, Alliance of Automobile Manufacturers) ("Most of the safety features on motor vehicles in the U.S.—antilock brakes, stability control, side airbags for head and chest protection, side curtains, pre-crash occupant positioning, lane departure warning, collision avoidance, and more, were developed and implemented voluntarily by manufacturers, in advance of any regulatory mandates.").

350. Self-driving cars comprise a wide range of automated vehicle (AV) technologies whose common feature is their contribution to automating some aspect of the operation of a vehicle that traditionally has been controlled by the driver. AV technologies rely heavily on software algorithms, artificial intelligence, and electronic sensors comprising radar, lidar, global position systems, and optical cameras to transmit sensory data from the environment to the computer processor. See *How Autonomous Vehicles Will Shape the Future of Surface Transportation: Hearing Before the Subcomm. on Highways & Transit of the H. Comm. on Transp. & Infrastructure*, 113th Cong. vii (2013) (memorandum from subcommittee staff to members) (noting that AV technologies provide the chance for massive reductions in automobile accidents). For a compelling account of AV technologies and the policy issues they present, see James M. Anderson et al., *Autonomous Vehicle Technology: A Guide for Policymakers*, RAND Corp. (2016) [hereinafter 2016 Rand Report], [http://www.rand.org/pubs/research\\_reports/RR443-2.html](http://www.rand.org/pubs/research_reports/RR443-2.html).

351. A 2016 report by Moody's found that self-driving cars will be available by 2020, common by 2030, standard by 2035, in the majority by 2045, and ubiquitous by 2055. *2016 NHTSA Oversight Hearing*, *supra* note 336, at 70.

are very few, vehicular crashes at all. The auto safety vision of the future seems to be one premised almost wholly on crash avoidance. It could even be a future in which crashworthiness technologies become largely irrelevant.

The other thing to notice about these crash avoidance technologies is their crucial reliance on advanced electronics, sensors, and software. Automobiles are now something like rolling computers. In contrast, collapsing steering wheels, energy absorbing crash zones, improved door latches, rigid passenger compartments, and the like were not only crashworthiness technologies, they were the province of the mechanical and automotive engineers that conventionally populated automobile manufacturers and component suppliers. New digital systems are the domain of different professionals. These technologies often emerge from outside the motor vehicle industry, and, like other digital electronic systems, the pace of technological innovation is rapid. Forcing technological innovation in industries where innovation is the basic business model begins to seem like a peculiar regulatory strategy.

### *C. NHTSA's Response*

Both the emergence of a market for auto safety and the changes in the nature of emerging vehicle safety technologies tend to reinforce the direction of NHTSA's adaptation to the signals from its legal and political environment. Public acceptability has always been a concern for the Agency. The fallout from the consumer revolt against the ignition interlock in the 1970s left indelible institutional memories of the pitfalls of getting too far in front of evolving public opinion. And NHTSA can only make educated guesses at what the motoring public might find acceptable. Public tastes change, sometimes dramatically. The massive shift in public opinion concerning the desirability of airbags is perhaps the most dramatic example. But, while NHTSA regulates by general rules, manufacturers can probe the market with limited experiments. New safety features can be provided as options and limited to just a few models in a manufacturer's product line. Market experience will then guide the pace of dissemination. In this context, the prudent path for an agency concerned about public acceptability of safety innovations is surely to follow the industry's lead.

Acceleration in the pace of safety innovation seems to suggest a similar strategy. NHTSA's rulemaking process is nothing if not ponderous. And its research capacities are miniscule by comparison with the industry that it regulates. Indeed, when the question is how digital electronic systems might promote automobile safety, it is far from clear how "the industry" should be defined. New developments might come from almost anywhere. Once again, these developments suggest something like the approach that NHTSA seems to be taking. In the so-called "tech sector," many promising ideas will fail to reach the market for reasons both technological and economic. Those that do can be nudged along by rules requiring universal application.

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These developments also suggest the potential efficacy of additional, non-coercive regulatory techniques. If there is a market for vehicle safety, one obvious regulatory strategy is to seek to ensure that it is well informed. Providing consumers with information is one of the least coercive, and least legally and politically controversial, techniques available to regulatory agencies. The opportunity for providing this sort of potentially market-perfecting assistance has not been lost on either Congress or the Agency.

In 1972, just as the legal and political groundwork was being laid for the collapse of rulemaking at NHTSA, Congress passed the Motor Vehicle Information and Cost Savings Act of 1972.<sup>352</sup> Title II of that statute authorized NHTSA to establish an information disclosure regime to assist purchasers of new cars in evaluating the relative safety performance of new motor vehicles.<sup>353</sup> In 1978, during the Ice Age of rulemaking, NHTSA began testing vehicles pursuant to its New Car Assessment Program (NCAP). NHTSA has steadily upgraded the program over time, but more importantly for the present discussion, the Agency seems to see the NCAP program as a potential substitute for rulemaking.

In proceedings to further upgrade the NCAP program, NHTSA has identified a number of emerging safety technologies: vehicle-to-vehicle (V2V) communications, advanced vehicle automation (self-driven cars), crash imminent braking, blind spot detection, advanced lighting technology, automatic lane keeping, and automatic pedestrian protection, to name a few. But, with one exception,<sup>354</sup> NHTSA seems not to be planning to provide performance standards for any of these emerging technologies. Instead, the Agency has proposed to add a number of standards to the information provided in the NCAP program.<sup>355</sup>

In giving vehicles a better safety score because of the inclusion of new safety technologies, NHTSA would simply be following the lead of the Insurance Institute for Highway Safety (IIHS), which already requires vehicles to have certain technologies, such as automatic emergency braking (AEB) in order to earn its “top safety pick” rating. Regulation by information provision is sufficiently non-coercive that it does not require the exercise of state power at all.

Collaboration with industry can take other forms. In 2015, NHTSA’s Administrator, Mark Rosekind, testified in congressional hearings that he had “really been pushing” a collaborative model with industry, reasoning that

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352. Pub. L. No. 92-513, 86 Stat. 947 (1972) (codified as amended at 49 U.S.C. §§ 32,908, 32,912-13, 32,918, and 42 U.S.C. § 6,363 (2012)).

353. *See id.*

354. The exception, vehicle-to-vehicle communication technology, is discussed *infra* note 366 and accompanying text.

355. New Car Assessment Program, 80 Fed. Reg. 78,522 (Dec. 16, 2015). In parallel, Congress has directed the Agency to include crash avoidance information on vehicles’ “Monroney” stickers. FAST Act, Pub. L. No. 114-94, 129 Stat. 1702 (2015) (codified at 49 U.S.C. § 32,302).

voluntary agreements “provide an opportunity to expedite and expand safety beyond the minimums we get from rulemaking.”<sup>356</sup> As a model for broader application, Rosekind highlighted a voluntary agreement between NHTSA, the IIHS, and ten major motor vehicle manufacturers under which the latter had committed to install AEB systems as a standard feature on new cars by 2022.<sup>357</sup> The agreement would have some of the features of a rule. For example, the parties were working on a timetable and on the development of specific performance criteria that would provide benchmarks for manufacturers to meet their commitment. But there was no suggestion that the agreement was meant to be legally enforceable.<sup>358</sup>

In a world in which technological development is firmly in the control of the industry and its component suppliers, and in which motor vehicle manufacturers now seem to value a reputation for providing advanced safety features on their vehicles, this sort of collaborative or cooperative approach may be perfectly sensible. There is certainly the potential for speeding up the process of making safety advances available to the motoring public. The collaborating manufacturers and other public and private institutions will have no occasion to bombard the Agency with objections to a rulemaking proposal or threaten to bring the whole process to a halt through judicial review. There is no rule to be submitted to the Office of Management and Budget with attendant resource-intensive regulatory analyses. “Regulated” parties who are not being coerced or shamed, but are instead treated as committed partners in a common enterprise, may be motivated to outperform their voluntary commitments rather than merely meeting the letter of the law as established by a performance standard.

Hope springs eternal, and this is not the place to attempt to provide an evaluation of the potential efficacy of NHTSA’s information and voluntary agreement strategies. But, the developments we have been describing raise an obvious question: what role, if any, remains for the sort of command and control, technology-forcing rulemaking that was thought to be at the heart of the 1966 Motor Vehicle Safety Act?

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356. *Examining Ways to Improve Vehicle and Roadway Safety: Hearings Before the Subcomm. on Comm., Mfg. & Trade of the H. Comm. on Energy & Commerce*, 114th Cong. 30 (2015) (testimony of Mark Rosekind, Administrator, NHTSA).

357. Press Release, NHTSA, DOT and IIHS Announce Historic Commitment from 10 Automakers to Include Automatic Emergency Braking on All New Vehicles (Sept. 11, 2015), <http://www.nhtsa.gov/About%20NHTSA/Press%20Releases/nhtsa-iihs-commitment-on-aeb-09112015>.

358. Another recent example of collaboration is the set of “Proactive Safety Principles” agreed to by DOT and industry earlier this year. *See supra* note 316. The process of adopting voluntary principles, unlike standard setting by rule, tends to exclude consideration of the views of other stakeholders.

## The Transformation of Auto Safety Regulation

### X. The Future of Federal Motor Vehicle Safety Regulation

#### A. *The Forgotten Virtues of Mandatory Standards*

While our views on these matters are speculative at this stage of our research, we are doubtful that a strategy based increasingly on information provision and voluntary commitments from industry will meet the need for automobile safety envisioned by the 1966 Motor Vehicle Safety Act. While progress has been made, it is still the case that over 38,000 motorists died from accidents on American roadways in 2015.<sup>359</sup> The estimated costs of motor vehicle accidents are in the hundreds of billions of dollars annually and motor vehicle crashes continue to be the leading cause of death for persons aged fifteen to twenty-four. They are the second leading cause of death for persons twenty-five to thirty-four.<sup>360</sup> Yes, the fatality rate expressed as deaths per miles driven has decreased dramatically in the U.S.; but motor vehicle deaths per capita in the U.S. are by far the highest compared to many other high income countries, and our progress in reducing them the slowest.<sup>361</sup> We are surely decades away from the zero-accident Nirvana of a motor vehicle fleet composed entirely of faultless, autonomous vehicles.

In the meantime, a market-based strategy of voluntary agreements and information provision is likely to be a suboptimal strategy. First, we must remember that the market for safety in motor vehicles did not emerge independently of regulation. Prior to 1966, motor vehicle manufacturers seldom advertised the safety characteristics of their vehicles. And, but for the Agency's persistent promotion of passive restraints technology, the airbag industry might well have disappeared before sufficient experience with airbags convinced consumers that they were life-saving, and therefore desirable, features of automobiles.

Even the recall program, which has little demonstrable effect on overall death and injury statistics, may well have contributed importantly to the

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359. Motor vehicle fatalities are on the rise. The 2015 total (38,300 fatalities) represents an eight percent increase over 2014 (35,398 fatalities), the largest percentage increase in fifty years. Fatalities in the first half of 2016 are nine percent higher than the corresponding period in 2015. NATIONAL SAFETY COUNCIL, NSC MOTOR VEHICLE FATALITY ESTIMATES (2016), <http://www.nsc.org/NewsDocuments/2016/6%20month%20fatality%20estimates.pdf>.

360. *USA Causes of Death by Age and Gender*, WORLDLIFEEXPECTANCY (last visited Oct. 13, 2016), <http://www.worldlifeexpectancy.com/usa-cause-of-death-by-age-and-gender>.

361. CENTERS FOR DISEASE CONTROL AND PREVENTION, VITAL SIGNS, MOTOR VEHICLE CRASH DEATHS, <https://www.cdc.gov/vitalsigns/motor-vehicle-safety/index.html> (citing to data from the World Health Organization and the International Road Traffic and Accident Database). U.S. motor vehicle deaths per 100,000 people in 2013 were nearly two to four times greater than corresponding deaths in nine other countries in the high-income cohort, which included Canada, Japan, New Zealand, and several European countries. CDC noted, "Even when considering population size, miles traveled, and number of registered vehicles, the US consistently ranked poorly relative to other high-income countries for crash deaths." *Id.* Between 2000 and 2013, the average reduction in motor vehicle deaths among nineteen high-income countries was 56%. The most successful country was Spain (75% reduction); the least successful was the United States (31% reduction). *Id.*

development of the vehicle safety market. Making a virtue of necessity, automobile manufacturers in the early years of the recall program advertised their good experience by comparison with their competitors. This was a game that virtually every manufacturer could play. In every three- or six-month period, some manufacturer always had the best recall record. Moreover, the constant play that the press gives to Agency recalls, whether “voluntary” or mandated, keeps vehicle safety in the public eye.

Second, the pace of safety technology development and diffusion matters. The prospect of NHTSA’s mandating airbags unquestionably helped drive their technological development in the early days. As a result, airbags were ready for mass deployment many years before the Agency’s ultimate mandate for passive restraints made them available in large numbers and stimulated widespread consumer demand. Without regulation, the market was miniscule, and diffusion almost non-existent. In the meantime, thousands of lives that might have been saved were lost. Pushing the pace of improved performance and dissemination of advanced crash avoidance technologies by rulemaking could be equally important.

The penetration of some crashworthiness technologies is proceeding at only an annual rate of about two percent to five percent of the vehicle fleet. But some estimates suggest that widespread use of such technologies already available could save as many as 10,000 lives annually.<sup>362</sup> Yet the agency at present demurs mandating such technologies arguing that rulemaking is protracted, complex, and burdensome,<sup>363</sup> and that “enough penetration” is needed to “provide sufficient data” to justify such rules.<sup>364</sup> It appears legal

362. *Oversight of the National Highway Traffic Safety Administration: Hearing Before the Subcomm. on Commerce, Mfg. & Trade of the H. Comm. on Energy & Commerce*, 114th Cong. 89-90 (2016) (testimony of Ann Wilson, Senior Vice President of Government Affairs, Motor & Vehicle Equipment Manufacturers Ass’n). An analysis by the Insurance Institute for Highway Safety found that incorporation in passenger vehicles of four crash avoidance technologies already on the market (lane departure warning/prevention, forward collision warning/mitigation, blind spot detection, and adaptive headlights) would prevent or mitigate 1/3 of fatal accidents and 1.9 million crashes involving passenger vehicles. See Insurance Institute for Highway Safety, *New Estimates of Benefits of Crash Avoidance Features on Passenger Vehicles*, 45 STATUS REP. (May 20, 2010). A 2016 Carnegie Mellon study found that implementation of three technologies (blind spot monitoring, lane departure warning, and forward collision crash avoidance systems) could together prevent or reduce the severity of up to 1.3 million crashes a year, including 10,100 fatal accidents. See *Partially Automated Cars Provide Enough Benefits To Warrant Widespread Adoption of Current Safety Technologies*, CARNEGIE MELLON U. (July 18, 2016), [https://engineering.cmu.edu/media/press/2016/07\\_18\\_partially\\_automated\\_cars.html](https://engineering.cmu.edu/media/press/2016/07_18_partially_automated_cars.html).

363. Asked at a recent congressional hearing why the Agency had not mandated some of the proven crash avoidance technologies already available, the NHTSA Administrator responded (citing other diffusion rules such as ESC and rear view cameras) that such measures, “took six, eight, and ten years to actually get through the regulatory process” and that “by the time those rules would come out, it would be irrelevant for the new technologies that would have evolved”. The Administrator argued that voluntary agreements could “beat” rules by 3 to 4 years. See *The Automated and Self Driving Vehicle Revolution: What Is the Role of Government? Hearings Before the Subcomm. on Transp., Housing and Urban Affairs of the S. Comm. on Commerce* (Nov. 16, 2016) (testimony of Mark Rosekind, NHTSA Administrator), video available at <http://www.appropriations.senate.gov/hearings>.

364. No one should hold their breath if NHTSA is waiting for “enough penetration” before mandating the diffusion of crashworthiness technologies already available. The turnover rate of



culture is a formidable constraint even on the technology diffusion rulemaking model.

Motor vehicle manufacturers have responded to questions about the pace of diffusion by lobbying for carrots rather than sticks. They have argued that they should be given incentives to deploy these technologies in the form of credits against their fuel economy and emission reduction obligations.<sup>365</sup> If market forces alone were going to accelerate dissemination of these new technologies, the manufacturers would not need these sorts of incentives. And sticks are both available and, at least superficially, superior. Standard setting could mandate diffusion without rolling back fuel economy and air quality improvement goals. While we doubt that NHTSA's twenty-first century diffusion efforts have had or will have significant safety payoffs beyond what otherwise would have occurred, that belief is based on the standards' timidity. The Agency has been consistently late to the game. It need not adopt requirements that most devices already meet or wait until half the fleet already has a new safety advance before pushing the pace of diffusion by rule.

The Agency's proposal to mandate vehicle-to-vehicle (V2V) communications technology recognizes that certain advances simply cannot be promoted adequately by market forces alone.<sup>366</sup> No manufacturer has an

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the U.S. motor vehicle fleet is agonizingly slow, and full penetration of a new technology in all registered vehicles can typically take decades. See, e.g., Highway Loss Data Institute, *Predicted Availability of Safety Feature on Registered Vehicles—a 2015 Update*, 32 BULLETIN 1 (Sept. 2015) [hereinafter HDLI 2015 study]. Moreover, the turnover rate appears to be slowing. The average age of passenger cars and light trucks in operation in the United States has risen from 8.4 years in 1995 to 11.4 years in 2014. Motorists are holding on to their vehicles considerably longer. See *Table 1-26, Average Age of Automobiles and Trucks in Operation in the United States*, BUREAU TRANSP. STAT. (last visited Jan. 19, 2017), <https://www.rita.dot.gov>.

The potential of auto safety rules to accelerate the penetration rate is clear, but variable with the particular technology involved. HDLI analyzed several crash avoidance technologies and reported that federal mandates could speed up penetration "by as much as six years." HDLI 2015 study, *supra* note 364, at 1. However, the Insurance Institute for Highway Safety, with which HDLI is affiliated, reported that a mandate for forward collision warnings (which HDLI also appears to have considered) could have accelerated the 95% penetration rate by 15 years. See *Advanced Notice of Proposed Rulemaking, Vehicle to Vehicle Communications*, NHTSA Docket 2014-0022, Comments of the Insurance Institute for Highway Safety, at 2 (Oct. 20, 2014). Further examination of this issue is needed.

365. *Examining Ways to Improve Vehicle and Roadway Safety: Hearings Before the Subcomm. on Commerce, Mfg. & Trade of the H. Comm. on Energy & Commerce*, 114th Cong. (2015). Industry officials described modest incentives, *id.* at 77, of emission and fuel economy credits for adopting crash-avoidance measures as "incentivizing lifesaving technologies," *id.* at 126, and something they "certainly support," *id.* at 125.

366. Following an advanced notice of proposed rulemaking in 2014, 79 Fed. Reg. 49,270 (Aug. 20, 2014) (codified at 49 C.F.R. pt. 571), the Agency on December 13, 2016 formally proposed a new safety standard (FMVSS 150) mandating V2V communications functionality in new light vehicles and standardizing the message and format of V2V transmissions for sending and receiving "basic safety messages" concerning such matters as vehicle location, heading, and speed. V2V Communications, 82 Fed. Reg. 3854 (Jan. 12, 2017) [hereinafter 2016 V2V Proposal]. The Agency's proposal does not cover vehicle to infrastructure (V2I) communications, which enable "intelligent" highway infrastructure and vehicles to communicate, but V2I functionality is expected to build upon V2V functionality.

incentive to include V2V technologies in a fleet that does not have other vehicles with which to communicate. Why should motor vehicle purchasers seek such capability in the absence of an assurance other purchasers will do the same? The promise of V2V technology can be realized only to the extent a critical mass of vehicles, a network, has that functionality and it is interoperable among vehicles of different makes. Being a first mover here has costs but virtually no marketable benefits.

Other technologies are likely to be justifiable on externality and lifesaving grounds, but extremely unattractive from a marketing perspective. Both NHTSA and state highway officials are increasingly concerned about the problem of distracted driving, particularly with respect to cell phone utilization. Many states have adopted prohibitions against texting while driving or using other than hands-free mobile devices. But the effect on motorists seems to be extremely modest, and, as the seat belt experience shows, it can take decades to change behavior. Meanwhile a technological solution—a plug-in device that disables a driver’s cell phone when the vehicle is underway—has been

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The V2V proposal establishes performance standards for devices conveying such messages at a rate of up to ten transmissions per second within a minimum range of three hundred meters, and predicated on using on-board dedicated short-range radio communication (DSRC) technology. That technology employs omnidirectional radio signals that provide 360-degree coverage and “see” around corners and through buildings. The proposal would also impose security and privacy safeguards for V2V communications. At present, the Agency seeks only to establish and regulate a basic, “data-rich” V2V platform; it would leave the development and choice of particular applications (for example, warnings and advisories based on V2V transmissions) to the market. The Agency has stated, however, that rules mandating specific applications may be forthcoming. *See id.* at 10-11, 15, 70-71.

The Agency has advanced an explicit market failure rationale for the rule. In its 2014 notice, it stated:

NHTSA believes that V2V capability will not develop absent regulation, because there would not be any immediate safety benefits for consumers who are early adopters of V2V. V2V begins to provide safety benefits only if a significant number of vehicles in the fleet are equipped with it and if there is a means to ensure secure and reliable communication between vehicles. NHTSA believes that no single manufacturer would have the incentive to build vehicles able to “talk” to other vehicles, if there are no other vehicles to talk to—leading to likely market failure without the creation of a mandate to induce collective action.

79 Fed. Reg. 49,270.

The Agency has affirmed this rationale, with variations, in its December 2016 proposal, urging that the market is incapable of efficiently and rapidly advancing the two essential features of an effective V2V system: interoperability and a “critical mass” of vehicles communicating with one another. *See* 2016 V2V Proposal, *supra*, at 11-12, 67. The Agency argues that V2V communications display “the same characteristics as more familiar network communications technologies”; that consumers might not voluntarily invest in V2V because the benefits to them depended on other consumers doing the same, which could not be assured; and that V2V communications entail “a significant network externality” because a buyer’s adoption benefits not only the buyer but other motorists whose protection is improved: “the society-wide benefits of individual vehicle buyers’ decisions . . . extend well beyond the direct increase in their own safety.” *Id.* at 12. The agency invited comment on its “tentative conclusions” that V2V “represents a classic ‘collective action’ problem of the sort government regulation is designed to address.” *Id.* at 67.

developed.<sup>367</sup> Without a mandate, market diffusion of this technology seems unlikely. Drivers see the advantages of blind spot warning technologies, emergency braking assistance, and rearview cameras. A device that prevents use of their cell phones? Not so much.

NHTSA's approach to the distracted driving problem has been incremental and restrained. In "Phase I", it carved out a small portion of the problem—distractions caused by devices installed in the vehicle—and then declined to establish performance standards for reasons that hark back to its early unhappy experience with the ignition interlock. Announcing its intention to address in-vehicle devices, the Agency outlined two sets of measures to address the safety problem caused by drivers performing secondary (non-driving) tasks, such as communications, entertainment, and information gathering on in-vehicle devices.<sup>368</sup>

First, it identified several tasks that it deemed so inherently distracting—such as displaying video not related to driving, and automatically scrolling text—that devices should be designed to preclude them. Second, the Agency identified testing methods and time-based criteria for assessing all other secondary tasks enabled by the devices. For example, the Agency proposed that in-vehicle devices should be designed so that "tasks can be completed by the driver while driving with glances away from the roadway of 2 seconds or less and a cumulative time spent away from the roadway of 12 seconds or less."<sup>369</sup>

Notwithstanding the seemingly self-evident desirability of discouraging drivers from watching movies or otherwise diverting their attention from the road more than momentarily, NHTSA proposed and then decided to embody these provisions not in mandatory safety standards but rather in non-binding, unenforceable, voluntary "guidelines."<sup>370</sup> The Agency gave three reasons for this approach. First, "the rapid pace of technology evolution cannot be fully addressed with a static rule," and guidelines "can be issued more quickly than regulations that go through the rulemaking process."<sup>371</sup> Second, more research was needed "to permit accurate estimation of the benefits . . . though NHTSA firmly believes that there are safety benefits to be gained . . ."<sup>372</sup> Finally, the Agency noted its rules must have "repeatable, objective means for determining compliance," but that "driver distraction testing involves drivers with inherent

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367. Indeed, there are several such devices. For a report on one, see Mark Peckham, *Want to Keep Your Teens (or Employees) from Texting Behind the Wheel?*, TIME (Dec. 5, 2012), <http://techland.time.com/2012/12/05/want-to-keep-your-teens-or-employees-from-texting-behind-the-wheel>.

368. See Visual-Manual NHTSA Driver Distraction Guidelines for In-Vehicle Electronic Devices, 77 Fed. Reg. 11,200 (Feb. 24, 2012).

369. *Id.* at 11,202.

370. Visual-Manual NHTSA Driver Distraction Guidelines for In-Vehicle Electronic Devices, 78 Fed. Reg. 24,818, 24,829 (Apr. 26, 2013).

371. Visual-Manual NHTSA Driver Distraction Guidelines for In-Vehicle Electronic Devices, 77 Fed. Reg. 11,207 (Feb. 24, 2012).

372. *Id.*

individual differences that present a unique challenge.”<sup>373</sup> Over forty years later, shades of the *Chrysler* decision, once again.

Recently, the Agency has proceeded to “Phase II” of its effort to reduce distracted driving, again through guidelines. These proposed measures<sup>374</sup> address the risks presented by portable devices, such as smartphones, tablets, and wristwatch computers, as well as after-market electronic devices. Once again, the Agency eschews mandating any blocking technology. Instead, the Phase II guidelines piggyback the Phase I guidelines issued for in-vehicle devices. The Agency recommends that motor vehicle manufacturers and portable device producers incorporate “pairing” functionality, which in effect ties portable devices to in-vehicle devices, which, in turn, operate (hopefully) in conformity with the Phase I guidelines.

The Agency recognizes, however, that some drivers may not want to “pair” their portable devices and thus limit their functionality in this way. The Agency therefore recommends that portable devices also be equipped with a “driver mode” setting that would, in effect, also subject the device to Phase I limits. The Agency prefers that the driver mode activate automatically when the device senses that a driver is using it. However, such activation technology is still being developed, and the Agency therefore recognizes the need for driver mode settings that are activated at the driver’s election.

In sum, the Phase II guidelines are an exuberant celebration of volunteerism. To have any effect, manufacturers must first elect to incorporate the recommended technology, and drivers must then elect to use it. The Agency makes it “absolutely clear” that its guidelines “are voluntary and non-binding”. NHTSA almost certainly lacks authority to issue mandatory rules for portable devices, but clearly could have done so with respect to manufacturer installed or permanently installed after market equipment. It might also have required manufacturers to install blocking devices that would prevent driver use of portable electronic devices. The predictable political consequences of such an intrusion on motorists’ freedom are too obvious to require extended consideration. Distracted driving may be a serious problem that has contributed substantially to the upswing in motor vehicle fatalities in recent years, but in this case, as with the ignition interlock, public acceptance (or the Agency’s apprehension of it) trumps the “need for motor vehicle safety.”

### *B. Deference and Discontent: The Case of Highly Automated Vehicles*

How the Agency should deal with the rapidly changing technological context in which it now finds itself is an enormously complex matter that we are not yet prepared to address. Instead, we will close by flagging some of the

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373. *Id.*

374. Visual-Manual NHTSA Driver Distraction Guidelines for Portable and Aftermarket Devices, 81 Fed. Reg. 87,656 (Dec. 5, 2016).

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regulatory issues NHTSA is now confronting as it applies far more broadly the approach it has taken to the issue of distracted driving. For the Agency is now embracing “guidelines,” “best practices,” and “recommendations” as its technique of choice with respect to crashworthiness generally and highly automated vehicles (HAVs) specifically. In that context, industry (which liked guidelines for distracted driving) is demanding a much more robust regulatory response—indeed, stronger in some respects than the Agency has been willing to provide.

To date, NHTSA has approached the regulation of HAV technologies very gingerly, to say the least. It has issued only a single standard, FMVSS 126 in 2007, on electronic stability control, which, the reader will remember, set performance standards that ninety-eight percent of all ESC systems already in use met. The only other noteworthy initiatives in the HAV field are the Agency’s voluntary agreement on ABS in 2015, its Federal Automated Vehicles Policy released in September 2016, and most recently, the Agency’s pending rulemaking on V2V communications announced in December 2016,

Otherwise, as its rulemaking priorities for 2015-2017 reveal, NHTSA has no plans to regulate any of the individual HAV technologies any time soon, even those that are well advanced in development or already being commercialized.<sup>375</sup> While it is not intuitively obvious why broadly framed, technology-diffusing standards of the kind NHTSA developed in the aftermath of the Ice Age are inappropriate for at least some HAV technologies, NHTSA has made clear that its preferred approach is something else altogether: the non-binding guidelines model previewed with respect to distracted driving.

In January 2016, the Agency issued an update of its 2013 statement of policy<sup>376</sup> on automated vehicles.<sup>377</sup> The Agency declared it would act quickly. First, it promised to propose within six months best-practice guidance to industry on establishing principles of safe operation for fully autonomous vehicles. Second, taking note of state involvement in the area and the desirability of a nationally consistent approach, the Agency committed to “work with the states to craft and propose model policy guidance that helps

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375. See Nat’l Highway Traffic Safety Admin., *Overview of NHTSA Priority Plan for Vehicle Safety and Fuel Economy 2015 to 2017*, U.S. DEP’T TRANSP. (2015), <http://www.nhtsa.gov/Laws-Regs>. In the crash-avoidance area, apart from the issue of V2V communications, the Agency contemplates only a single rulemaking, namely, to require the installation of speed-limiting devices in heavy trucks in response to a petition from the American Trucking Association. *Id.* at 9. With respect to all other advanced crash avoidance technologies, the Agency stated that it would confine its activities to research and promoting the technologies through inclusion in NCAP. *Id.* at 3-4.

376. NHTSA, *Preliminary Statement of Policy Concerning Automated Vehicles*, U.S. DEP’T TRANSP. (May 30, 2013), <http://www.nhtsa.gov/About+NHTSA/Press+Releases/U.S.+Department+of+Transportation+Releases+Policy+on+Automated+Vehicle+Development>.

377. Nat’l Highway Traffic Safety Admin., *DOT/NHTSA Policy Statement Concerning Automated Vehicles, 2016 Update to “Preliminary Statement of Policy Concerning Automated Vehicles,”* U.S. DEP’T TRANSP. (Apr. 27, 2016), <https://www.nhtsa.gov/staticfiles/rulemaking/pdf/Autonomous-Vehicles-Policy-Update-2016.pdf>.

policymakers address issues in both the testing and wider deployment of vehicles at advanced stages of automation.”<sup>378</sup> Beyond these “guidelines” the Agency promised individualized deregulation:

NHTSA will fully utilize its currently available regulatory tools, such as interpretations and exemptions, to more rapidly enable safety innovations. The agency encourages manufacturers to, when appropriate, seek the use of NHTSA’s exemption authority to field test fleets that can demonstrate the safety benefits of automation technology.<sup>379</sup>

The proposition that NHTSA’s *existing* safety standards might be an *obstacle* to innovation was by no means theoretical. Only two months earlier, Google had written the Agency expressing concern that the company might not be able to certify compliance with many of NHTSA’s safety standards, as required by the MVSA, in the case of the fully autonomous vehicle that Google was developing.<sup>380</sup> The starting point for its concern was that Google’s car was entirely controlled by artificial intelligence, something Google called a “Self Driving System” (SDS), such that no driver was needed, or indeed, wanted.

In fact, the car’s design eliminated the steering wheel, brake pedal, and accelerator pedal. Yet, many of the Agency’s standards require that a vehicle device or basic feature be located near “the driver” or “the driver’s seating position.”<sup>381</sup> Google acknowledged that it could design its vehicle to include conventional controls but was reluctant to do so because the SDS was programmed consistently to make “optimal decisions” for the vehicle’s occupants (as well as for pedestrians and other road users).<sup>382</sup> Google argued that providing functions like steering, acceleration, braking, or turn signals “could be detrimental to safety because the human occupants could attempt to override the SDS’s decisions.”<sup>383</sup>

NHTSA responded that, while it was possible to provide a formal interpretation of its rules to the effect that Google’s SDS was a “driver,” that response would not end the inquiry because many of the issues raised by Google, such as testing, “present policy issues beyond the scope and limitations of interpretations.”<sup>384</sup> The Agency acknowledged that it could address these issues by means of rulemaking, but noted somewhat glumly that “it can take

378. *Id.* at 1.

379. *Id.* at 2.

380. See Letter from Paul A. Hemmersbaugh, Chief Counsel, NHTSA, to Chris Urmson, Director, Self-Driving Car Project, Google (Feb. 4, 2016) <http://isearch.nhtsa.gov/files/Google%20-%20compiled%20response%20to%2012%20Nov%20%2015%20interp%20request%20-%204%20Feb%2016%20final.htm>.

381. *Id.*

382. *Id.*

383. *Id.*

384. *Id.*

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substantial periods of time to develop rulemaking proposals and final rules,” and that such proceedings are “ill-suited as first-line regulatory mechanisms to address rapidly-evolving vehicle technologies.”<sup>385</sup> To escape the Catch-22 of being subject to rules too obsolescent to make sense but too cumbersome to revise, the Agency encouraged Google to petition for an exemption altogether from the regulatory requirements it could not meet.<sup>386</sup> Google’s problems were not unique, as a similar inquiry from BMW<sup>387</sup> and a March 2016 DOT research report<sup>388</sup> indicate. Nor were HAV developers only concerned with federal regulation.

At hearings seeking information to support its promised AV guidelines, manufacturers seemed more alarmed by emerging state regulation. Commentators repeatedly expressed concern that NHTSA was creating what one witness called a “policy vacuum” that states were rapidly filling with a “patchwork” of inconsistent regulations.<sup>389</sup> Consider the lament of the Association of Global Automakers:

In the absence of clear federal action up to now, a focus on the near-term deployment of automated vehicle systems has caused several states to take action. Without the clear direction of a uniform national program there is an increased likelihood of a patchwork of conflicting requirements.

...

A principal goal of the agency—and of all of the stakeholders involved in the process—should be avoiding a patchwork of different federal and state standards for automated technologies. Despite NHTSA’s important actions to date with respect to automated vehicles, many states have stepped into what they perceive to be a policy vacuum in the field.<sup>390</sup>

Comment after comment from industry and others echoed the same concern,<sup>391</sup> perhaps understandably so. In the few years preceding the hearing,

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385. *Id.*

386. At the same time, the Agency encouraged Google to “reconsider its view” that conventional controls and devices (steering wheels, foot pedals, rear view mirrors) “may never be needed in any circumstance” and that “there is not a risk of harm associated with their absence.” *Id.*

387. See Letter from Paul A. Hemmersbaugh, Chief Counsel, NHTSA, to Samuel Campbell III, Dep’t Head, BMW of North America (Jan. 4, 2016), <http://isearch.nhtsa.gov/files/15-005347%20BMW%20Brake%20Transmission%20Shift%20Interlock%20v5.htm>.

388. TECH. INNOVATION & POLICY DIV., DEP’T OF TRANSP., DOT-VNTSC-OSTR-16-03, REVIEW OF FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS) FOR AUTOMATED VEHICLES: IDENTIFYING POTENTIAL BARRIERS AND CHALLENGES FOR THE CERTIFICATION OF AUTOMATED VEHICLES USING FMVSS (Mar. 2016).

389. Ass’n of Global Automakers, Comment Letter on the Development of Guidelines for the Deployment of Automated Vehicles, at 1-2 (May 9, 2016), <https://www.regulations.gov/document?D=NHTSA-2016-0036-0051> [hereinafter Global Auto. Comment].

390. *Id.*

391. See Nat’l Highway Traffic Safety Admin., U.S. Dep’t Transp., Public Meeting on Automated Vehicle Operational Guidance, at 35 (Apr. 27, 2016), <https://www.regulations.gov/document?D=NHTSA-2016-0036-0076> [hereinafter Public Meeting

some twenty-four states had introduced over fifty bills on autonomous vehicle technology.<sup>392</sup> In the immediately preceding twelve months, fifteen states had proposed such measures, and California, Nevada, and Florida had enacted legislation.<sup>393</sup> Each took a “slightly different” approach and used different definitions that would “impact the way automakers design and manufacture automated vehicles.”<sup>394</sup>

At times, it seemed that industry was almost begging NHTSA to regulate it. Under the MVSA of 1966, states may not have in force motor vehicle performance standards that are not identical to existing federal standards. But guidelines are not standards. Again, the Association of Global Automakers stated:

As we enter a new era of automotive safety, rapidly advancing technologies and different mobility models, the agency feels the need to explore new ways of addressing these complex issues. While the normal rulemaking process used to promulgate Federal Motor Vehicle Safety Standards has the advantage of being data-focused, scientifically rigorous, deliberative and participatory, it is sometimes criticized for being too slow. Recognizing this problem, in recent times, the agency has tried other approaches such as issuing guidelines and agency interpretations, and encouraging the development of industry-led standard-setting and best practices. *While these approaches may work in certain contexts and provide for a more streamlined process, we believe these approaches, as well as the statutory rulemaking model, need to be reconsidered in the long-run to ensure that safety standards remain national in scope, performance based, work to promote innovation and are equally*

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Transcript] (statement of Ralf Muenster, CTO Director, Texas Instruments) (“[O]ne important policy goal should be avoiding a patchwork of different federal and state standards.”); *id.* at 37, 39 (statement of Emily Frascaroli, Counsel, Ford) (“[T]he proper regulatory environment begins with uniform nationwide guidelines . . . . [A]ny prohibition on vehicles that are capable of operation without a driver in the vehicle, such as were included in California’s draft regulations, will be an inhibitor to the revolutionary opportunities fully autonomous vehicles may provide”); *id.* at 43 (statement of James Kuffner, CTO, Toyota) (noting that some regulatory frameworks imposed by states are “burdensome and restrictive, having the unintended effect of impeding progress and innovation”); *id.* at 55 (statement of Robert Grant, Legislative Counsel, Lyft) (“The worst possible scenario for the growth of autonomous vehicles is an inconsistent and conflicting patchwork of local, municipal, and county laws that will hamper efforts to bring AV technology to market.”); *id.* at 82 (statement of John Weinberger, Vice President, Alliance of Automobile Manufacturers) (noting that the Alliance, which represents seventy-seven percent of all new car and light truck sales revenue in the United States is “very concerned that a patchwork of potentially conflicting vehicle certification and performance regulations at the state level will be costly for consumers and stifle safety innovation”); *id.* at 116 (statement of Chris Urmsom, Lead Engineer, Google) (stating that allowing a “patchwork” of state laws to continue to develop will “create complications for interstate commerce”).

392. *Id.* at 137 (statement of Katherine Yehl, Director of Government Affairs, Volvo).

393. Google, Inc., Comment Letter on Proposed Guidelines for the Safe Deployment and Operation of Automated Vehicle Safety Technologies (May 7, 2016), <https://www.regulations.gov/document?D=NHTSA-2016-0036-0046>.

394. Association of Global Automakers, Inc., Comments on NHTSA’s Request for Public Comment on the Development of Guidelines for the Deployment of Automated Vehicles 2 (May 9, 2016), <https://www.regulations.gov/document?D=NHTSA-2016-0036-0051>.



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*applicable to all automakers who seek to sell vehicles in the United States.*<sup>395</sup>

Industry might well desire, as its lead trade association explained, a “nationally applicable legal and regulatory framework that avoids a patchwork of state laws and regulations and maintains self-certification practices . . . .”<sup>396</sup> But industry also believed, as Toyota explained, that “it is too soon to set minimum performance requirements for automated driving systems” and that “it is best for NHTSA, as it has done in the past, to set performance requirements *after* the technology has been introduced to the market.”<sup>397</sup> Standards were needed so that innovation could go forward, but NHTSA should wait for it to be both developed and deployed. Catch-22. Google’s presentation even seemed to imply reversion to an old but extremely powerful regulatory technique: licensing. Its representative suggested, “Congress should give NHTSA the power to approve the new safety-enhancing technology features on full speed vehicles without the need to issue a new or amended regulation.”<sup>398</sup> Perhaps industry wanted NHTSA to have certification authority for motor vehicles similar to the Federal Aviation Administration’s licensing authority concerning new aircraft. If so, to our knowledge, no one said so.<sup>399</sup>

NHTSA has responded with a set of non-binding guidelines, its Federal Automated Vehicles Policy.<sup>400</sup> This Article is not the place to provide a detailed analysis of this very complex document, but a few general points bear emphasis. First, NHTSA views the development of HAV technologies as a potential revolution in motor vehicle transportation that can offer a multitude of safety and mobility benefits. Second, the Agency understands that HAV development is taking place in a remarkably complex and dynamic technological environment and that it is currently in no position to provide mandatory performance standards for these emerging technologies. Indeed, it is concerned that its existing standards could stand in the way of useful

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395. Global Auto. Comment, *supra* note 389, at 4-5 (emphasis added).

396. Public Meeting Transcript, *supra* note 391, at 84 (comments of John Weinberger, Vice President of Innovation, Alliance of Automobile Manufacturers).

397. *Id.* at 43-44 (emphasis added) (comments of James Kuffner, CTO, Toyota Research Institute). The proposition that NHTSA should regulate technology only *after* its introduction seemed to be received wisdom at the hearing. The Agency’s historic mission of forcing technology was such a distant memory that speakers eulogized the practice, seemingly unaware. Google’s representative stated, “We have a proud history in the U.S. of introducing new safety innovations into our fleets. As manufacturers iterate and as consumers adopt the new technology, industry standards evolve and eventually a rulemaking process gives us federal standards.” *Id.* at 114.

398. *Id.* at 113-18 (comments of Chris Urmson, Lead Engineer, Google).

399. The MVSA, of course, presently has no licensing provisions, let alone preemptive ones. NHTSA is currently considering what lessons can be learned from the aviation industry experience. Press Release, NHTSA, DOT Convenes Aviation and Automobile Industry Forum on Safety (Apr. 22, 2016), <http://www.nhtsa.gov/About+NHTSA/Press+Releases/nhtsa-faa-safety-forum-04222016>.

400. Nat’l Highway Traffic Safety Admin., *Federal Automated Vehicles Policy: Accelerating the Next Revolution in Roadway Safety*, U.S. DEP’T OF TRANSP. (Sept. 2016), <http://www.nhtsa.gov/nhtsa/av/index.html> [hereinafter *HAV Policy*].

experimentation and deployment of HAVs, and the Agency promises to expedite the processing of interpretation and exemption requests concerning existing standards at the behest of HAV developers.

Third, the Agency views itself as in a partnership with developers for the safe and rapid deployment of HAVs. The subtitle of its guidelines is “Accelerating the Next Revolution in Roadway Safety.” NHTSA sees its current role as facilitating the exchange of information among participants in HAV development, providing a model approach for state functions, such as licensing, insurance regulation, and traffic safety laws, and participating in HAV monitoring in ways that reassure consumers that new technologies are safe. To that latter end, the Agency foresees the possibility of standard setting in the future, but for now contemplates only one new rule: a mandate that manufacturers self-assess the safety of new HAV equipment.<sup>401</sup> Standing in the way of standards that would permit NHTSA to judge compliance for itself, or as a check on manufacturers’ self-certification, is, once again, the 1972 *Chrysler* opinion’s demand for objectivity, interpreted as identical results from identical tests.<sup>402</sup> As the Agency’s guidance document explains,<sup>403</sup> HAVs must be capable of reacting appropriately to diverse and rapidly changing driving environments. If a standardized test environment were specified, it would be child’s play to program a vehicle to pass the test. But that would tell the Agency and the public little about whether the vehicle could perform safely in the countless actual environments that vehicles encounter every second of every day. NHTSA does not concede that it is barred from taking a sensible approach to testing, but suggests that it may seek legislation to make clear that “objectivity” does not prevent realistic testing protocols for HAVs.<sup>404</sup>

NHTSA’s guidance document nevertheless reminds manufacturers that it retains one coercive regulatory technique that requires no new statutory authority: its capacity to both recall defective vehicles and demand record keeping and reporting in support of its defects monitoring and investigation.<sup>405</sup> After surveying fifteen broadly defined areas that might affect the safety performance of HAVs, the Agency requests manufacturers to provide it with a “safety assessment letter” that details how they are attending to all these

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401. *Id.* at 15.

402. *Id.* at 77 (“The requirement in the Vehicle Safety Act that each vehicle standard be ‘objective’ was interpreted in the 1970s to mean that a standard’s “tests to determine compliance must be capable of producing identical results when test conditions are exactly duplicated.”).

403. *Id.* at 77-78.

404. *Id.* at 70.

405. *Id.* at 50. Contemporaneously, the Agency issued an “Enforcement Guidance Bulletin” elaborating how it will apply its sweeping recall powers to automated safety technologies. 81 Fed. Reg. 65,705-09 (Sept. 23, 2016). It reminded readers of the case law that had so generously eased the agency’s burden of proof to establish a safety-related defect, including that the agency did not need to proffer an engineering explanation or root cause, and that “merely a ‘non-de minimis’ quantity” of failures could be sufficient to make a showing. *Id.* at 65,708. The Agency suggested some best practices for companies to follow but also made clear that the Bulletin’s guidance “did not establish any defense to any violations of the Safety Act.” *Id.* at 65,709.

matters.<sup>406</sup> These letters are to be sent to the Agency's General Counsel—the official who oversees defect investigations and recall proceedings.

In sum, it appears that the recall crocodile has adapted to yet another new and turbulent environment. As motor vehicle technology rapidly evolves, the Agency, for the foreseeable future, cannot tell us, let alone prescribe by rule, the essential features of a “safe” HAV. But the crocodile is apparently not so bewildered or confined. He will know an unsafe (“defective”) HAV when he sees it.

### A Final Word

The collapse of NHTSA's rulemaking efforts induced by the legal culture led us to speculate nearly three decades ago that a strategy of accommodation might be the way forward if NHTSA was to surmount the barriers to standard setting that lay before it.<sup>407</sup> Perhaps we should have added that successful adaptation is not necessarily successful regulation. NHTSA's current response to the emergence of HAV technologies—a response that seems to eschew standard setting for even widely deployed crash avoidance technologies—suggests that the Agency may have overlearned the lessons of the past.

#### *A. Glimpsing the Road Ahead*

We cannot begin here to outline a reform agenda that will ensure NHTSA has the regulatory tools it requires to “meet the need for motor vehicle safety,” assuming for the moment that “we the people” still want it to do so. That is a task for another day. We can, however, touch upon some aspects of the technological upheaval now underway that are likely to affect the viability of future regulation and the form it may take. We say “likely” because our analysis at this point is conjectural and our understanding of the emerging technology still embryonic. Above all, our observations here are intended to be illustrative, not exhaustive, of the contributions rulemaking may yet still make to advancing motor vehicle safety.

To begin with, the shift in focus from crashworthiness to crash avoidance is not a trivial matter from the standpoint of regulatory design. The quintessential crashworthiness technology—the airbag—encountered many obstacles along the tortured, thirty-year path to its adoption. But the airbag had one thing going for it. Once motorists were persuaded of the airbag's efficacy, they could at least be certain of capturing essentially all the benefits of their investment in it. Like other crashworthiness technologies, the airbag benefits

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406. *HAV Policy*, *supra* note 400, at 15-16.

407. *MASHAW & HARFST*, *supra* note 5, at 250-253.

almost exclusively the passengers of the vehicle in which it is installed. Airbags are of little consequence to other roadway inhabitants.

The same cannot be said of crash avoidance technologies. By their nature, avoidance technologies enhance the safety of many fellow travelers on the roadway, not just the safety of the motorists paying for them. Crash avoidance technologies are “positive externalities” on wheels.<sup>408</sup> They benefit not only the occupants of other vehicles with which a collision is avoided, but also pedestrians and bicyclists. Basic economics posits that, absent some market intervention, crash avoidance technology will be “under-consumed,” that is, it will not reach the level of usage that would be achieved in a market in which its benefits are fully internalized in the purchasing decision.

Moreover, the inherent tendency of crash avoidance technology to sub-optimal penetration is dynamic. Consider the extreme case of the last motorist contemplating the purchase of a crash avoidance device. His incentives are far weaker than those who preceded him in purchasing it. As the latecomer, he knows that other motorists have already done so and will avoid him. Acting rationally, he may well decide to luxuriate in his status as a “free rider.” In theory, at least, these free rider effects will kick in well before the last adopter. As crash avoidance technology increases in penetration, the incentives for its further adoption dissipate.

We cannot know, of course, how powerful these economic incentives will be in the market for crash avoidance technologies. Incentives are not behaviors. And some, perhaps many, of them will have other, non-safety benefits that will increase their attractiveness to vehicle purchasers. Nevertheless, the changed market circumstances as the focus of innovation shifts from crashworthiness to crash avoidance cannot be ignored.

Subsidization is a conventional policy response for promoting the consumption of goods entailing positive externalities and free rider effects. Subsidies reduce the effective price purchasers pay, and move the demand curve closer to alignment with the level of consumption that a perfect market would produce.<sup>409</sup> The problem for NHTSA is simple. It does not have the authority to confer subsidies, and is unlikely to acquire it any time soon given budgetary and other constraints. To be sure, a case could be made, for example, for allocating recall fines to cash rebates supporting motorists’ purchase of crash avoidance technologies. Such a program might even be packaged as shrewd industrial policy to advance U.S. technology leadership in the strategically important global automotive market. But we doubt such an initiative would pass muster in today’s Congress or Executive branch, and in

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408. For a discussion of the positive externalities of crash avoidance technology, see Rand Report, *supra* note 350, at 135-38.

409. Subsidization presents its own set of challenges, including among others, the quantification of offsetting negative externalities and the amount of the subsidy needed to produce the socially efficient result without accompanying over consumption. *Id.*

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any event, subsidies will not overcome all the obstacles crash avoidance technologies face in the marketplace, as we shall see.

The Agency, however, already has another tool to reduce the prices motorists pay for crash avoidance devices: command and control rule making. By mandating universal adoption, NHTSA can force economies of scale, reduce the marginal costs of production, and lower prices to motorists. Of course, mandates are an imperfect substitute for subsidies, which can be more easily fine-tuned. But mandates also eliminate the free rider problem, and, assuming the efficacy of the technology, reduce the negative externalities that all accidents cause, for example higher insurance premiums and lost productivity.

There are additional reasons why policy makers may wish to pursue rulemaking mandates in the crash avoidance context. To understand why, it is helpful to distinguish two branches of the underlying technology. The first is motor vehicle connectivity, at issue in NHTSA's pending proceeding to require light vehicles to be equipped with a V2V platform communication technology so that they can exchange basic safety messages and warnings. The second branch comprises various levels of automated driving, in which sensors instantaneously gather millions of data points descriptive of the surrounding environment, which are then analyzed by powerful software algorithms to generate appropriate commands to maneuver the vehicle without human intervention. Note that these two branches are overlapping and complementary, but distinct. Self-driving cars may or may not be able to communicate with one another, and connected cars may or may not be automated. Over time, it seems likely the two branches will converge.

A key point for policy makers is that both kinds of crash avoidance display strong "network effects."<sup>410</sup> Consider first the case of connected cars. As we have seen in the Agency's V2V rulemaking, each additional user of the V2V platform increases the utility of those already using it—there is one more car to "talk to," a classical network effect. But, as NHTSA has pointed out, no prospective user of V2V technology can be certain whether others (and if so, how many) will join the V2V network. This uncertainty, or early mover disadvantage, increases the risk of investment and deters optimal usage. NHTSA sees this as a classic problem of collective action well suited to correction by its proposed mandate.

Will a V2V mandate alone solve the problem? It seems unlikely. First, it appears plausible that the efficacy of at least some applications on the V2V platform may depend on or be affected by the availability of other applications. In that event, the problem of collective action migrates from the platform level

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410. While network effects can take various direct and indirect forms, the core idea is that each additional user enhances the benefit of the network to users already participating in it. The classic example is a telephone network, whose utility increases as the number of persons to call and be called increases.

to the application level. Second, the generic problem of positive externalities should affect V2V applications as it does other crash avoidance technologies. But, the V2V platform has no intrinsic value apart from the applications it runs. Suboptimal utilization of applications means suboptimal utilization of the platform. Perhaps sensing that possibility, NHTSA itself has already said it may need to mandate some V2V applications in due course.

Network effects arise in the context of vehicle automation as well. A distinctive property of algorithms, the brainpower of AV technologies, is their capacity to “learn” in proportion to the data they are asked to analyze. Consider the paradigm of Google’s search engine. Google introduced a good product from the beginning, but that alone was not the secret sauce of its success. Google achieved overwhelming dominance because it was the beneficiary of a positive feedback loop. The more searches Google conducted, the more powerful—faster, more accurate, and more reliable—the search engine became, leading to the demand for more searches. And so the virtuous cycle thrust relentlessly forward. Ultimately, the database of prior searches enabled Google to anticipate a search query before a user even fully typed it.

What lessons are to be learned for AV algorithms? First, to the extent positive externalities produce suboptimal utilization, they diminish the safety of those who otherwise would have chosen to deploy AV technologies had their benefits been fully internalized. But the deeper problem is that suboptimal utilization also diminishes the efficacy of the technology of those who elect to deploy it. If information is shared, machines can learn from the experience of other machines. By diminishing the database of real world experience, limited utilization degrades the capacity of critical algorithms to learn from mistakes.

There is yet another challenge worth mentioning in this context. The interests of suppliers and users of AV algorithms may not be fully aligned. Users presumably want the most powerful algorithms possible. For the reasons just explained, this ideally would entail access to the database of usage of other algorithms. But suppliers have no incentive to share such data, even if competition law allowed them to do so. Each supplier seeks to gain market share and brand recognition, and is likely to regard its algorithm database as a trade secret. In these circumstances, it may be appropriate for NHTSA to require suppliers to share data essential to the life saving potential of their algorithms, while leaving suppliers free to compete on other grounds, such as the human-machine interface (which, however, may also benefit from standardization). The Agency would need to balance suppliers’ commercial incentives to innovate against the need for motor vehicle safety in the use of a public utility, namely the nation’s roadways and airways.<sup>411</sup>

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411. *Shaping the Future of Autonomous Vehicles: How Policy Makers Can Promote Safety, Mobility, and Efficiency in an Uncertain World: Hearings Before the Subcomm. on Transp., Housing and Urban Affairs of the S. Comm. on Commerce & Related Agencies of the S. Appropriations Comm.* 114th Cong. 5 (Nov. 16, 2016) (testimony by Nidhi Kalra, Rand Corp.) (mentioning that sharing driving data across industry could accelerate improvements by autonomous vehicle developers and

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We reiterate that only the foolhardiest observer would advance a rulemaking agenda at this early state in the emergence of crash avoidance innovation. That is not our purpose here. We recognize that standards pose complex challenges, such as identifying objective performance criteria and appropriate testing protocols. We also understand that premature regulation may stifle innovation. But so may regulation that is late to the party in the face of positive externalities and foregone network benefits. Our point is simply that command and control rulemaking may yet play a constructive role in advancing the safety of crash avoidance technologies, assuming, of course, that legal culture allows it to do so. To paraphrase, reports of the demise of rulemaking are likely premature.

### *B. Facing the Here and Now*

In the meantime, the adaptability and popularity of NHTSA's recall authority may be providential as the Agency seeks to remain relevant, perhaps even powerful, in the new HAV world. As NHTSA's HAV guidelines report, ninety-four percent of all current vehicle crashes are attributable to driver decisions or errors.<sup>412</sup> As more and more decisions are committed to digital systems, more and more crashes will be prima facie evidence of equipment failures that might justify a defects investigation and, potentially, a recall.

If manufacturers want to avoid those sorts of inquiries, they would do well to respond carefully and comprehensively to NHTSA's requests for safety assessment letters and to adopt systems for production, testing, and quality assurance as the Agency recommends. The current guidance is quite general in its recommendations for the development of those systems, but the agency makes clear that its guidelines are a work in progress that will be continuously updated as more information on HAV production and performance becomes available.<sup>413</sup>

While the blurring of the line between "drivers" and "vehicles" complicates NHTSA's relationship with state regulators who have historically established the qualifications for and licensed most drivers, it can leverage the Agency's ability to substitute guidance for standard setting. Whether NHTSA will aggressively exploit this potentially powerful regulatory tool, and how the industry will react if it does, remains an open question.

However the agency proceeds, we should add that our reservations about the systemic efficacy of recalling conventional automobiles do not apply with equal force to recalling self-driving cars at this formative stage of their development and in the circumstances NHTSA proposes. Context is king. The combination of highly specified voluntary safety assessments performed by

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arguing that concern for protecting trade secrets "must be balanced" with "need for safe autonomous vehicle technology").

412. *HAV Policy*, *supra* note 400, at 5.

413. *Id.* at 9.

industry itself, but backed up by the agency's fulsome recall power and product liability exposure, is a technique that seems exquisitely well suited to the legal, market, and technological circumstances in which NHTSA finds itself.

Enforced self-regulation of this kind responds "both to the delay, red tape, costs, and stultification of innovation that can result from imposing detailed regulations on business, and to the naiveté of trusting companies to regulate themselves."<sup>414</sup> Such soft law approaches seem especially well suited to sectors that are in the grip of rapid innovation, such as today's automobile industry, because the alternative, in this case command and control regulation, presupposes, among other things, "clear definitions of what is to be regulated."<sup>415</sup>

As we have said, we believe that regulating HAVs by rule will have its virtues sooner rather than later. But the Agency's orchestration of an enforced self-regulatory regime may well be a preferable approach in the intermediate term. We began this Article by portraying NHTSA administrators as resourceful survivors, not knaves or fools. The "guidance" approach to current regulation of HAVs seems to us to be yet another adaptation, but one that is, as yet, untested in the context of NHTSA's regulatory regime.

The line between guidance—generally not subject to procedural requirements, cost-benefit analysis, or judicial review—and rulemaking—subject to all three—is murky, to say the least.<sup>416</sup> Other agencies that have tried to exploit this legal uncertainty have not gone unchallenged. And as was recounted earlier, the only serious legal challenge to NHTSA's recall authority was when it attempted, in effect, to substitute a recall for a standard.<sup>417</sup> The boundary between guidance and standard setting may well be the next battleground where motor vehicle safety regulation encounters the demands of American legal culture.<sup>418</sup>

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414. See J. Braithwaite, *Enforced Self-Regulation: A New Strategy for Corporate Crime Control*, 80 MICH. L. REV. 1446, 1470 (1982). NHTSA's model of enforced self-regulation of HAVs also responds to the Agency's limited resources and technical expertise, especially in software and advanced electronics, in comparison to that of industry. In addition, in the context of pervasive scientific uncertainty, that model largely shifts the burden of proof to industry to establish the parameters of a safe HAV.

415. See Gary E. Marchant, Douglas J. Sylvester, & Kenneth W. Abbott, *A New Soft Law Approach to Nanotechnology Oversight: A Voluntary Product Certification Scheme*, 123 UCLA J. ENVTL. & POL'Y 123, 125 (2010). The authors adapt the Ayres-Braithwaite regulatory pyramid to the context of a rapidly innovating sector (nanotechnology), showing a gradual progression from soft to hard regulatory oversight as the sector matures and technology stabilizes. *Id.* at 132-33. For a discussion of the original Ayres-Braithwaite pyramid, see IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE* (1992).

416. For an overview of the doctrine, see JERRY L. MASHAW ET AL., *ADMINISTRATIVE LAW: THE AMERICAN PUBLIC LAW SYSTEM* 652-57 (2014) (excerpting relevant cases and providing citation to prominent secondary literature).

417. *United States v. Chrysler*, 158 F.3d 1350 (D.C. Cir. 1998).

418. The Agency and its critics have already made an initial foray into the dense fog separating rulemaking and policy statements. See *Ctr. for Auto Safety v. NHTSA*, 452 F.3d 798 (2006) (agency statement on regional recalls constitutes expression of policy not de facto rule embracing binding norms).