

The Hidden Benefits of Regulation: Disclosing the Auto Safety Payoff

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When Elizabeth P.'s¹ Toyota station wagon skidded off an icy road one foggy winter night and slammed sideways into a tree, she never knew that Federal Motor Vehicle Safety Standard (FMVSS) 214 had saved her life. The standard, issued by the federal auto safety agency—the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA)—requires auto makers to build side door beams in cars, as specified in the dry technical language of Volume 49, Section 571.214 of the *Code of Federal Regulations*.²

Side-impact protection is not an automotive feature that General Motors or Ford or Chrysler is likely to promote. Most auto dealers don't even know about it.³ Yet for the estimated 480 motorists whose lives are saved annually by strong side-impact protection,⁴ the design features required by FMVSS 214 are one of the most important components of their cars—even though most of the survivors are oblivious to the role federal regulation played in saving their lives. Indeed, the estimated 10,000 motorists whose lives are spared⁵ and the tens of thousands spared injury

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1. Elizabeth P. is a *nom emprunte* we have chosen to represent the anonymous beneficiaries of FMVSS 214. In order to protect the privacy rights of the victims of auto crashes, the NHTSA system for collecting auto crash statistics is forbidden by law from disclosing the names of people involved in crashes. Crashes such as the one portrayed here, however, are extremely common.

2. "This standard specifies strength requirements for side doors of a motor vehicle to minimize the safety hazard caused by intrusion into the passenger compartments in a side impact accident." 49 C.F.R. § 571.214 (1984). The regulation sets forth specific levels of "crush resistance" that side doors must satisfy and details test procedures to determine compliance with those strength levels. *Id.* at S3, S4.

3. Our assessment is based on six seminars that NHTSA sponsored for 60 auto dealers in 1980 to educate them about the benefits of auto and highway safety regulation. It was apparent that most of the attendees knew very little about such lifesaving regulatory standards as FMVSS 214.

4. OFFICE OF PROGRAM EVALUATION, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., AN EVALUATION OF SIDE STRUCTURE IMPROVEMENTS IN RESPONSE TO FEDERAL MOTOR VEHICLE STANDARD 214, at xxi, xxvi (1982).

5. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., TRAFFIC SAFETY TRENDS AND FORECASTS 1 (Oct. 1981).

through auto safety regulation each year,⁶ are more grateful for their “good luck” than for federal safety regulation.

Except among the top executives, engineers, attorneys, and lobbyists associated with the automobile industry, NHTSA regulations such as FMVSS 214 remain virtually unknown.⁷ There are few spokespeople in political culture or academic literature to bear witness to the benefits of auto safety regulation. Instead, scores of lifesaving federal standards such as FMVSS 214 collectively have come to be known by pejorative terms: “red tape,”⁸ “government meddling,”⁹ the result of “class politics,”¹⁰ and misguided attempts to legislate a “zero-risk society” with “an ambulance on every street corner.”¹¹ Paradoxically, although social regulation¹² is demonstrably beneficial to human health and the environment, the images most triggered by the word “regulation” are negative.¹³ The reference points for understanding regulation have come to be those factors that regulated industries find most notable: its cost, intrusiveness, and

6. The side-impact protection standard alone is estimated to prevent almost 10,000 non-fatal hospitalizations a year. OFFICE OF PROGRAM EVALUATION, *supra* note 4, at xxvi. Other standards provide still greater protection against injuries. See *infra* text accompanying notes 109, 111.

7. Cf. League of Women Voters Education Fund, News Release (May 25, 1982) (one half of those polled could not name a single federal regulation most affecting them or their family) (on file with the *Yale Journal on Regulation*).

8. See W. SAFIRE, SAFIRE'S POLITICAL DICTIONARY 603 (1978).

9. Alfred Kahn, quoted in S. TOLCHIN & M. TOLCHIN, DISMANTLING AMERICA: THE RUSH TO DEREGULATE 11 (1983) (“The revolt against regulation that we’re experiencing is also a revolt against government compulsion and meddling. . .”).

10. Weaver, *Regulation, Social Policy and Class Conflict*, 50 THE PUBLIC INTEREST 45, 57 (1978).

11. Charles L. Schultze, former chairman of the Council of Economic Advisers, Remarks before the Commonwealth Club of California, San Francisco (April 13, 1979), quoted in M. TOLCHIN & S. TOLCHIN, *supra* note 9, at 10:

If we had an ambulance waiting on every street corner, response times in the event of an accident would be cut to zero, and there would be many fewer traffic fatalities. Why don't we do it? . . . Because . . . we implicitly recognize that reducing risks to zero is impossible, and trying to do so would impose unbearably large losses in our living standards. . . . Zero risk is simply an unrealistic goal.

Whether zero risk is the actual goal of most regulatory programs is, of course, another matter and an essentially political judgment.

12. Throughout this article, we use the term “regulation” to refer to health, safety and environmental regulation—not economic regulation of markets. Social regulation of health, safety, and environmental risks seeks to protect consumers from hidden harms that even the most competitive, effective marketplace cannot detect. Economic regulation, by contrast, is intended to promote stability in the marketplace and promote competition and economic efficiency. The two types of regulation have different political and economic dynamics. See SOCIAL REGULATION: STRATEGIES FOR REFORM 3-9 (E. Bardach & R. Kagan eds. 1982).

13. A Louis Harris poll conducted in 1982 found that “[e]nthusiasm has waned for governmental regulation of business as a general principle of public policy.” The poll showed that while in 1976 about “as many consumers wanted more regulation as wanted less,” by 1982 “anti-regulation opinion outnumber[ed] opinions favoring more regulation by a ratio of two to one.” Regulation appeared to have a public image problem. Those who opposed regulation abstractly often expressed high approval ratings of concrete regulatory endeavors. Louis Harris & Assoc., Inc., Consumerism in the Eighties, A National Survey of Attitudes Toward the Consumer Movement (Feb. 1983) (report on file with the *Yale Journal on Regulation*).

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inconvenience. Meanwhile, the most salient features of regulation for its beneficiaries—such as the lifesaving, injury-reducing benefits of FMVSS 214—are largely unrecognized and unarticulated. Regulatory benefits are perceived to be minimal; regulatory agencies are viewed with extreme skepticism.

This article seeks to confront, correct, and explain these misperceptions of the benefits of regulation and the salutary role of regulatory agencies. Focusing on the national experience with auto safety regulation, we examine the benefits that NHTSA's regulatory efforts have conferred and explore why those benefits remain underappreciated.¹⁴ In Part I, we document the impressive record of achievements that NHTSA's auto safety programs have yielded since its statutory origins in 1966. Observing the wide currency of attacks on the legitimacy of the regulatory enterprise and the Reagan Administration's opposition to progressive auto safety regulation, we take an historic measure of the considerable costs wrought by six decades of the "private regulation" of automobiles prior to government intervention and the safety advances ushered in since NHTSA's creation. In Part II we examine why the demonstrable fruits of auto safety regulation remain so invisible—an invisibility that we believe impedes further progress in improving America's health and safety. Our analysis suggests three reasons: First, regulation, as a preventive enterprise, is self-effacing. Second, regulatory benefits can also go unnoticed or undocumented because of industry domination of regulatory knowledge. Finally, we explain how the Reagan Administration and the regulated industries have used cost-benefit analysis to spin a simplistic, quantitative cocoon around regulatory debate, masking benefits not readily comprehended in economic terms and isolating from the political dialogue the ethical judgments that ought to be paramount.

I. The Benefits of Auto Safety Regulation

In the current political climate, it is unfashionable to speak of benefits from regulation; it is high-gospel that benefits pale in comparison to the regulatory costs. In this Part, we document NHTSA's extensive safety achievements since its statutory inception in 1966. We begin our analysis with an examination of the rhetoric of regulatory critics, and the troublesome character of the market alternative they pose. After reviewing the costs wrought by this private regulation prior to the genesis of NHTSA, we turn our attention to the Agency's statutory origins and its regulatory

14. Our forthcoming book, *FREEDOM FROM HARM: THE CIVILIZING INFLUENCES OF HEALTH, SAFETY AND ENVIRONMENTAL REGULATION*, describes the diverse accomplishments of six key health, safety and environmental agencies.

program. Finally, we examine the documented payoff in safety advances ushered in under NHTSA's regulatory leadership.

A. *The Costs of Private Regulation*

Popular supporters of laissez-faire economics such as the Reagan Administration,¹⁵ the *Wall Street Journal*,¹⁶ and the U.S. Chamber of Commerce,¹⁷ generally consider health and safety regulation an inefficient diversion of capital and corporate resources from the business of business. Scholars at the Heritage Foundation,¹⁸ the American Enterprise Institute,¹⁹ the Brookings Institution,²⁰ the Cato Institute,²¹ and the Center for the Study of American Business²² predictably reach the same conclusion through more methodologically ornate, though not necessarily factually based, means.²³ In both cases, the basic message is that governmental interference generates enormous costs and yields questionable benefits.

15. Perhaps the most focused statement on regulation made by the Reagan Administration may be found in Vice President Bush, Statement Regarding Actions Taken by the President's Task Force on Regulatory Relief, Press Release (Mar. 25, 1981), reprinted in *Role of OMB in Regulation: Hearings Before the Subcomm. on Oversight and Investigations of the House Comm. on Energy and Commerce*, 97th Cong., 1st Sess. 391 (1981). The press release states: "Our mandate is to achieve the regulatory relief our economy desperately needs—to reduce costs, to reduce inflation, to increase productivity and to provide more jobs—while at the same time maintaining due concern for the environment, and for the health and safety of our citizens." The document then went on to designate 26 regulatory proposals targeted for postponement or review—euphemisms, as it turned out, for halting further action on the proposals. A more complete account of the Reagan Administration's record on regulation can be found in J. CLAYBROOK & THE STAFF OF PUBLIC CITIZEN, *RETREAT FROM SAFETY: REAGAN'S ATTACK ON AMERICA'S HEALTH* (1984). See also J. LASH, K. GILLMAN & D. SHERIDAN, *A SEASON OF SPOILS: THE STORY OF THE REAGAN ADMINISTRATION'S ATTACK ON THE ENVIRONMENT* (1984).

16. See, e.g., *Wall St. J.*, July 12, 1984, at 36, col. 1.

17. A U.S. Chamber of Commerce brochure advertising its Regulatory Action Network argues that "government regulation now threatened to squeeze the very life out of our free enterprise system." See M. TOLCHIN & S. TOLCHIN, *supra* note 9, at 6.

18. E.g., van Andel & DeVos, *The Government versus the Entrepreneur*, *POL. REV.*, Fall 1979, at 23-32.

19. See DeMuth, *The White House Review Programs*, *REGULATION*, Jan./Feb. 1980, at 13-26; DeMuth, *The Regulatory Budget*, *REGULATION*, Mar./Apr. 1980, at 29-44; UNSETTLED QUESTIONS ON REGULATORY REFORM (P. MacAvoy ed. American Enterprise Institute 1978).

20. See, e.g., C. SCHULTZE, *THE PUBLIC USE OF PRIVATE INTEREST* (The Brookings Institution 1977).

21. See, e.g., Dorn, *Economic Liberties and the Judiciary*, 4 *CATO J.* 661 (1985) (arguing that courts should return to substantive due process standard in evaluating social and economic regulation); Gieringer, *The Safety and Efficacy of New Drug Approval*, 5 *CATO J.* 177 (1985) (arguing that a policy of allowing consumers to make informed choices about new drugs is superior to any new-drug approval system).

22. Murray L. Weidenbaum, the former chair of President Reagan's Council of Economic Advisers, is among the Center's most prolific authors. His views on regulation are well represented in M. WEIDENBAUM, *BUSINESS, GOVERNMENT AND THE PUBLIC* (1981).

23. An example of such factually casual analysis is the much-quoted calculation by economist Murray Weidenbaum that social regulation costs American business about \$100 billion per year. Weidenbaum, *On Estimating Regulatory Costs*, *REGULATION*, May-June 1978, at 14. The empirical flaws of that calculation are explicitly detailed in M. GREEN & N. WAITZMAN, *BUSINESS WAR ON THE LAW* 33-40 (1981).

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Private markets, it is argued, are better able to serve the needs of the public.

President Reagan's auto safety program has been based on these tenets.²⁴ As his first Secretary of Transportation, Drew Lewis, said in a speech to the National Automobile Dealers Association in 1981: "If I could do it, there would be a four-year moratorium [on new regulations]. I know four years is unrealistic, but my point is that this administration opposes regulations."²⁵

Then-Secretary Lewis' words have proved to be more than idle political rhetoric. Opposition to auto safety regulation has assumed palpable form in Reagan Administration actions to suspend NHTSA auto and tire safety rating programs;²⁶ to rescind or weaken existing auto safety performance standards;²⁷ and to stall or quash lifesaving proposals which would correct identified shortcomings in present auto safety regulations.²⁸

This hostility toward regulation, and willful neglect of regulatory benefits, is not accidental, of course, but a reflection of the Administration's misplaced reliance on the efficacy of market forces to generate health and safety improvements in products desired by the public. What the Reagan Administration in effect advocates is "private regulation" of vehicle performance by the auto manufacturers themselves. This may or may not entail offering auto safety devices as optional equipment.

One need only look back to an earlier, but not distant period in auto safety history, to discover the serious deficiencies of this "private regulation" approach. The industry's laissez-faire notion of safety innovation has exacted a fearsome human toll in the decades since the first automobile death in 1899. As a 1979 report by the Office of Technology

24. See Office of the Press Secretary, The White House, Actions to Help the U.S. Auto Industry (Apr. 6, 1981) [hereinafter cited as Actions to Help Auto Industry]. The press release noted that the auto industry is "burdened with stringent regulatory requirements which add hundreds of dollars to the cost of each vehicle and billions to the industry's capital requirements. Regulation also diverts engineering and managerial talent from the industry's adjustment problems." *Id.* at 2. It went on to announce 34 specific regulatory actions to be taken by NHTSA and the EPA to provide "regulatory relief" for the auto industry. *Id.* at 4. The 17 NHTSA proposals included: delaying the implementation of the automatic crash protection requirement; eliminating or modifying the bumper standard; rescinding the "field of direct view" requirements; review and "simplification" of the tire quality grading system; modification of the brake performance standard for light trucks, buses and vans; and reduction in manufacturers' fuel economy reporting requirements. See Notice of Intent, 46 Fed. Reg. 21,203 (Apr. 9, 1981). See also J. CLAYBROOK, J. GILLAN & A. STRAINCHAMPS, REAGAN ON THE ROAD: THE CRASH OF THE U.S. AUTO SAFETY PROGRAM (1982).

25. *Lewis Favors Moratorium on Auto Rules*, Wash. Star, Feb. 11, 1981. Lewis' bald opposition to regulation *per se* conflicted, of course, with Congress' determination "that it is necessary to establish motor vehicle safety standards" to reduce deaths and injuries resulting from traffic accidents. National Traffic and Motor Vehicle Safety Act of 1966, Pub. L. No. 89-563, 80 Stat. 718, 718 (1967).

26. See *infra* notes 139 & 145 and accompanying text.

27. See *infra* notes 106 & 163.

28. See *infra* note 110.

Assessment stated: "In this century, approximately two million persons have died and nearly 100 million have been injured through the use of motor vehicles—a total that is more than three times the combat losses suffered by the United States in all wars."²⁹

For decades, this extraordinary toll exacted on the highways was not linked to the safety of automobiles themselves. The auto industry instead attributed the many deaths and injuries associated with its product to driver habits, the unpredictable "human factor" that was beyond industry control.³⁰ The traffic safety establishment focused its attentions on driver education and traffic law enforcement, not safer car design.³¹ It is thus not surprising that the public came to believe that highway fatalities were caused by the "nut behind the wheel."³²

In truth, these terminologies disguised the remediable nature of the problem. Not only can the incidence of crashes be reduced through changes mandated by law such as a 55 mile per hour speed limit, raising the drinking age to twenty-one, and building the interstate highway system; the human injury that typically occurs in a crash can also be reduced quickly and inexpensively through improved vehicle design. The so-called "first collision" often cannot be prevented, even with effective laws governing driver behavior, but the "second collision," in which automobile occupants are thrown against the hard interior surfaces of the car, can be

29. OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS, 2 CHANGES IN THE FUTURE USE AND CHARACTERISTICS OF THE AUTOMOBILE TRANSPORTATION SYSTEM, TECHNICAL REPORT 185-86 (1979). While federal regulation has slowed the rate of highway death and injury, it remains at epidemic levels. In 1984, 44,241 people died on the highways. The average daily death toll from auto crashes is 121 people, the equivalent of a major airline disaster every day. See NATIONAL CENTER FOR STATISTICS AND ANALYSIS, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., FATAL ACCIDENT REPORTING SYSTEM 1984 (forthcoming).

America's youth are particularly hard hit. Even though persons under 25 years of age account for only 19% of all licensed drivers, young drivers are involved in 34% of alcohol-related crashes. Telephone interview with Grace Hazzard, analyst, National Center for Statistics and Analysis, Nat'l Highway Traffic Safety Admin. (Dec. 4, 1985). One of almost every 46 babies born today will die in an automobile crash, based on current trends. Telephone interview with Barry Felrice, Associate Administrator for Rulemaking, NHTSA (Dec. 4, 1985).

30. See, e.g., M. NADEL, THE POLITICS OF CONSUMER PROTECTION 138 (1971) ("The official line of the automobile companies, echoed by the President's Committee for Traffic Safety and the National Safety Council, was that traffic safety was a function of the driver and the highways.") An observation in 1958 made by the director of General Motors research laboratories is indicative of this outlook: "More progress can be made in traffic safety by emphasizing the relation between the driver, the signalling system, and the road, than by undue emphasis on a crash-proof car, which could lead us to a progressive stalemate analogous to the classic conflict between projectile and armor plate." See R. NADER, UNSAFE AT ANY SPEED: THE DESIGNED-IN DANGERS OF THE AMERICAN AUTOMOBILE 172-73 (1965).

31. See, e.g., R. NADER, *supra* note 30, at 235-36.

32. As the Senate Commerce Committee stated: "For too many years, the public's proper concern over safe driving habits and capacity of the driver (the 'nut behind the wheel') was permitted to overshadow the role of the car itself." SENATE COMM. ON COMMERCE, TRAFFIC SAFETY ACT OF 1966, S. REP. NO. 1301, 89TH CONG., 2D SESS. 3, reprinted in 1966 U. S. CODE CONG. & AD. NEWS 2709, 2710 [hereinafter cited as S. REP. NO. 1301].

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foreseen and its consequences significantly mitigated. The death and injury that would otherwise occur during the second collision can be prevented in a great many cases through design innovations that are both technologically and economically feasible, as well as publicly welcomed.

The practice of distinguishing between the first and second collisions was a major analytic breakthrough in the history of automobile safety.³³ It led to an understanding of the application of different remedies for the pre-crash, crash, and post-crash phases of auto accidents, and thus helped to identify the distinct roles of environmental factors, human factors and vehicle design in causing and preventing crash injuries and fatalities. By using this analytic model, the responsibility for the different components of a crash could more readily be assigned and the public could demand more suitable, effective remedies. While this conceptual framework may seem obvious today, it did not appear so in the mid-1960's.³⁴

This new understanding of first and second collisions contributed to the decline of a contrary ideology focusing on the first crash alone, an outlook that was of more than small service to the automobile industry.³⁵ If injuries were thought to be caused by poor driving and bad highways, as automakers liked to stress, no one could object if manufacturers did not invest resources in automobile safety design. A public sold on the myth of the "nut behind the wheel," in turn, was unlikely to make demands, either in the marketplace or through government, that industry take steps to improve car safety. The Detroit line on safety innovation was two-fold: innovation would not do much good because it could not stop accidents from happening,³⁶ and the public would not buy safety anyway. The latter belief was perhaps best expressed by General Motors President

33. The analytic implications of separating the first and second collisions of auto crashes were first outlined in W. HADDON, JR., *ACCIDENT RESEARCH: METHODS AND APPROACHES* (1964). A more recent examination of this analytic framework is provided in Haddon, *Options for the Prevention of Motor Vehicle Crash Injury* (keynote address), in *PROCEEDINGS OF THE CONFERENCE ON THE PREVENTION OF MOTOR VEHICLE CRASH INJURY*, BEN-GURION UNIVERSITY OF THE NEGEV, BEERSHEBA, ISRAEL, (Jan. 10, 1979), reprinted in 16 *ISRAEL J. MED. SCIENCES* 45 (1980).

34. The Senate Committee noted: "The 'second collision' . . . has been largely neglected. The committee was greatly impressed by the critical distinction between the causes of the accident itself and the causes of the resulting death or injury." S. REP. NO. 1301, *supra* note 32, at 3.

35. As Nader observed:

The prevailing view of traffic safety is much more a political strategy to defend special interests than it is an empirical program to save lives and prevent injuries. . . . In the automobile industry, safety could represent an investment in research, a priority in production, design and manufacturing and a theme of marketing policy. But under existing business values potential safety advances are subordinated to other investments, priorities, preferences, and themes designed to maximize profit. Industry insists on maintaining the freedom to rank safety anywhere it pleases on the list of commercial considerations. In the protection of these considerations, the industry supports and fosters the traffic safety policy focused on driver behavior. . . .

R. NADER, *supra* note 30, at 236.

36. See M. NADEL, *supra* note 30, at 236.

Frederic G. Donner, who told Congress in 1965 that, "from a commercial standpoint in a competitive marketplace," safety provisions must be optional "until a very high proportion of the customers select the item or unless there are compelling reasons for standard installation." Safety devices in this category, said Donner, included the turn signal and the seat belt.³⁷ He did not mention that optional equipment packages such as air conditioning were initially sold to only a miniscule percentage of all car buyers.³⁸

Donner's reference to the "competitive marketplace" belied the facts. Safety innovations had been severely retarded by the oligopolistic structure of the auto industry. Detroit largely acted monolithically, at least when it came to safety.³⁹ And on the rare occasion when a manufacturer did step out of line, conformity could be exacted, as evidenced by General Motors' success in pressuring Ford to drop its successful promotion of an optional safety package offered on its 1956 models.⁴⁰ Consumers were provided little or no opportunity to purchase safety, even had they possessed information enabling them to express their preferences. The industry enjoyed a consumer Catch 22: the absence in the market of safety alternatives would keep consumers ignorant; ignorant consumers would not demand reform.

The result for decades was an auto industry that allocated almost no resources to improving the safety of its product.⁴¹ In 1965, the President of General Motors acknowledged before a congressional subcommittee that his company contributed only \$1 million of its \$1.7 billion profit in 1964 to fund external automobile accident research.⁴² The total auto

37. *Federal Role in Traffic Safety: Hearings Before the Subcomm. on Executive Reorganization of the Senate Comm. on Government Operations*, 89th Cong., 1st Sess. 657 (1965) (statement of Frederic G. Donner, Chairman of the Board, General Motors Corp.) [hereinafter cited as *Gov't Operations Hearings*].

38. Booz Allen & Hamilton, Inc., *A Retrospective Analysis of the General Motors Air Cushion Restraint System Marketing Effort 1974 to 1976*, at 41 (1983) (unpublished report on file with *Yale Journal on Regulation*) (automotive air conditioning was first introduced by G.M. in 1953, but did not exceed 1% of all sales to new car buyers until 1955; did not exceed 5% until 1959; and did not exceed 10% until 1962).

39. See, e.g., R. NADER, *supra* note 30, at 134-39, 189-91 ("Big Three's" use of the Automobile Manufacturers Association to suppress safety data produced by an independent research group, Automatic Crash Injury Research, which identified divergent safety performances of specific manufacturers' makes and models; automobile industry coordination of motor vehicle standard setting through control of Society of Automotive Engineers).

40. See R. NADER, *UNSAFE AT ANY SPEED* x-xiii (Bantam ed. 1973). The short-lived campaign demonstrated that safety could sell. According to Ford, the optional crash padding feature was selected by 43% of 1956 Ford model year purchasers, a record for any optional feature Ford had introduced. *Id.* at xi.

41. As the Senate Commerce Committee noted: "Until the industry had been subjected to the prod of heightened public interest and governmental concern, new models showed little improvement in safe design or in the incorporation of safety devices. Such elemental safe design features as safety door latches made their appearance as standard equipment only a decade after their desirability and feasibility had been established." S. REP. NO. 1301, *supra* note 32, at 2.

42. *Gov't Operations Hearings*, *supra* note 37, at 777-81 (testimony of Frederic G. Donner,

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industry expenditure that year for internal research and development of crash safety improvements was estimated at only \$2 million.⁴³ Automakers instead devoted their considerable financial resources to the superficialities of automobile styling and “muscle cars,” which were promoted by elaborate marketing campaigns.⁴⁴

B. *The Genesis of NHTSA*

The choices that automakers made in allocating their considerable resources had tragic human consequences that could not remain permanently hidden from view. By 1965, 49,000 Americans were being killed and 1.5 million injured on the highways annually.⁴⁵ Auto crashes were the largest killer of Americans under age 44 and the fourth largest cause of death after heart disease, cancer, and stroke.⁴⁶ The publication of Ralph Nader’s *Unsafe at Any Speed* in 1965 brought to the public consciousness for the first time the serious deficiencies of the past decades’ “private regulation” approach to auto safety.⁴⁷ In his book, Nader explained why a federal auto safety statute was so desperately needed:

A principal reason why the automobile has remained the only transportation vehicle to escape being called to meaningful public account is that the public has never been supplied the information nor offered the quality of competition to enable it to make effective demands through the marketplace and through government for a safe, non-polluting and efficient automobile that can be produced economically. . . . The specialists and researchers outside the industry who could have provided the leadership to stimulate this flow of information by and large chose to remain silent, as did government officials.⁴⁸

As the public became aware of the enormous costs it was paying for industry self-regulation, Senator Abraham Ribicoff’s Government Operations Committee began to hold hearings with an eye toward creating a federal auto safety agency.⁴⁹ Worried at this turn of events, a hundred-

Chairman of the Board, General Motors Corp., and James Roche, President, General Motors Corp.).

43. R. NADER, *supra* note 30, at 337.

44. J. DELOREAN, ON A CLEAR DAY YOU CAN SEE GENERAL MOTORS 5 (1979).

45. SENATE COMM. ON PUBLIC WORKS, HIGHWAY SAFETY ACT OF 1966, S. REP. NO. 1302, 89TH CONG., 2D SESS. 3 (1966).

46. NATIONAL SAFETY COUNCIL, ACCIDENT FACTS 5 (1967).

47. R. NADER, *supra* note 30.

48. *Id.* at xi.

49. See *Gov’t Operations Hearings*, *supra* note 37. The Ribicoff oversight hearings were continued in the second session of the 89th Congress. That same session, Senator Magnuson conducted legislative hearings before the Commerce Committee on proposed traffic safety legislation. See *Traffic Safety: Hearings on S. 3005 Before the Senate Comm. on Commerce*, 89th Cong., 2d Sess. (1966).

man conclave of top business executives, the Business Council, mobilized to quell what would be the first major regulatory salvo of the 1960's. One member of the Business Council voiced a common sentiment in the business community when he dismissed the auto safety reform movement as a joke: "It's of the same order as the hula hoop—a fad. Six months from now, we'll probably be on another kick."⁵⁰

Nader's critique, however, was not to have so short a life. Indeed, his analysis was echoed later that year by the Senate Commerce Committee as it drafted legislation creating the National Highway Traffic Safety Administration. The Committee found

disturbing evidence of the automobile industry's chronic subordination of safe design to promotional styling, and of an overriding stress on power, acceleration, speed, and the 'ride' to the relative neglect of safe performance or collision protection. The committee cannot judge the truth of the conviction that 'safety doesn't sell,' but it is a conviction widely held in the industry which has plainly resulted in the inadequate allocation of resources to safety engineering.⁵¹

The revelations of Nader's book, General Motors' misdirected investigation of Mr. Nader's private life,⁵² and the vivid congressional testimony on highway carnage galvanized Congress to pass the National Traffic and Motor Vehicle Safety Act of 1966.⁵³

The statute was a milestone. The Act quite clearly asserted the need for an ongoing federal role in motor vehicle safety by establishing the first national traffic safety agency.⁵⁴ The agency was charged with setting minimum uniform safety performance standards for all motor vehicles used on the highways.⁵⁵ In addition, the law authorized vehicle investigations and

50. See R. NADER, *supra* note 40, at xxvii (statement of W. B. Murphy, president of Campbell Soup Company).

51. S. REP. NO. 1301, *supra* note 32, at 2.

52. T. WHITESIDE, *THE INVESTIGATION OF RALPH NADER: GENERAL MOTORS VS. ONE DETERMINED MAN* (1972). See also, C. MCCARRY, *CITIZEN NADER* (1972).

53. Pub. L. No. 89-563, 80 Stat. 718 (1967) (codified as amended at 15 U.S.C. §§ 1381-1431 (1982)).

54. Pub. L. No. 89-563, § 115, 80 Stat. 727 (1967). The original Act created the National Traffic Safety Agency, within the Department of Commerce. Weeks later, however, legislation was passed creating the Department of Transportation. Department of Transportation Act, Pub. L. No. 89-670, 80 Stat. 931 (1966) (codified as amended at 49 U.S.C. § 1651-1659 (1982)). The legislation amended the National Traffic and Motor Vehicle Safety Act to provide that the provisions of the Act be carried out by a National Traffic Safety Bureau, as a component of the new Department of Transportation. Pub. L. No. 89-670, § 8(i). The National Highway Traffic Safety Administration, the successor agency, was formally created by further amendments to Pub. L. No. 89-564 in 1970. See Highway Safety Act of 1970, Pub. L. No. 91-605, Title II, § 202, 80 Stat. 1739 (1970). For simplicity, we refer to these federal agencies as NHTSA.

55. Pub. L. No. 89-563, § 103, 80 Stat. 718, 719 (1967) (codified at 15 U.S.C. § 1392 (1982)).

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inspections to uncover standard violations and other safety defects;⁵⁶ required automakers to notify purchasers of defects uncovered;⁵⁷ and provided for federal research, development and testing of vehicle safety technologies, including the development of experimental safety vehicles.⁵⁸ Companion legislation passed that same day, the Highway Safety Act of 1966,⁵⁹ called for the promulgation of minimum standards for highway safety that states would have to meet through federally funded programs.⁶⁰ Later congressional action would further expand the government's role in regulating motor vehicle and highway safety.⁶¹

While each of these provisions has contributed to advances in motor vehicle safety, perhaps the most important change wrought by this rush of legislation was the leadership role granted NHTSA in developing vehicle "crashworthiness" design improvements.⁶² The creation of NHTSA inaugurated a fruitful new line of safety reforms focusing on the inherent safety design of motor vehicles. The agency's first action under the statute was to issue nineteen initial motor vehicle safety standards.⁶³ This first foray into regulation of the industry prompted Henry Ford II to bristle: "Many of the temporary standards are unreasonable, arbitrary, and technically unfeasible . . . if we can't meet them when they are published we'll have to close down."⁶⁴

Ford's doomsday reaction, mimicked by the auto industry in countless permutations ever since,⁶⁵ ignored basic facts. The first NHTSA standards were based largely on practices previously recommended by the Society of Automotive Engineers as well as federal procurement standards

56. *Id.* at §§ 112-113, 80 Stat. at 726 (codified as amended at 15 U.S.C. §§ 1401-1402 (1982)).

57. *Id.* at §113, 80 Stat. at 726 (codified as amended at 15 U.S.C. § 1402 (1982)). The law was strengthened by amendments in 1974 which required manufacturers to repair or replace defective vehicles, or refund the purchase price. Motor Vehicle and Schoolbus Safety Amendments of 1974, Pub. L. No. 93-492, § 102(a), 88 Stat. 1470, 1472 (codified at 15 U.S.C. § 1414 (1982)).

58. Pub. L. No. 89-563, § 106, 80 Stat. 718, 721 (1967) (codified at 15 U.S.C. § 1395 (1982)).

59. Pub. L. No. 89-564, 80 Stat. 731 (codified as amended at 23 U.S.C. §§ 401-408 (1982)).

60. *Id.* § 402, 80 Stat. at 731 (codified at 23 U.S.C. § 402 (1982)).

61. *See, e.g.* Motor Vehicle and School Bus Safety Amendments of 1974, *supra* note 57; Highway Safety Act of 1973, Pub. L. No. 93-87, 87 Stat. 290.

62. The Senate Commerce Committee Report for the Traffic Safety Act of 1966, states: "[T]his legislation reflects the faith that the restrained and responsible exercise of Federal authority can channel the creative energies and vast technology of the automobile industry into a vigorous and competitive effort to improve the safety of vehicles." S. REP. NO. 1301, *supra* note 32, at 1.

63. 32 Fed. Reg. 2409 (1967) (codified at 49 C.F.R. pt. 571 (1984)). *See also* NAT'L TRAFFIC SAFETY AGENCY, U.S. DEP'T OF COMMERCE, REPORT ON THE DEVELOPMENT OF THE INITIAL FEDERAL MOTOR VEHICLE STANDARDS ISSUED JANUARY 31, 1967, at 12-13 (1967).

64. R. NADER, *supra* note 32, at xv.

65. *See, e.g., Auto Fuel Efficiency Standards: Hearings on H. 179 Before the Subcomm. on Energy Regulation and Power of the House Comm. on Energy and Commerce*, 98th Cong., 2d Sess. 174-75 (1985) (testimony of Helen O. Petruskas, Vice President, Ford Motor Company, urging Congress to jettison fleet fuel efficiency standards).

already put into effect by the General Services Administration,⁶⁶ they were hardly revolutionary. But what disturbed automakers more was the precedent that NHTSA could now affect their investment decisions, research priorities, and technological autonomy. More engineering talent and funds would have to be committed to improving vehicle safety and less to reiterating inconsequential stylistic changes.

The first safety standards, while largely "invisible" to the untutored car buyer, were responsible for significant new improvements in the basic safety design of all cars sold in the United States, both domestic and imported. The crashworthiness innovations, included such simple items as laminated windshields to help absorb crash energies and prevent faces and necks being slashed by large chunks of sharp glass;⁶⁷ collapsible steering assemblies to cushion the trauma to the head, neck, and chest in a crash;⁶⁸ non-rearward displacement of the steering assembly to reduce the impact on the upper body;⁶⁹ enhanced door locks to keep doors from flying open in a crash and permitting ejection;⁷⁰ interior padding to cushion body contact with the car interior;⁷¹ seat anchorages to prevent seats from tumbling around, smashing heads against the roof and crushing spinal cords;⁷² and lap and shoulder harnesses to restrain car occupants and diffuse and reduce crash energies sustained during impact.⁷³

Other improvements would follow. To prevent neck and head injuries from whiplash, head restraints became standard safety equipment in 1969.⁷⁴ Safety standards issued a year earlier set minimum safety performance requirements for tires.⁷⁵ In 1970, the government issued the automatic crash protection standard which required automakers to install either inflatable restraints, commonly known as airbags, or automatic belts as standard equipment on all new cars beginning in July 1973.⁷⁶ This breakthrough safety standard⁷⁷ has long been delayed by political and

66. NATIONAL TRAFFIC SAFETY AGENCY, *supra* note 63, at iii.

67. 49 C.F.R. § 571.205 (1984).

68. *Id.* at § 571.203.

69. *Id.* at § 571.204.

70. *Id.* at § 571.206.

71. *Id.* at § 571.201.

72. *Id.* at § 571.207.

73. *Id.* at § 571.209.

74. The standardization followed the promulgation of FMVSS 202 in 1968. *See* 33 Fed. Reg. 2945 (1968) (codified at 49 C.F.R. § 571.202 (1984)).

75. 32 Fed. Reg. 15,798 (1967) (codified at 49 C.F.R. §§ 571.109, 571.110 (1984)).

76. 35 Fed. Reg. 16,927, 16,928-29 (Nov. 3, 1970).

77. The automatic crash protection standard represents a breakthrough in automotive standard making because it requires a vehicle to pass dynamic crash tests using instrumented dummies to measure occupant injuries. *See* 49 C.F.R. § 571.208 (1984). The first, most basic motor vehicle standards, such as the ban on certain wheel nuts, wheel discs, and hub caps that constituted a hazard to pedestrians and cyclists, simply measured the strength of equipment to be installed or proscribed certain design configurations. *See, e.g.*, 49 C.F.R. § 571.211 (1984). A second generation of safety

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legal resistance by automakers.⁷⁸ It is now expected to begin a three-year phase-in starting in September 1986.⁷⁹

After initial delays, side impact protection standards became effective in 1973, making motor vehicles more resistant to side-door intrusion in single-vehicle crashes of the sort that might have killed Elizabeth P.⁸⁰ To reduce the chances of fire in a crash, the NHTSA in 1974, under congressional pressure, mandated standards for fuel tank safety, effective in 1977 model cars.⁸¹

In the late 1970's, a number of important new standards were issued to improve bumper damage resistance;⁸² require tamper-resistant odometers;⁸³ require rating and publication of tire treadwear, traction, and heat-resistance qualities;⁸⁴ extend the steering column protection standards to vans and light trucks;⁸⁵ require dynamic crash testing of child restraint seats to ensure their safety;⁸⁶ improve seat belt comfort and convenience;⁸⁷ improve braking for vans and light trucks;⁸⁸ and improve driver visibility for cars, vans and light trucks.⁸⁹ The reissuance in 1977 of the automatic crash protection standard⁹⁰ provided the basis for the standard eventually issued by the Reagan Administration.

Once these vehicle safety standards were in place, it became obvious that many automobile hazards were remediable, as evidenced by the declining highway fatality rate beginning in the early 1970's.⁹¹ History discloses just as clearly that industry, left alone, had failed to give

standards, such as the side door strength requirement, required vehicle components to pass certain safety performance dynamic crash tests, but did not make use of instrumented dummies to measure the likely impact on occupants. See 49 C.F.R. § 571.214 (1984).

78. Justice White observed: "For nearly a decade, the automobile industry waged the regulatory equivalent of war against the airbag. . . ." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 49 (1983).

79. See 49 Fed. Reg. 28,962, 29,009 (July 17, 1984) (to be codified at 49 C.F.R. § 571.208 at S4.1.3).

80. 35 Fed. Reg. 16,801 (1970) (codified at 49 C.F.R. § 571.214 (1984)).

81. 39 Fed. Reg. 40,857 (1974) (codified at 49 C.F.R. § 571.301 (1984)).

82. 42 Fed. Reg. 24,056 (1977) (codified at 49 C.F.R. § 581 (1984)).

83. 43 Fed. Reg. 10,919 (1978) (codified at 49 C.F.R. § 571.127 (1984)).

84. 43 Fed. Reg. 30,542 (1978) (bias ply and bias belted tires) and 44 Fed. Reg. 15,721 (1979) (radial tires) (codified together at 49 C.F.R. § 575.104 (1984)).

85. 44 Fed. Reg. 68,470 (1979) (codified at 49 C.F.R. § 571.204 (1984)).

86. 44 Fed. Reg. 72,131, 72,147 (1979) (codified at 49 C.F.R. § 571.213 (1984)).

87. 46 Fed. Reg. 2,064 (1981) (codified at 49 C.F.R. § 571.208 (1984)).

88. 46 Fed. Reg. 55 (1981) (codified at 49 C.F.R. § 571.105 (1984)).

89. 46 Fed. Reg. 40 (1981) (codified at 49 C.F.R. § 571.128 (1984)).

90. 42 Fed. Reg. 34,289 (1977).

91. In 1966, the fatality rate from motor vehicle crashes stood at 5.50 deaths per hundred million vehicle miles travelled. Telephone interview with Grace Hazzard, analyst, National Center for Information and Statistics, NHTSA (Dec. 4, 1985). By 1970, that figure had declined to 4.74 deaths per hundred million vehicle miles travelled; by 1975, it stood at 3.35; by 1980, 3.34; and by 1983 (the latest figure available), the death rate was 2.57 deaths per million vehicle miles travelled. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., MOTOR VEHICLE SAFETY, 1983, at 3 (1984).

automobile safety the consideration it was due. Congressional action, followed by sustained regulatory attention, was necessary to give safety concerns their proper place in a civilized society.

C. *The Documented Payoff of Auto and Highway Safety Regulation*

NHTSA's efforts to promote automobile and highway safety have been wide-ranging, and have yielded benefits in myriad forms. As noted above, the focus of much of NHTSA's work has been the promulgation of safety standards which all automakers must follow in the design and manufacture of cars. NHTSA's activities, however, extend beyond regulating automotive safety performance. In tandem with that effort, the agency conducts auto safety research enabling it to monitor—and require correction of—latent defects in automobiles already on the road; to spur advances in automotive safety technology; and to educate consumers so as to promote informed market decision-making. Finally, NHTSA administers highway safety programs aimed at influencing motorists' behavior in order to prevent crashes and mitigate their severity.

Below we summarize the fruits of each of these regulatory labors. While scant attention has been paid to the public health successes accomplished since the 1966 watershed, the federal government's regulatory role has been highly effective. In describing the successes of NHTSA's endeavors, numbers provide a convenient way of expressing the magnitude of success—the numbers of lives saved and injuries prevented. We wish to stress, however, that most regulatory benefits cannot be reduced to dollar savings; others cannot be quantified at all. As we discuss in Part II, a myopic concentration on the quantifiable and monetizable obscures from view the most profound and important benefits of regulation which lie at the heart of the regulatory enterprise—freedom from unnecessary harm.

1. *Federal Motor Vehicle Safety Standards*

Even the partial picture that statistics can provide indicates that the crashworthiness standards mandated by NHTSA have been highly beneficial. During the past six to eight years, in a number of significant if obscure evaluation reports,⁹² NHTSA has documented the cumulative injury reduction resulting from the federal motor vehicle safety standards. The estimated number of lives saved by NHTSA standards alone exceeds 100,000.⁹³

92. See, e.g., *supra* note 4; *infra* notes 104, 107, 111, 114, 115, 164 & 248.

93. See NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 5, at 1.

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Occupant restraints offer the best crash protection of all federal motor vehicle safety standards.⁹⁴ Throughout the 1950's, the Automobile Manufacturers Association had such a hostile attitude toward safety that it opposed making seat belt anchorages and fittings standard equipment in cars, actions which would have facilitated the private installation of seat belts by individuals.⁹⁵ However, after several states enacted legislation in the early 1960's requiring the installation of lap belts, the dam soon burst. In 1964, U.S. manufacturers agreed to make lap belts standard equipment in cars,⁹⁶ giving occupants who used the belts a 30% to 40% better chance of surviving a crash.⁹⁷ In 1967, over General Motors' vigorous objections, NHTSA issued a standard that made combined shoulder and lap belts mandatory in all new cars.⁹⁸ "Three-point" belts, which had proven successful in Sweden and elsewhere in Europe,⁹⁹ increased the chance of survival of a person wearing the belt by 40% to 50%.¹⁰⁰ While use of seat belts remains optional in most states,¹⁰¹ the now universal availability of this simple device offers substantial protection to those choosing to employ them.

The steering assembly standards for driver impact protection (FMVSS 203)¹⁰² and protection against rearward column displacement (FMVSS 204)¹⁰³ are among the most important standards after the occupant restraint requirements. The standards, which have an average cost of \$10.46 over the lifetime of a car,¹⁰⁴ prevent 21,600 serious injuries and

94. If all states enacted mandatory safety belt laws and usage rates rose to 40-70 percent, for example, NHTSA estimates that 3,220 to 6,720 lives would be saved each year. See 49 Fed. Reg. 28,962, 28,987 (Table 6) (July 17, 1984). This level of crash protection is not achievable by any other federal motor vehicle safety standard except airbags, which NHTSA estimated would save 9,000 lives a year once all cars are so equipped. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., AUTOMOBILE OCCUPANT CRASH PROTECTION REPORT NO. 3, at 4, cited in Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 38 (1983). The effectiveness of safety belts in protecting occupants in crashes, however, is greatly diminished by an overall usage rate (for front seat occupants) of only 12.5 percent. 49 Fed. Reg. at 28,983. The most effective crash protection system is an airbag plus a lap belt and shoulder belt. *Id.* at 28,986.

95. S. REP. NO. 1301, *supra* note 32, at 2.

96. R. NADER, *supra* note 30, at 113.

97. See 49 Fed. Reg. 28,962, 28,985 (1984).

98. 32 Fed. Reg. 2408, 2415 (1967) (codified as amended at 49 C.F.R. § 571.208 (1984)).

99. See Royal Swedish Embassy, Memorandum on U.S. Motor Vehicle Safety Regulations (Jan. 3, 1966), reprinted in *Motor Vehicle Safety Standards: Hearings Before the Senate Comm. on Commerce*, 90th Cong., 1st Sess. 243, 245 (1967).

100. 49 Fed. Reg. 28,962, 28,985 (1984).

101. N.Y. Times, July 21, 1985, § 1, at 22, col. 1.

102. 49 C.F.R. § 571.203 (1984).

103. 49 C.F.R. § 571.204 (1984).

104. OFFICE OF PROGRAM EVALUATION, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEPT OF TRANSP., AN EVALUATION OF FEDERAL MOTOR VEHICLE SAFETY STANDARDS FOR PASSENGER CAR STEERING ASSEMBLIES 17 (Jan. 1981).

deaths a year, based on 1978 data.¹⁰⁵ The standards have reduced serious-to-fatal driver injuries by 38% in post-1968 passenger cars.¹⁰⁶

The side-impact protection standard (FMVSS 214) has also been shown to produce enormous benefits for the driving public. In a 1982 report, NHTSA found that the standard saves up to 480 lives and prevents 4550 nonfatal hospitalizations per year in side impact crashes with fixed objects—a 14% injury reduction.¹⁰⁷ The standard also prevents an estimated 4920 nonfatal hospitalizations per year in vehicle-to-vehicle crashes.¹⁰⁸

How much has this cost? According to NHTSA, the sales-weighted average cost in 1982 dollars for the side door beams is \$61.¹⁰⁹ Further side-impact improvements for car-to-car crashes are feasible and needed, but are politically unpalatable to the Reagan Administration.¹¹⁰

The head restraint standard (FMVSS 202) prevents 64,000 injuries per year, based on 1979 data, and would have prevented 85,000 injuries per year in 1979 if restraints had been installed in all cars.¹¹¹ A 1982 NHTSA report found that “integral seats” (non-adjustable head restraints built into the seat structure) are nearly twice as effective as adjustable restraints.¹¹² The difference can be attributed to the failure by occupants to position their adjustable restraints correctly. Integral head restraints cost \$6.65, according to the report, while the less effective but more common adjustable restraints cost the consumer an average of \$24.33.¹¹³ Unfortunately, the current administration has shown no

105. *Id.* at 15.

106. S. Stucki & N. Hannemann, Study of Steering Assemblies for Evaluation and Rating of Safety Performance (1982) (Soc. Automotive Eng. Technical Paper Series No. 820476). These and other papers have also identified deficiencies in the present standard that could be corrected for \$15 per vehicle, but the current regime in the Department of Transportation not only declined to take this initiative but also proposed a weakening amendment to Standard 203 in 1981. *See* 46 Fed. Reg. 48,260 (Oct. 1, 1981).

107. OFFICE OF PROGRAM EVALUATION, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., AN EVALUATION OF SIDE STRUCTURE IMPROVEMENTS IN RESPONSE TO FEDERAL MOTOR VEHICLE SAFETY STANDARD 214, at xxvi (Nov. 1982).

108. *Id.* at xxiii. In addition, the standard has reduced ejection in side-impact, single-vehicle crashes by 40% to 60%. For multi-vehicle crashes, the reduction ranges from 10% to 50%. *Id.* at xxiv.

109. *Id.* at xxvi.

110. *See* OFFICE OF PROGRAM EVALUATION, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., AN EVALUATION OF STANDARD 214, at 24 (1979) (noting that the side-impact protection of vehicles can be significantly improved to protect occupants in vehicle-to-vehicle crashes). In December 1979, NHTSA issued an advance notice of proposed rulemaking to upgrade FMVSS 214, but the Reagan Administration, claiming the need for more research, terminated the rulemaking. 47 Fed. Reg. 30,084 (1982).

111. OFFICE OF PROGRAM EVALUATION, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., AN EVALUATION OF HEAD RESTRAINTS FEDERAL MOTOR VEHICLE SAFETY STANDARD 202 xx (Feb. 1982).

112. *Id.*

113. *Id.*

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interest to date in revising FMVSS 202 to require installation of integral head restraints, despite the clear safety—and economic—payoff.

The fuel system integrity standard (FMVSS 301), which took effect in 1977 car models, has saved 400 lives and prevented 520 serious injuries, 110 moderate injuries, and 6,500 passenger car fires per year, according to a 1983 NHTSA evaluation. The estimated cost to the consumer for this standard: \$8.50 per vehicle.¹¹⁴

Two windshield standards (FMVSS 112) are responsible for saving lives and reducing head injuries when front-seat occupants hit the windshield in crashes. The standard for laminated high-penetration-resistant windshield glazing, estimated to add \$6 to the price of a car, prevents 39,000 serious lacerations and 8,000 facial fractures each year, with little or no negative effect on persons not ejected.¹¹⁵ A windshield mounting standard (FMVSS 212) requires adhesive bonding to prevent windshields from popping out and allowing passengers to be ejected. This standard, which actually saves the buyer \$15, also saves an estimated 105 lives per year by preventing ejections.¹¹⁶

2. *Safety Advances through NHTSA Research, Monitoring, and Education Programs*

While safety performance standards offer an important layer of consumer protection, NHTSA cannot possibly scrutinize every detail of vehicle design to determine safety consequences. It can, however, research and monitor the safety performance of the motor vehicles already on the road and of the cars currently on the market.

a. *Automobile Recalls*

Before 1966, auto manufacturers could produce defective cars without any obligations under federal law to recall them or acknowledge responsibility for the problem.¹¹⁷ Only state product liability law exerted any pressure on the companies to warn or correct such problems, and this remedial pressure was minimal.¹¹⁸

114. OFFICE OF PROGRAM EVALUATION, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., AN EVALUATION OF FEDERAL MOTOR VEHICLE SAFETY STANDARD 301-75, FUEL SYSTEM INTEGRITY: PASSENGER CARS, xvi (Jan. 1983).

115. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., AN EVALUATION OF WINDSHIELD GLAZING AND INSTALLATION METHODS FOR PASSENGER CARS 223, 231 (Feb. 1985).

116. *Id.* at 224, 244.

117. See *Gov't Operations Hearings*, *supra* note 37, at 826-28.

118. Consumers were much less likely to discover defects in automobiles, let alone pursue product liability litigation, when auto manufacturers kept secret the very fact of their recalls of defective cars.

Between 1960 and 1966, 8.7 million U.S.-manufactured cars were recalled for possible safety defects¹¹⁹ but these recalls were *ad hoc* efforts conducted without sufficient notice to the owners and without publicity.¹²⁰ Manufacturers' letters to customers did not make clear either the nature of the problem or the risk involved.¹²¹ Since the creation of NHTSA, however, more than 100 million vehicles and equipment with potentially dangerous defects have been recalled by manufacturers.¹²² Now the industry can no longer ignore known or suspected defects and surreptitiously try to correct them while leaving motorists at risk. Automakers must now formally advise each car owner by individual letter about safety-defect recalls.¹²³

In the Carter years, NHTSA also instituted a toll-free hotline, a service which has helped car owners learn whether their motor vehicle, or any component, has been recalled.¹²⁴ The hotline has helped the agency identify undetected safety problems by compiling defect complaints by year, model, and make of vehicle, and combining this data with the many complaint letters the agency receives each year. If enough similar complaints are lodged about a particular vehicle or automotive component, the agency often begins a safety defect investigation that may result in a formal recall.

Under the Reagan Administration, however, recalls are rarely publicized and programs to discover defects have been eliminated.¹²⁵ Following

119. *Federal Role in Traffic Safety: Hearings Before the Subcomm. on Executive Reorganization of the Senate Comm. on Government Operations*, 89th Cong., 2d. Sess. 78 (1966) (statement of Senator Ribicoff).

120. As the Senate Commerce Committee noted: "The committee hearings also documented past laxity in furnishing adequate notification to car owners of latent defects which had crept into the manufacturing process—defects frequently directly related to safety. Equally disturbing was evidence that the manufacturers have not always taken effective steps to insure the speedy and efficient repair of such defects." S. REP. NO. 1301, *supra* note 32, at 2.

121. See, e.g., 112 CONG. REC. 14,247 (1966) (statement of Senator Mondale).

122. *NHTSA's Defect and Recall Procedures: The GM X-Car Case: Hearings Before the Subcomm. on Telecommunications, Consumer Protection and Finance of the House Comm. on Energy and Commerce*, 98th Cong., 1st Sess. 19 (1983) (statement of Raymond A. Peck, Jr., Administrator, NHTSA).

123. 15 U.S.C. § 1402 (1982).

124. See NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., *THE CAR BOOK: A CONSUMER'S GUIDE TO CAR BUYING* 46 (1980) [hereinafter cited as *THE CAR BOOK*] for a description of the NHTSA consumer hotline program.

125. Eight months after taking office, the Reagan Administration failed to publicize nine safety recalls involving over 200,000 Ford and Chrysler automobiles. Lenhoff, *Car-Safety Recalls Kept Quiet*, Detroit Free Press, Aug. 11, 1981. In the case of the defective brakes in General Motors' X-body cars, "NHTSA waited two years after it believed that the original 1981 recall would not work to bring the problem to the public, and to take action on it." *NHTSA's Defect and Recall Procedures: The GM X-Car Case: Hearings Before the Subcomm. on Telecommunications, Consumer Protection, and Finance of the House Comm. on Energy and Commerce*, 98th Cong., 1st Sess. 198 (1983) (statement of Rep. Timothy A. Wirth). In 1984, the Center for Auto Safety released a list of 65 "informal inquiries" into auto defects kept secret by the Reagan Administration because, according to NHTSA Administrator Diane Steed, they do not want to "stir up the public." Center for Auto Safety, Impact, Jan.-Feb. 1984, at 3.

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revelations of a major agency coverup of the safety defects of the braking system in the General Motors X-body cars,¹²⁶ the chastened agency improved its defects recall program.¹²⁷

b. *Consumer Information*

NHTSA research and testing also benefits consumers by making available to them accurate and unbiased information allowing informed decisionmaking in the automobile market. Because there is such an enormous disparity between consumers and automakers in the technical expertise they can bring to the market, consumers are often unable to make intelligent purchasing decisions. How, for example, can the typical car buyer feasibly educate herself about the intricacies of side-impact protection? Manufacturers and dealers are quick to exploit this vulnerability.¹²⁸ The information-disparity about automobile safety performance results in serious market imperfections and consequent misallocation of resources—while depriving consumers of a minimal standard of fair play in the marketplace.

The empowerment of consumers through education is truly one of the signal achievements of NHTSA. By providing reliable safety data to the public, NHTSA enables consumers to decide better which product is best for their health and wallet. Manufacturers, in turn, are encouraged to compete on the basis of safety. A case in point is NHTSA's New Car Assessment Program,¹²⁹ the results of which were distilled into the popular 1980 consumer publication, *The Car Book*.¹³⁰ In the late 1970's, the agency began crash testing vehicles as a way to provide make and model vehicle crashworthiness data to new car buyers.¹³¹ Under the mandatory

126. See, U.S. COMPTROLLER GENERAL, GENERAL ACCOUNTING OFFICE, DEPARTMENT OF TRANSPORTATION'S INVESTIGATION OF REAR BRAKE LOCKUP PROBLEMS IN 1980 X-BODY CARS SHOULD HAVE BEEN MORE TIMELY (Aug. 5, 1983).

127. Conte, *Official at Safety Agency, in a Switch, Draws Auto Industry's Fire, Consumer Groups' Praise*, Wall St. J., Apr. 19, 1985, at 58.

128. The Senate Commerce Committee explicitly recognized the scarcity of consumer information about automobile safety: "The individual in the marketplace, upon whom the free market economy normally relies to choose the superior among competing products, is incapable of evaluating the comparative safety of competing model cars." S. REP. NO. 1301, *supra* note 32, at 4. See also R. NADER, *supra* note 30, at 210-31 (showing how the information void is exploited by manufacturers and dealers, for whom sporty styling is a greater engineering, design and marketing priority than safety).

129. The Motor Vehicle Information and Cost Savings Act of 1972, § 201, 15 U.S.C. § 1941 (1982), provided the statutory authority for the program. The statute directed comprehensive study of vehicle crashworthiness and further provided that the compiled information be furnished to the public so as to benefit consumers in their motor vehicle purchasing decisions. The New Car Assessment Program, which tests cars in 35 m.p.h. frontal crashes, is described in a non-technical manner in OFFICE OF PUBLIC AFFAIRS, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., TESTING HOW WELL NEW CARS PERFORM IN CRASHES (1985).

130. See THE CAR BOOK, *supra* note 124.

131. See Brownlee, Hackney & Abney, *Implications of the New Car Assessment Program for*

automatic crash protection standard, all new cars must protect occupants in 30 miles per hour (mph) frontal crashes.¹³² But which cars would give the same protection in 35 mph crashes—the median speed for fatalities? To let consumers know which cars could protect them at speeds above the minimum federal requirements, the agency conducted crash testing at the higher speed.

The results of the tests were published in December 1980 in *The Car Book* along with other comparative data on fuel economy,¹³³ defects recalls,¹³⁴ crash fatality rates,¹³⁵ maintenance and collision repair costs,¹³⁶ and damageability and insurance costs.¹³⁷ The sixty-eight page booklet was the first compilation ever of this data by make and model. Distributed to more than 1.7 million consumers, *The Car Book* was the single most requested government publication in the history of the government's Consumer Information Center in Pueblo, Colorado.¹³⁸ Despite the booklet's value in making the "free market" work better, the Reagan Administration quickly discontinued publication of the guidebook early in 1981.¹³⁹ As a result, the NHTSA staff coordinator for *The Car Book* resigned and now publishes it privately in cooperation with the Center for Auto Safety.¹⁴⁰ This private arrangement, while profitable, cannot begin to match the distribution of the NHTSA publication of the booklet.¹⁴¹ And had there been no governmental initiation of this research and information program, it is doubtful that the booklet would ever have come to life.

Another NHTSA program that has empowered consumers through information is the Uniform Tire Quality Grading System (UTQGS), which was launched in stages in 1979 and 1980 after industry resistance

Small Car Safety, in NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., SMALL CAR SAFETY IN THE 1980's, at 117-29 (1980).

132. 49 C.F.R. § 571.208 (1984).

133. THE CAR BOOK, *supra* note 124, at 27.

134. *Id.* at 50.

135. *Id.* at 18.

136. *Id.* at 31, 40.

137. *Id.* at 40.

138. *National Highway Traffic Safety Administration Oversight and Authorization: Hearings Before the Subcomm. on Telecommunications, Consumer Protection and Finance of the House Comm. on Energy and Commerce*, 97th Cong., 2d Sess. 83 (1982) (statement of Jack Gillis) [hereinafter cited as *Oversight Hearings*].

139. The Reagan Administration not only discontinued publication of *The Car Book*, but otherwise made crashworthiness data arising from the NHTSA research less accessible to consumers requesting such information. *Id.* at 109 (statement of Raymond A. Peck, Jr., Administrator, NHTSA).

140. J. GILLIS, THE CAR BOOK (1984).

141. The government distributed *The Car Book* for free to consumers who requested a copy. The privately-sold book now costs \$8.95. The book probably would not have been developed in the first place by a private entrepreneur because of the enormous costs involved in creating the first edition (upon which the subsequent editions are patterned). The later private editions also capitalized on the success of the government version and the controversy that accompanied its release.

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and agency indecision had caused a twelve-year delay.¹⁴² For years, consumers had little reliable information to judge the comparative quality of tires. The UTQGS program rates tires on their three most important qualities—the expected treadwear, traction, and temperature resistance.¹⁴³ Codes stamped on the side wall of tires help consumers judge the best tire for the money.¹⁴⁴ In 1983, the Reagan Administration indefinitely suspended the treadwear grading requirement, citing inconsistencies in test results.¹⁴⁵ But a successful challenge in the U.S. Court of Appeals by Public Citizen forced the program back into place in 1985.¹⁴⁶

c. *Technological Innovation*

NHTSA research also operates to spur technological innovation in an industry known for its stodgy attitudes toward safety. If auto design was dominated by the “stylists” in the 1950’s and 1960’s, as Nader demonstrated,¹⁴⁷ then NHTSA regulation helped enhance the role of engineers in designing vehicles. As Ford’s Vice President for Car Product Development Robert B. Alexander told an industry audience in 1978, “the lion’s share of the burden of meeting these stringent standards and mandates will fall on the shoulders of the engineers. In fact, I like to call this the ‘age of the engineer’—and I, for one, couldn’t be happier.”¹⁴⁸ Ford’s Chief Vehicle Engineer, Stuart Frey, echoed this view: “[T]he task ahead is the kind that an engineer relishes because it puts a premium on ingenuity and creativity. I believe I speak for all my colleagues in the industry when I say I’m delighted to be part of the action.”¹⁴⁹

Because the auto industry conducts and controls nearly all of the design research that is done, NHTSA is at a disadvantage in assessing industry claims about what is and is not possible in designing safer cars. Anticipating this problem, Congress directed the agency to develop experimental safety vehicles, which would serve as technological yardsticks for judging current automotive design and capability.¹⁵⁰

142. See *Public Citizen v. Steed*, 733 F.2d 93, 94-95 (D.C. Cir. 1984).

143. 49 C.F.R. 575.104 (1984).

144. *Id.*

145. 48 Fed. Reg. 5690 (Feb. 7, 1983).

146. *Public Citizen v. Steed*, 733 F.2d 93 (D.C. Cir. 1984).

147. See R. NADER, *supra* note 30, at 210-231.

148. Robert B. Alexander, Remarks at Management Briefing Centers sponsored by Michigan Chamber of Commerce and University of Michigan 5 (Aug. 4, 1977) (Ford news release on file with the *Yale Journal on Regulation*).

149. Address of Stuart Frey, Michigan Management Conference (August 10, 1978), cited in Nat’l Highway Traffic Safety Admin., U.S. Dep’t of Transp., Remarks of Joan Claybrook, National Conference of Editorial Writers 2 (Oct. 19, 1978) (on file with the *Yale Journal on Regulation*).

150. 15 U.S.C. § 1395(a)(2) (1982).

After a slow start in carrying out this 1966 congressional mandate,¹⁵¹ NHTSA launched the Research Safety Vehicle (RSV) program in 1974 to demonstrate that an attractive, comfortable, and affordable passenger car could be built with a high degree of safety.¹⁵² Superior fuel economy and low exhaust emissions were other design goals.¹⁵³

Countering claims that "we are reaching the limits of the laws of physics in many instances,"¹⁵⁴ the RSV program has demonstrated the feasibility of new safety technologies. The Minicars RSV delivers an average of 32 miles per gallon, has an advanced air bag system, and poses less of a threat to pedestrians because of its soft, flexible bumper, hood and front fender.¹⁵⁵ The vehicle can crash without inflicting injury on instrumented dummies in 50 mph frontal crashes and 40 to 50 mph side and rear crashes.¹⁵⁶ The car's body structure consists of hollow, lightweight, high-strength, foam-filled steel sections that absorb the energy of a crash much more efficiently than do conventional car bodies, while at the same time saving weight.¹⁵⁷ Its projected cost in mass production is about \$6,800 in 1980 dollars.¹⁵⁸ The RSV program has also enhanced the technical expertise of NHTSA, making it better able to propose safety innovations and evaluate industry claims.¹⁵⁹

One tangible innovation that NHTSA research and rulemaking jointly helped to create was the "elastomeric" soft-faced bumper, which protects cars in lower speed crashes. The agency mandated the 5 mph bumper standard in 1974 to protect brake, steering, and lighting systems in low-speed collisions.¹⁶⁰ An official with State Farm Insurance said: "Over the

151. R. NADER, *supra* note 40, at xxxix-xlii.

152. The RSV program is described in NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., SEVENTH INTERNATIONAL TECHNICAL CONFERENCE ON EXPERIMENTAL SAFETY VEHICLES 21-28, 185-87 (1979).

153. *Id.* at 25, 27.

154. See *Oversight Hearings*, *supra* note 138 at 5 (testimony of Raymond A. Peck, Jr., Administrator, NHTSA).

155. The specifications for the Minicars RSV are described in N. DiNAPOLI, M. FITZPATRICK, C. STROTHER, D. STRUBLE & R. TANNER, 2 RESEARCH SAFETY VEHICLE — PHASE II (1977). For a non-technical description, see NAT'L HIGHWAY TRAFFIC SAFETY ADMINISTRATION, RESEARCH SAFETY VEHICLE (1979).

156. See *id.*

157. *Id.*

158. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., THE SAFE, FUEL-EFFICIENT CAR: A REPORT ON ITS PRODUCIBILITY AND MARKETING (1980), reprinted in *Oversight Hearings*, *supra* note 138, at 804, 831. See also The Budd Company, *Design, Producibility, and Manufacturing Support for Minicars RSV—Phase II* in 3A RESEARCH SAFETY VEHICLE—PHASE II 98 (1977).

159. See, e.g., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 152.

160. 42 Fed. Reg. 31,162 (1977). The standard was upgraded in 1979 under the Motor Vehicle Information and Cost Savings Act, Pub. L. No. 92-513, 86 Stat. 947 (1976) (codified at 15 U.S.C. § 1901 (1982)), so that a car's body and grille, in addition to its safety systems, would be protected. This prompted Consumers Union to exclaim: "In testing cars over the years, CU has rarely encountered a change as dramatic as that brought about by the bumper standard that went into effect with the 1979 models." *Tales from the Cost-Benefit Wonderland*, CONSUMER REP., June 1981, at 338.

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last decade, the standard has served to eliminate entirely hundreds of thousands of small claims that our policyholders would otherwise be filing.”¹⁶¹ The Insurance Institute for Highway Safety (IIHS) calculated that collision coverage losses increased dramatically for cars¹⁶² after the Reagan Administration weakened the 5 mph bumper requirement to 2.5 mph.¹⁶³

NHTSA has also been at the forefront of spurring more efficient fuel economy innovations¹⁶⁴ on an industry addicted to the highly-profitable large engine cars.¹⁶⁵ Following the gasoline shortages in 1973, Congress in 1975 enacted the first major energy crisis legislation, the Energy Policy and Conservation Act.¹⁶⁶ One provision of this law required automakers to double the fuel efficiency of their new cars within ten years. NHTSA was charged with implementing statutorily required annual fuel economy standards that ranged from 20 miles per gallon in 1980 to 27.5 miles per gallon in 1985.¹⁶⁷

The NHTSA-administered program has been a great success. The average new U.S. car in model year 1974 delivered about 13 miles per gallon.¹⁶⁸ By 1980, the average was 21.8 miles per gallon.¹⁶⁹ As a result

161. Donald P. McHugh, quoted in D. Feaver, *Softer Bumper Standards Hit Opposition*, Wash. Post, July 30, 1981, at A23.

162. “Claim frequencies for the 1983 Honda, Volvo, Volkswagen and Chrysler models—all equipped with weakened bumpers—were up to 60% higher than claim frequencies for 1982 models of the same cars, which were equipped with 5 mph bumpers.” INSURANCE INSTITUTE FOR HIGHWAY SAFETY, 1984 REPORT ON BUMPERS 7 (1984).

163. Despite the public acceptance and success of this standard in reducing car owner aggravation and insurance costs, the Reagan Administration, at the behest of the auto industry, reduced the 5 mph standard to 2.5 mph in 1982. 47 Fed. Reg. 21,820 (May 20, 1982). The popularity of the bumper standard was demonstrated in Opinion Research Corp., *The Amount of Protection Against Damage That New Car Bumpers Should Provide: A National Survey of Car Owners Opinions* (June 1982) (survey conducted for the Insurance Institute for Highway Safety). The survey found that a total of 76% of all respondents prefer the 5 mph bumper when car cost, gasoline cost and insurance cost are all considered. Even when respondents were asked whether they preferred a 5 mph bumper if a 2½ mph bumper would produce a savings reduction of \$100 per car, 64% still preferred 5 mph bumpers.

164. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP’T OF TRANSP., 1981 ANNUAL REPORT TO THE CONGRESS ON THE AUTOMOTIVE FUEL ECONOMY PROGRAM 7 (1981).

165. Representatives of Ford and General Motors testified on May 14, 1985 that their companies would have great difficulty meeting the statutorily mandated 27.5 miles-per-gallon Corporate Average Fuel Economy (CAFE) standard. *Automotive Fuel Economy Standards: Hearings Before the Subcomm. on Energy Regulation and Conservation, Senate Comm. on Energy and Natural Resources*, 99th Cong., 1st Sess. 56, 57, 70, 72 (1985) (testimony of Dr. Marina v.N. Whitman, Vice President, General Motors Public Affairs Group and Helen O. Petrauskas, Vice President, Environmental and Safety Engineering, Ford Motor Co.). Chrysler’s representative testified at the same hearing that Ford and GM “are not meeting the law because they fell short in reducing weight and introducing new technology.” *Id.* at 72, 73 (testimony of Robert S. Miller, Jr., Executive Vice President of Finance and Administration, Chrysler Corp.).

166. Pub. L. No. 94-163, 89 Stat. 871.

167. Pub. L. No. 94-163 § 301, 89 Stat. 871, 901-16 (codified as amended at 15 U.S.C. §§ 2001-2012 (1982)).

168. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 164, at 1.

169. *Id.*

of the fuel economy standards, purchasers of 1980 model year cars saved over \$1700 compared to the 1976 buyer because of reduced fuel purchases over the lifetime of their cars.¹⁷⁰ The millions of gallons of fuel saved by these standards contributed to the stabilization of the dollar, reduced inflation, and enhanced national security by reducing the need for oil imports.¹⁷¹ Finally, the fuel economy standards helped the American auto industry become progressively more competitive with fuel-efficient foreign cars in the U.S. marketplace.¹⁷² Despite these achievements, U.S. auto makers have lost their sense of urgency about fuel efficiency over the past few years. As the price of oil and consumer concern has fallen, manufacturers have sought to slow the pace of feasible innovation.¹⁷³

3. *Highway Safety Successes*

The NHTSA programs discussed above seek primarily to improve vehicle safety design in order to minimize the injuries that occur during the crash phase of accidents. There is another set of NHTSA programs, however—the highway safety programs—that greatly enhances the effectiveness of the vehicle design improvements. These programs, which act directly upon individual motorists, seek to alter pre-crash driver behavior that can cause accidents (accident prevention) and behavioral habits that can affect the severity of harm during the crash phase of accidents (injury prevention).

The highway safety and vehicle design programs, while separate, are mutually reinforcing. If more motorists are traveling at safer 55 mph speed limits; if more motorists wear their seat belts; if more infants are

170. *See id.* at ii.

171. *Id.*

172. The NHTSA fuel economy program was responsible for the “stimulation of substantial innovation in automotive design and production technology.” *Id.* at 3. The report further noted: “In the absence of adequate market signals encouraging fuel economy improvements, fuel economy regulations provided a rational approach toward integrating requirements of technical feasibility, and economic practicability with the need of the nation to conserve energy.” *Id.* at 9.

173. *See supra* note 165. Shielded from foreign competition by a 1.8 million car limit on Japanese imports—a form of market protection that was worth \$15 billion, according to the International Trade Commission—Ford and General Motors still claimed they could not achieve the 27.5 miles per gallon standard by 1985, as required by law. *N.Y. Times*, June 27, 1985, at D23, col. 1. The two companies petitioned NHTSA in March 1985 to reduce the 1985 standard from 27.5 to 26 miles per gallon and to keep it at 26 mpg for the rest of the decade. *Id.* Even while General Motors and Ford were claiming that they could not meet the 1985 standard, they also petitioned NHTSA not to levy any penalties because they claimed their 1986-1988 fleet of cars would exceed the fuel economy standard enough to offset their current penalties with credits. *Id.* It is unclear whether either company would have risked such large penalties by intentionally failing to improve the fuel economy of their fleets if they could not have counted on the Reagan Administration to go along with their plan. In any case, NHTSA granted Ford and GM the fuel efficiency cutback, 50 Fed. Reg. 40,528 (1985), an action currently being challenged in federal court. *See Public Citizen v. NHTSA*, No. 85-1745 (D.C. Cir. filed Nov. 14, 1985).

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strapped into a safety seat; if fewer youths are drinking and driving; if more motorcyclists wear helmets—then the safety features built into motor vehicles are likely to be more effective. There is an interactive effect between vehicle and highway safety programs.

The 55 mph speed limit is one of the few behavioral highway safety programs whose payoff can be clearly measured and shown. Though enacted in 1973 to conserve energy,¹⁷⁴ the law's subsequent safety benefits persuaded Congress to retain the 55 mph limit after the energy crisis had abated.¹⁷⁵ The law had saved an estimated 25,000 to 50,000 lives by 1984.¹⁷⁶ The 55 mph speed limit also prevented 2500 to 4500 serious, severe and critical injuries and 34,000 to 61,000 minor and moderate injuries annually.¹⁷⁷ The National Academy of Science's Transportation Research Board concluded: "Few safety policies can rival the impact of the 55 mph speed limit in reducing the accidental deaths of Americans as they travel about the country."¹⁷⁸

NHTSA has also worked to counter the serious injuries resulting from motorcycle accidents. Motorcycle crashes account for ten percent of all motor vehicle fatalities in the country.¹⁷⁹ Forty-five hundred Americans are killed and about 200,000 injured in motorcycle crashes each year.¹⁸⁰ About seventy percent of all motorcycle fatalities result from head injuries.¹⁸¹ Numerous studies show, however, that motorcycle helmets are effective in reducing the severity and frequency of head injuries.¹⁸² Unhelmeted riders are at least three times more likely to incur a fatal head injury than are helmeted riders.¹⁸³

In 1967, NHTSA initiated an effort to improve motorcycle safety when it issued a standard requiring states to enact motorcycle helmet use laws as part of their state highway safety programs.¹⁸⁴ States that failed to

174. See Emergency Highway Energy Conservation Act, Pub. L. No. 93-239, 87 Stat. 1046 (1973).

175. TRANSPORTATION RESEARCH BOARD, NATIONAL RESEARCH COUNCIL, 55: A DECADE OF EXPERIENCE 166 (1984).

176. *Id.* at 167.

177. *Id.* at 166-67.

178. *Id.* at 167. The Transportation Research Board discerned additional benefits. For example, the 55 mph speed limit was found to have reduced spinal cord and head injuries significantly. *Id.* at 86-88. The 55 mph limit also saves about 167,000 barrels of fuel per day, resulting in \$2 billion in savings annually. *Id.* at 110-11.

179. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., STATE AND COMMUNITY PROGRAM AREA REPORT, MOTORCYCLE SAFETY, 1984-1985 at 3 (1985) [hereinafter cited as MOTORCYCLE SAFETY].

180. *Id.*

181. *Id.*

182. *Id.*

183. *Id.*

184. Highway Safety Program Standard No. 3, 23 C.F.R. § 1204.4 (1985). The standard, initially issued on June 27, 1967, was not published until a year later. 33 Fed. Reg. 16,560 (1968).

enact helmet use laws could be penalized by cutoffs in highway grant-in-aid funds distributed by the Agency and up to ten percent of federal highway funds.¹⁸⁵ By the end of 1975, all but three states had adopted helmet use laws.¹⁸⁶

The success of this standard in saving lives and reducing injury received a grisly demonstration in the years after 1976. In that year, Congress struck down the helmet law requirement in an unexpected amendment to the Highway Safety Act.¹⁸⁷ This freed states to repeal or weaken their helmet laws without jeopardizing their federal highway funds. Deaths from motorcycle crashes jumped forty-eight percent in the next four years, from 3312 in 1976, to 5144 in 1980.¹⁸⁸ The decline in helmet use was the single most important factor in the increase of motorcycle fatalities in the states which had repealed or seriously weakened their helmet laws.¹⁸⁹ Following documentation by NHTSA of this fact, states stopped repealing their laws, and subsequently one state, Louisiana, reenacted the provision in its law making helmet use mandatory for all motorcyclists.¹⁹⁰

NHTSA has also focused attention on the special crash dangers faced by children and the urgent need for them to use child safety seats. The problem dwarfs traditional medical concerns: motor vehicle crashes are the number one killer andcrippler of children in the United States.¹⁹¹ Following the enactment in 1977 of the first child restraint use law in Tennessee,¹⁹² NHTSA began to promote a model state law requiring parents to use child safety seats for children under five. The Agency also sponsored conferences with medical professionals, car dealers, PTA representatives and others to publicize the need for such restraint laws.¹⁹³

As a result of the initiatives of NHTSA and others, every state now requires the use of child restraint systems for children under forty

185. 23 C.F.R. § 1206.4 (1985).

186. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., A REPORT TO CONGRESS ON THE EFFECT OF MOTORCYCLE HELMET USE LAW REPEAL—A CASE FOR HELMET USE IV-2 (1980) [hereinafter cited as HELMET USE LAW REPEAL].

187. See Federal Aid-Highway Act of 1976, Pub. L. No. 94-280 § 208(a), 90 Stat. 425, 454 (codified as amended at 23 U.S.C. § 402(c) (1982)).

188. MOTORCYCLE SAFETY, *supra* note 179, at 1.

189. See HELMET USE LAW REPEAL, *supra* note 186, at I-5. In states where helmet use is voluntary, usage rates range from 50% to 60%, states with mandatory helmet laws report helmet usage rates between 95% and 100%. See *id.* at VIII-4.

190. 1981 La. Acts 517, § 1 (codified at LA. REV. STAT. ANN. § 32:190 (West 1963 & Supp. 1985)). See also N. McSWAIN & A. WILLEY, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., IMPACT OF THE MOTORCYCLE HELMET LAW IN LOUISIANA (1984).

191. BUREAU OF SAFETY PROGRAMS, NAT'L TRANSP. SAFETY BOARD, SAFETY STUDY: CHILD PASSENGER PROTECTION AGAINST DEATH, DISABILITY AND DISFIGUREMENT IN MOTOR VEHICLE ACCIDENTS 1 (Sept 7, 1983) [hereinafter cited as CHILD PASSENGER PROTECTION].

192. 1977 Tenn. Pub. Acts ch. 114 §§ 1, 2 (codified as amended at TENN. CODE ANN. § 55-9-214(b) (1980 & Supp. 1985)).

193. See, e.g., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., PROCEEDINGS OF THE NATIONAL CONFERENCE ON CHILD PASSENGER PROTECTION (Apr. 1981).

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pounds.¹⁹⁴ Usage has increased dramatically from less than 5% in 1974¹⁹⁵ to about 50% in 1985.¹⁹⁶ The payoff has been significant. The number of child passenger fatalities for children up to four years old dropped from 726 in 1978 to 424 in 1984,¹⁹⁷ with most of the decrease occurring since 1983,¹⁹⁸ when most states had enacted mandatory usage laws. In 1985, NHTSA found that with fifty percent usage, about 240 lives and 26,300 injuries a year are saved.¹⁹⁹ While much remains to be done in improving enforcement and educating families on proper installation and use of the child restraint systems,²⁰⁰ the use laws have proven their effectiveness.

Finally, NHTSA has pushed states to raise the legal drinking age to twenty-one years following passage of the 1982 law requiring cutoff of federal highway aid funds for states failing to do so.²⁰¹ The problem of young drinking drivers is severe. Driving while alcohol-impaired is the leading cause of death for young people aged sixteen to twenty-four.²⁰² In fourteen states that raised their legal drinking age, nighttime highway fatalities among youth under age twenty-one declined by 380 per year.²⁰³

194. National Safety Council, Office of Federal Affairs, Policy Update (Sept. 18, 1985) (on file with the *Yale Journal on Regulation*).

195. C. Kahane, J. Kossar & G. Chi, Evaluation of the Effectiveness of Child Safety Seats in Actual Use, 4.638 (1984) (Soc. of Automotive Eng. publication no. 831656).

196. Telephone interview with James Nichols, Highway Safety Program Office, NHTSA (Nov. 8, 1985) (a 19-city survey involving 6636 observations shows that usage for infants was 65.5% and usage for children aged one to four was 50.4%).

197. Telephone interview with Grace Hazzard, analyst, National Center for Statistics and Analysis, NHTSA (Dec. 4, 1985).

198. *Id.*

199. Telephone interview with Susan Partyka, analyst, National Center for Statistics and Analysis, NHTSA (Dec. 11, 1985). In analyzing the fatality data and a number of state studies of child restraint effectiveness, a recent study of NHTSA and state accident files has found that "child safety seats definitely reduce deaths and injuries in highway crashes." C. Kahane, J. Kossar & G. Chi, *supra* note 195, at 4.638. Overall injury reduction was estimated in the range of 25 to 30% for all safety seats and as high as 40 to 50% for seats used correctly. Fatality reduction was even higher, with an estimated effectiveness of 40 to 50% for all safety seats and 65 to 75% for seats used correctly. *Id.* at 4.647.

200. See CHILD PASSENGER PROTECTION, *supra* note 191, at 2.

201. Act of July 17, 1984, Pub. L. No. 98-363 § 6(a), 98 Stat. 435, 437 (codified as 23 U.S.C.A. § 158 (West Supp. 1985)).

202. Nat'l Transp. Safety Board, U.S. Dep't of Transp., Status Report: National Transportation Safety Board Recommendations on Raising the Minimum Legal Age for the Purchase/Consumption of Alcoholic Beverages 2 (Jan. 22, 1985) (on file with the *Yale Journal on Regulation*).

Approximately 14 teenagers (15 to 19 years old) die and 360 are injured each day in alcohol-related traffic crashes. *Id.* About 60% of fatally injured 15 to 19 year old drivers were found to have been drinking prior to crashes, with 43% at legally intoxicated levels based on the laws of most states. National Center for Statistics & Analysis, Nat'l Highway Traffic Safety Admin., U.S. Dep't of Transp., Drunk Driving Facts 2 (June 1984) (on file with the *Yale Journal on Regulation*) [hereinafter cited as Drunk Driving Facts]. Even though 18 to 20 year olds represent only 7% of licensed drivers and travel only 7% of all vehicle-miles travelled, this age group was involved in 16% of all highway fatalities involving drunken driving. J. Fell, Research Notes: Alcohol in Fatal Accidents for Various Driver Age Groups 1 (Apr. 1984) (on file with the *Yale Journal on Regulation*).

203. Insurance Institute for Highway Safety, *Raising Drinking Age Reduces Fatal Crashes*,

If the drinking age were raised to twenty-one in all states, NHTSA has estimated that an additional 600 lives would be saved each year.²⁰⁴

4. *Synergistic Benefits of NHTSA Regulation*

All of the above actions of NHTSA have conferred concrete safety and efficiency benefits upon the American public. Their consideration, *seriatim*, may however underemphasize the synergistic effect agency activity has upon the automotive industry and American society. Professor Lee Preston, Director of the Center for Business and Public Policy at the University of Maryland, has pointed out that the mere presence of a federal regulatory agency can have a significant social impact:

The most critical activity [of regulatory agencies] may be the *articulation* of social concerns, rather than the development and implementation of specific means for their achievements. The fact that questions have been raised, issues looked into, and awareness stimulated may amount to satisfactory goal-attainment in itself.²⁰⁵

Simply "paying attention" is often not enough to control a hazard; actual regulation and enforcement may be necessary. Yet Preston does make a point overlooked by many observers of regulation. That is, the mere fact that a regulatory agency is looking into technology-based problems and proposing regulatory reforms can spark a wide variety of salutary if unquantifiable results.

Simply because the NHTSA is conducting research or proposing a rulemaking, the auto industry may be deterred from a certain course of action or will alter its behavior.²⁰⁶ It may conduct more safety research or become more conscientious in alerting the government about defects it discovers. In 1981, after the 35 mph NHTSA crash tests were publicized and the Honda Civic "failed," Honda worked to improve the design of its car so that it would pass the next year—even though no regulation was

HIGHWAY LOSS REDUCTION STATUS REP., July 15, 1981.

204. National Center for Statistics and Analysis, Nat'l Highway Traffic Safety Admin., U.S. Dep't of Transp., Alcohol and Driver Age in Fatal Accidents 3 (1984) (unpublished memorandum) (on file with the *Yale Journal on Regulation*).

205. Lee E. Preston, *Is Social Regulation Achieving Its Goals?* (1984) (unpublished paper prepared for The Regulatory Process Assessing Its Effectiveness and Reform, Conference at the Baldy Center for Law and Policy, State University of New York at Buffalo, March 8-9, 1984) (on file with the *Yale Journal on Regulation*).

206. Shortly after the release of the 1980 crash tests of passenger cars at 35 miles per hour, a Japanese auto executive, commenting on the efforts of Japanese makers to design safety into their cars, said "When you look at Japanese cars a year or two from now, I'd be very surprised if they all don't pass the crash test." *Which Cars Do the Best in Crashes?*, CONSUMER REP., Apr. 1981 at 188, 192.

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issued.²⁰⁷ When companies like Firestone are severely penalized for putting consumers' lives at risk with defective products such as the Firestone 500 radial tire,²⁰⁸ the rest of the industry takes notice of stiff penalties and official reprobation. Companies are deterred from allowing careless or unscrupulous behavior. No quantitative analysis can truly capture this sort of regulatory benefit.

Similarly, when a regulatory agency announces new research findings or proposes remedial action, the press coverage that results educates the public about the problem. This new information shifts consumer purchasing patterns towards relatively safe products,²⁰⁹ and publicity may lead to the organization of consumer action groups.²¹⁰ Other consumers who have been already harmed may initiate product liability suits to obtain relief on their own²¹¹ and such actions may force changes in product design. Car owners who discover through the NHTSA hotline that their cars have dangerous defects—as X-car owners did—can demand replacement or repair. By having an agency in a centralized location collecting information, the scope and nature of the problem can be identified. Additionally, the agency's work emboldens and empowers consumers to assert their legal rights. This, too, is an incalculable benefit.

A more subtle economic benefit of regulation is the prevention of enormous long-term liabilities that could threaten the well-being of the industry. It is difficult to prove this assertion by affirmative evidence. How, for example, can one prove that the drug industry is kept viable by FDA regulation, which assures consumer confidence and stable markets? (The

207. See *Oversight Hearings*, *supra* note 138, at 83-84 (testimony of Jack Gillis). Gillis observed as well that the publicized crash tests "stimulated improvements in the Volvo and improvements in the Subaru." *Id.* at 84.

208. N. Y. Times, May 13, 1980, at 16, col. 1 (Firestone to pay fine of \$500,000 in recall dispute with NHTSA); Nov. 30, 1978, Section IV at 23, col. 1 (Firestone recalls and replaces at no charge over seven million tires).

209. Former NHTSA official Jack Gillis observed that consumer education "allow[s] the consumer to make informed choices among products which can effectively and efficiently remove harmful and wasteful products from the marketplace." *Oversight Hearings*, *supra* note 138, at 89.

210. The disclosures made by the Consumer Product Safety Commission about the dangers of urea formaldehyde foam insulation, for example, helped spur the growth of a grassroots consumer group with 8,000 members in 40 states and Canada, "Save Us From Formaldehyde Environmental Repercussions," or SUFFER, to fight the use of formaldehyde in home building materials. *Federal Response to Health Risks of Formaldehyde in Home Insulation, Mobile Homes and Other Consumer Products: Hearings before the Subcomm. on Commerce, Consumer, and Monetary Affairs, House Government Operations Committee*, 97th Cong., 2d. Sess. 11-34 (1982).

211. Victims of defective Ford transmissions, defective General Motors diesel cars, the Dalkon shield intrauterine device, the drug DES, and other consumer products have been alerted to the possibility of legal redress for their harm after the federal government verified and publicized the harm. See, e.g., Supplement to Opposition of the Ford Motor Company to Petition for Expedited Defect Investigation, Petition No. P85-15 at 2 (Office of Defects, NHTSA) (filed June 3, 1985) (indemnity suit brought against Ford only after decedent's husband became aware of publicity concerning Fords equipped with automatic transmissions).

makers of Tylenol discovered how valuable FDA regulation can be when its product was the target of tampering.) But the exceptions to the rule, where regulation did not succeed, can prove the rule. The lack of a regulatory program to control asbestos dangers is now shaking the foundations of that industry.²¹² The defects of the Dalkon Shield are causing serious financial difficulties for A.H. Robins.²¹³ Automotive disasters like the Corvair (defective suspensions),²¹⁴ the Ford Pinto (explosive gas tanks),²¹⁵ the X-body cars (defective braking systems),²¹⁶ and Firestone 500 radial tires (manufacturing defect)²¹⁷ have all caused economic harm to their companies because they were dealt with after the harm was already done. Regulation prevents both human harm and economic calamities.

What, then, are the aggregate benefits of auto safety regulation? Department of Transportation figures show that existing auto safety standards save more than 10,000 lives per year, at a cost of \$370 per car.²¹⁸ This translates to twenty-seven lives saved per dollar price increase per car.²¹⁹

Regulation of auto and highway safety helps reduce the enormous "hidden" societal costs associated with crashes. For 1980, the economic cost of auto crashes was estimated at \$57.2 billion, or \$700 per year for every household in the country.²²⁰ Of this total, medical costs amounted to \$3.3 billion, property losses to \$21 billion, lost productivity reached \$14.2

212. See Brodeur, *The Asbestos Industry On Trial* (pts. 1—4), *THE NEW YORKER*, June 10, 1985, at 49; June 17, 1985, at 45; June 24, 1985, at 37; July 1, 1985, at 36.

213. See Mintz, *Questions Arose Early on Contraceptive's Safety*, *Wash. Post*, Apr. 7, 1985 at A1, col. 1 (first article in a five-part series on the Dalkon Shield). Mintz notes that Robins and its insurance company had paid out \$314.6 million in 27 court judgments as of April 1985. At the end of 1984, more than 3800 additional suits and claims were pending against Robins, with nearly 10 new cases being filed each day. In April 1985, Robins set up a \$615 million reserve fund to handle future settlements and court judgments.

214. In 1965, Chevrolet sold 209,000 Corvairs. The next year, following the Senate Commerce Committee Hearings, the car's sales totaled 86,000. The company sold 1.5 million Corvairs prior to the revelation in 1966 but only 125,000 the four years after. E. CRAY, *CHROME COLOSSUS* 427 (1980).

215. See Dowie, *Pinto Madness*, *MOTHER JONES*, Sept.-Oct. 1977, at 18, 31.

216. Litigation to force a recall of 1.1 million 1980 General Motors' X-body cars whose rear brakes lock up unexpectedly is still pending. However, the costs of a recall could cost GM between \$30 million and \$50 million. *N. Y. Times*, Nov. 25, 1984 at A1, col. 8. In the meantime, GM discontinued its production of X-body cars in the spring of 1985, one year ahead of schedule. *Wall St. J.*, Feb. 11, 1985 at 3, col. 1.

217. Louis, *Lessons from the Firestone Fracas*, *FORTUNE*, Aug. 28, 1978, at 45 (defect in tire leads to loss of market share not only for particular tire but also for the entire product line).

218. *NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., PLANNING FOR SAFETY PRIORITIES: 1983 SAFETY PRIORITIES PLAN 40* (Apr. 1983). This \$370 represents the price charged to the car buyer, not the cost incurred by the manufacturers.

219. *Id.*

220. *NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., THE ECONOMIC COST TO SOCIETY OF MOTOR VEHICLE ACCIDENTS I-3—I-4* (1983).

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billion, and other costs came to \$18.6 billion.²²¹ Vehicle standards save money by reducing these costs.²²²

The greatest benefits of auto safety regulation, however, are not measured by money saved, but by the pain, trauma, death and family disruption prevented. No aggregate number or dollar figure can truly express these preventive benefits located at the personal level of daily life. As a 1983 NHTSA report concludes:

Permanent disability such as paraplegia, loss of eyesight, or brain damage can deprive an individual of the ability to achieve even minor goals or aspirations and leave one dependent on others for economic support and routine physical care. Less serious but more common injuries such as whiplash can result in chronic physical pain and effectively limit the victim's physical activities for years after the accident. Serious burns, contusions, or lacerations can lead to similar results with the additional emotional trauma associated with permanent disfigurement.²²³

Successful regulation, by preventing a crash death or injury, can prevent strained family relationships that may result when an accident victim faces new economic and emotional dependencies; can prevent personality problems that undermine marital relationships; and can prevent feelings of grief, anguish, fear, insecurity, and sense of loss that can afflict a person's emotional state for years after a crash occurs.²²⁴ None of these personal tragedies can be measured by conventional economic indices, yet the prevention of such harm is arguably the most profound benefit of NHTSA regulation.

In only twenty years, NHTSA has dramatically improved the safety performance of automobiles, empowered consumers in the marketplace, and promoted safer driving habits among motorists. It has proven itself to be one of the premier public health agencies of the federal government. Notwithstanding the remarkable social benefits that it has conferred on the American people, NHTSA's achievements remain underappreciated. To explain this paradox, we turn now to the political context in which regulatory knowledge is generated and popularized.

221. *Id.*

222. *Id.* at 1-11.

223. *Id.* at 1-6—1-7.

224. *Id.* at 1-7.

II. Perceptual Bias in Regulatory Debate

If nearly two decades of auto safety regulation have generated such a vast array of benefits, why then is there so little awareness of these significant government achievements? Why is the regulatory enterprise seen in such negative terms when its demonstrable social value is so positive? Our analysis suggests that any understanding of this irony of modern politics must at minimum consider three factors: the self-effacing nature of regulatory successes; the dominant role of industry in shaping the framework for regulatory debate; and the ascendancy of cost-benefit analysis in regulatory decisionmaking.

A. *The Self-Effacing Nature of Regulatory Achievements*

What is it about the regulatory enterprise that works to obscure its considerable achievements? This section suggests some important reasons: the often inconspicuous and chronic quality of the hazards, the highly technical nature of regulatory remedies, and the preventive nature of regulation itself. When the hazards addressed by regulation are chronic rather than acute, or when such hazards afflict victims individually, rather than *en masse*, an agency's regulatory successes often remain "hidden" from public view. Because hazards of this nature are invisible, so too are their regulatory cures. Chronic hazards, such as presented by carcinogenic pesticides, for example, afflict their victims slowly and subtly, in private, anonymous ways.²²⁵ Victims may not develop cancer until a number of years after being unwittingly exposed to the carcinogen, and they rarely are able to connect the disease to a particular cause. While pesticide regulation may save hundreds or thousands of lives, that accomplishment can only be ascertained statistically; there are no beneficiaries to write thank-you notes to Washington, D.C. It is not surprising, therefore, that the actual benefits of chronic-risk regulation may go unrecognized by the public, and politicians may feel few pressures to focus attention on the threat such hazards continue to pose. Deaths from chronic hazards are not immediately apparent, the individuals saved cannot be readily identified, and blame cannot be easily assigned.

Similarly, regulatory successes are less apparent when they address hazards that take their victims by ones and twos. When large numbers of people are hurt in public catastrophes, the press provides substantial news coverage and politicians are generally responsive. A public assignment of responsibility is usually possible. But episodic tragedies such as automobile crashes, which injure or kill only a few individuals at a time, do not

225. See S. EPSTEIN, *THE POLITICS OF CANCER* 3 (Anchor Press ed. 1979).

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inspire anywhere near the same measure of media attention or political accountability. While such tragedies are far more common, and exact a heavier toll, they occur in an isolated, dispersed manner; their political repercussions are marginal. Thus, it is more likely that an agency's success at reducing discrete or chronic risks will go unnoticed.

The tendency of regulatory benefits to "disappear" from public view can also be traced in part to the preventive nature of regulation itself. When harm is prevented, the evidence of regulatory success is not obvious. Safety and the absence of harm come to seem "natural." The beneficiaries of the side door improvements mandated by FMVSS 214 are unlikely ever to recognize the life-saving consequences of this NHTSA-required performance feature. This occurs because, when regulation has eliminated hazards or reduced risk, the normative perception of those hazards and risks changes: the original risk, which should serve as the standard for evaluating the regulation, is soon forgotten. The traumas now averted through auto safety regulation—paralysis, disfigurement, the loss of a job, the loss of a house, changed self-image, altered family relationships, and the other misfortunes that often accompany auto crashes—fade into obscurity. They appear unrelated to regulation.

Regulatory benefits often go unseen and unapplauded, too, because so often they result from highly esoteric technological changes mandated by agencies such as NHTSA. The very existence of regulatory achievements such as side door beams—a technically complex feature "hidden" in the design of the car—is not readily apparent to consumers. Unless they read the *Federal Register*, consumers are not likely to recognize that federal regulation has, for example, eliminated carcinogens from sleepwear,²²⁶ certain drugs and food products,²²⁷ and root beer.²²⁸ Yet these and hundreds of other obscure but vital technological improvements have been mandated or diffused through regulation.

Finally, regulatory victories are often perceived as incomplete because frequently they are. Regulation often requires political negotiation and compromise with recalcitrant industries. The outcomes are usually qualified or in some way inadequate. A complete "cure" is unusual.

226. The Consumer Products Safety Commission stated that clothing treated with TRIS, a carcinogenic flame-retardant, was a "banned hazardous substance" under the Federal Hazardous Substances Act. 42 Fed. Reg. 61,621 (1977).

227. For example, Red Dye No. 2 is now banned in food products. 21 C.F.R. § 81.10(f) (1985). The acceptable level of acrylonitrile traces that can occur in certain plastic beverage bottles is also regulated. 21 C.F.R. §§ 1020-1040 (1985).

228. Safrole, a primary component of oil of sassafras, a flavoring agent used in root beer, was found to be a carcinogen in the late 1950s. The Food and Drug Administration banned it in 1960 and manufacturers sought out safer substitutes. 25 Fed. Reg. 12,412 (1960) (codified at 21 C.F.R. § 172.580 (1985)).

Even when there is a significant regulatory accomplishment, it may go unrecognized because a constant stream of new and newly identified hazards make new claims for government attention. Regulatory efforts to control the "old" hazards, such as hydrocarbon air pollutants,²²⁹ may be making significant progress just as a "new" hazard, such as acid rain,²³⁰ is beginning to command attention from the press and Congress. As a result, there is rarely a sense of completely eradicating a hazard. Attention moves quickly to the next crisis, for the daily press which helps set the political agenda rarely has the interest or expertise to focus on regulatory remedies that work in subtle, long-term ways.

If some explanations for the misperception of regulatory benefits can be traced to the nature of regulation itself, other explanations must be traced to industry dominance of regulatory knowledge. Through its superior resources, industry sets the terms for much of the regulatory debate, and sympathetic interpreters of regulation lend their support by forging a quantitative vernacular for evaluating regulation. Below we examine how industry shapes, and misshapes, perceptions of regulation, and how it has strategically deployed cost-benefit analysis to advance its political interests.

B. *Industry Dominance of Regulatory Knowledge and Debate*

Corporate opponents of safety and health regulation have important advantages within the regulatory arena: their wealth and political power. These advantages enable them to shape much of the discourse on regulatory issues and, therefore, to influence greatly political outcomes. By funding public policy institutes, trade associations, research projects, and university chairs, regulated industries have helped underwrite scholarship stressing the costs and constraints imposed by regulation. By contrast, there is no significant intellectual tradition (other than that carried on by regulatory agencies themselves) which has focused upon the noneconomic benefits of regulation and the freedoms which it secures.

The absence of such a literature could lead some citizens, legislators, and academics to believe that actual regulatory benefits are negligible. In fact, this void in knowledge about health and safety regulation can be traced to the superior resources that industries command in generating

229. Congress recognized the need to regulate hydrocarbon emissions from cars in 1970. Clean Air Amendments of 1970, Pub. L. No. 91-604 § 6(a), 84 Stat. 1676, 1690-93 (codified as amended at 42 U.S.C. § 7521 (1982)).

230. *Acid Rain: Hearings on S. 1706, S. 1709 & S. 1718 Before the Senate Comm. on Environment and Public Works*, 97th Cong., 1st Sess. (1981) (hearings to consider amending Clean Air Act to control acid rain); *Summary of Oversight Hearings on the Acid Precipitation Act of 1980 Before the Senate Comm. of Energy and Natural Resources*, 98th Cong., 2d Sess. (1984) (recommending research and program requirements for acid rain regulation).

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regulatory knowledge and disseminating it. This is an important political advantage because it allows regulated industries to set the terms of political debate and insist upon their own polemical categories, primarily the economic freedoms of industry.

The idiom that American business has fostered to describe regulation is itself responsible for diverting attention from regulatory achievements and hindering further regulatory accomplishments. The corporate idiom succeeds in this task by positing a rhetoric and framework of motives that focus upon industry freedom to act. By the terms of this rhetorical model, regulation is depicted as a costly intrusion upon the freedom of industry to compete and innovate. What comes to matter most, under this paradigm, is the freedom of the company to act with a minimum of constraints, even if its unconstrained behavior may, incidentally, cause serious harm to others. By this political reckoning, the regulatory enterprise is properly understood as an odious and costly assault on the integrity of the free market and, indeed, freedom itself.

What is missing from the corporate taxonomy of regulation, however, is any meaningful recognition of a much more basic human freedom: the freedom from harm prized by the beneficiaries of regulation. The prevailing rhetoric thus ignores the very form of freedom that is secured through regulation. Potential victims of corporate misconduct such as Elizabeth P. seek to preserve certain basic human rights including personal safety, good health, and the right to make informed decisions in the marketplace. The freedom the public seeks is not an assertion of their will over others but a freedom from the myriad harms that threaten their lives and health.

The rights this latter freedom encompasses are arguably more basic than the proprietary and business rights that industry claims as paramount. Yet among corporate interpreters of regulation, the overriding right to health and safety is rarely stressed. Instead regulatory issues become framed very differently, in terms of the economic costs and constraints that regulation imposes upon industry. Industry thus helps obscure the public health goals of regulation, impeding the implementation of regulatory remedies that have as much lifesaving potential as traditional public health remedies. When Dr. Jonas E. Salk discovered a serum that could prevent the crippling symptoms of poliomyelitis, his accomplishment was hailed as one of the greatest triumphs in the history of medicine, and Salk himself was lionized by his peers and the public. But when NHTSA unveiled the automatic crash protection standards—a technological vaccine for the crippling effects of auto crashes, which are the single largest source of paraplegia and quadriplegia²³¹—the proposal

231. Haddon, *Quadriplegia and Other Motor Vehicle Injuries: Some Implications and Choices*

quickly became a regulatory controversy of epic dimensions.²³² For the fifteen years in which the reform has been delayed, the economic freedom of the automobile industry has taken precedence over the proven, but underappreciated, lifesaving potential of airbags and automatic belts.²³³

The excessive focus on industry prerogatives in regulatory debate, we believe, reflects the systematic imbalance of political power and financial resources between consumers and corporations. Just as victims of corporate misconduct rarely are able to secure regulatory protections until after harm has already occurred (at which time they can only strive to capitalize on the transient ethical embarrassment of the offending industry),²³⁴ so too victims lack the financial means and political organization to give greater intellectual dimension or currency to the beneficial freedoms that regulation can secure for them. Regulatory benefits accrue to a relatively amorphous and unorganized citizenry. Each citizen individually may bear only a small risk of injury and, until harm occurs, victims often have little or no basis to anticipate that they will be directly affected by industry conduct.²³⁵ As a consequence, there are few countervailing groups to advance the freedoms from harm prized by consumers.

Indeed, it is a central irony of regulatory politics that, largely because of the pervasiveness of corporate image and advocacy advertising, consumers like Elizabeth P. may have no conception of the protective role regulatory agencies play in securing their freedom, but may instead adopt the industry view that regulation is a costly intrusion upon business prerogatives. Many consumers may actually believe General Motors' publicity that auto safety is something it has pioneered—when, in fact, General Motors has long resisted most safety innovations including safety glass in the 1930's²³⁶ and lap belts in the 1950's.²³⁷ The corporate community can

for Motor Vehicle Manufacturers 38 (1978) (unpublished paper on file with the *Yale Journal on Regulation*).

232. The proposal was first issued in 1970, to become effective in 1973. 35 Fed. Reg. 16,927, 16,928-29 (1970). Its subsequent political history is summarized in J. CLAYBROOK AND THE STAFF OF PUBLIC CITIZEN, *supra* note 15, at 167-77.

233. Approximately 22,000 persons are killed annually in front seats of passenger cars, about half of the total deaths each year from motor vehicle crashes. 49 Fed. Reg. 28,964 (1984). Many of the deaths could have been prevented by automatic crash protection. A study by Professor Nordhaus estimated that each year of delay in implementing the standard increases fatalities by about 5000. *Id.* at 28,967. Nordhaus concluded the net economic benefit of the standard would be between \$2.7 and \$4.1 billion per year. Over a decade the cost to society of rescinding the standard would exceed \$30 billion. *Id.* Contrary to industry claims, he concluded that the standard would have a miniscule impact on auto industry profits and employment. *Id.*

234. Some victims are able to use product liability litigation, but such a tactic is compensatory, not preventative in nature, and may not deter future misconduct.

235. See M. PERTSCHUK, *REVOLT AGAINST REGULATION* 133 (1982).

236. Correspondence between General Motors Corp. and E.I. duPont deNemour & Co. regarding safety glass, 1929-32, reprinted in *Planning, Regulation, and Competition: Automobile Industry—1968: Hearings Before Subcomms. of the Senate Select Comm. on Small Business*, 90th Cong.,

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and does mold public perception in its favor by spending hundreds of millions of dollars on corporate image advertising.²³⁸ Companies like Mobil, Grace, and Amway have developed reputations for aggressive advocacy in their issue advertisements, which often deal explicitly with regulatory issues.²³⁹

If a company is not criticizing a pending regulatory proposal as expensive governmental meddling, as is customary, it may instead be portraying its compliance with popular regulatory programs as a public-spirited initiative of its own.²⁴⁰ Corporate credit-taking for regulatory successes can preempt public appreciation for the work of federal agencies while bolstering respectability for the industry rhetoric of freedom.

In contrast, there are scant resources available to public interest proponents of regulation to generate a scholarship or political dialogue focused upon the form of freedom conferred by regulation.²⁴¹ Consumer groups whose annual budgets often equal the amount spent by one corporation for a sixty second television advertisement cannot easily afford to sponsor independent research or intellectual treatises on regulatory benefits. Forced to “fight fires” in the political arena—through lobbying, rulemakings, and litigation—consumer groups have not had the luxury of developing a scholarly literature on regulation. With few other sources for pro-consumer research, there is very little scholarship exploring improved ways to incorporate noneconomic benefits into the regulatory calculus.

For their part, few academics have chosen to focus their studies on the freedoms protected by regulation.²⁴² Indeed, some academic programs are

2d Sess. 964-69 (1968).

237. See R. NADER, *supra* note 30, at 113-26.

238. See *Corporate Advertising Costs*, PUB. REL. J., Nov. 1984, at 20, 24. Three of the top five corporate advertisers in 1983 were automobile manufacturers. Five of the top ten association advertisers in 1983 were automobile dealer associations. *Id.* at 25.

239. Mobil's aggressive advertising tactics are discussed in Gerrard, *This Man Was Made Possible By a Grant From Mobil Oil*, ESQUIRE, Jan. 1978, at 62, reprinted in SUBCOMMITTEE ON ADMINISTRATIVE PRACTICE AND PROCEDURE OF THE SENATE COMMITTEE ON THE JUDICIARY, 95TH CONG., 2D SESS., SOURCEBOOK ON CORPORATE IMAGE AND CORPORATE ADVOCACY ADVERTISING 592 (Comm. Print 1978) [hereinafter cited as SOURCEBOOK]. Gerrard discussed, for example, Mobil's weekly use of the *New York Times*' Op-ed page: “. . . in advertising jargon, ‘Mobil Oil position’ now means the lower right-hand corner of that page. With sheer cash, Mobil has become a *Times* columnist.” Grace's corporate advertising activities are discussed in W.R. GRACE & CO., 1981 ANNUAL REPORT 26-27 (1982). An example of Amway Corporation's advocacy advertising is discussed in Kelley, *Critical Issues for Issue Ads*, HARV. BUS. REV., July-Aug. 1982, at 80, 80-81, 84.

240. For example, see U.S. Steel's advertisement claiming credit for efforts made to control air and water pollution at its plants. SOURCEBOOK, *supra* note 239, at 38.

241. For example, the Safe Energy Communication Council, a coalition of environmental and public interest groups opposed to nuclear power, has a budget of \$80,000. The U.S. Committee on Energy Awareness, an enterprise financed by utilities and nuclear industry firms, has an annual television advertising budget of \$26 million for promotion of nuclear power. Lanouette, *Industry Goliath, Environmental David Girding for Battle over Nuclear Power*, NAT'L J., Apr. 9, 1983, at 737-39.

242. Among the few analysts who have documented the benefits of regulation are SENATE COMM. ON GOVERNMENTAL AFFAIRS, 96TH CONG., 2D SESS., BENEFITS OF ENVIRONMENTAL, HEALTH,

specifically funded by industrialists and corporate foundations to promote free enterprise and, by implication, industry's anti-regulation stance.²⁴³ "Political academics" such as Murray Weidenbaum, who chaired President Reagan's Council on Economic Advisors, are immensely useful in giving legitimacy to industry's portrayal of regulation as a costly intrusion upon its freedom.²⁴⁴

In the public debate about regulation, then, there is a distinct void when it comes to scholarship and research oriented toward the consumer interest—a deficiency that works to skew rulemaking outcomes and popular perceptions of regulation in general. To a degree, these imbalances in regulatory discourse are checked by the public's enduring commitment to the values advanced by regulation—safer cars, a cleaner environment, healthier workplaces. Regulatory agencies themselves also act as a counterweight to the industry point of view by sponsoring independent research, statistical and economic analyses, technological assessments, and other inquiries into regulatory benefits. Agencies also scrutinize and often challenge the self-serving claims made by industry in the rulemaking process.

Still, regulatory agencies are constrained in this mission by limited budgets, information gathering restrictions imposed by the Office of Management and Budget (OMB), and the absence of a well-financed, politically mobilized constituency to support their work. In addition, a Congress whose members increasingly rely on corporate political action committees for campaign contributions feels less and less moved to provide federal agencies with adequate means to evaluate regulatory successes and publicize them. Less equipped to document their regulatory achievements (especially against the flood of cost-oriented analyses of regulation favored by industry), federal agencies are, in turn, less able to serve as a resource for the beneficiaries of regulation. This disparity leaves regulated industries with by far the loudest, most articulate voice in regulatory debate. As self-styled champions of free market efficiency, corporate opponents of

AND SAFETY REGULATION (COMM. PRINT 1980); M. GREEN & N. WAITZMAN, *BUSINESS WAR ON THE LAW* 95-168 (1981).

243. See, e.g., Stone, *Businesses Widen Role in Conservatives' 'War of Ideas'*, Wash. Post, May 12, 1985, at F4, col. 1. Stone reports that corporations and foundations have spent tens of millions of dollars to support or create conservative think tanks and academic centers, promoting pro-business public policymaking keyed to the theme that the private sector should be permitted more freedom and the government role should be reduced. *Id.* Examples include Smith-Kline Beckman's donation of \$500,000 per year to public policy research and John M. Olin Foundation's funding of chairs in economics, law, and other social sciences at several universities, including its \$3 million endowment to the Center for the Study of American Business at Washington University. See also Krinsky, *The New Corporate Identity of the American Business* 6, 8-10 (1985) (unpublished paper on file with the *Yale Journal on Regulation*).

244. See, e.g., Weidenbaum, *supra* note 23 (containing oft-cited estimate of costs imposed by regulation).

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health and safety regulation take comfort in the foreknowledge that most rebuttals to their attacks will achieve far more limited circulation.

So it is that the sources that can generate and publicize knowledge about the benefits of regulation are scarce. Except for the anecdotal testimony of victims and occasional statistical data (usually generated by government programs that are themselves under attack by President Reagan's OMB), the landscape of benefits that regulation has produced remains largely fragmentary or unexplored.

C. *Disguising Regulatory Benefits: The Strategic Deployment of Cost-Benefit Analysis*

The crowning achievement of those who decry regulation as an assault on freedom has been their success in winning respectability for cost-benefit analysis, a tool originally developed by the federal government to evaluate public works projects.²⁴⁵ In the mid-1970's, cost-benefit analysis was adapted to assess health and safety measures, and now it is a central fixture in much of regulatory decisionmaking by virtue of Reagan's Executive Orders 12,291²⁴⁶ and 12,498.²⁴⁷

The ascendancy of cost-benefit analysis has helped disguise the benefits of health and safety regulation while enabling industries to stress instead its economic costs. As an analytic tool, cost-benefit declares that a proposed regulation should be issued only if its projected benefits outweigh its anticipated costs. By the terms of this formula, however, costs and benefits must be rendered solely in economic terms. For the methodology to proceed, dollar amounts must stand as proxies for the actual social and human consequences of regulating (or not regulating). This approach gives short shrift to regulatory benefits, because the inherently qualitative payoff of most regulatory programs cannot be faithfully captured in monetary terms. As a 1983 NHTSA report entitled *The Economic Cost to Society of Motor Vehicle Accidents* cautions:

The true value of the lives and the physical and mental capabilities which are destroyed in motor vehicle accidents can never be ade-

245. See SUBCOMM. ON OVERSIGHT AND INVESTIGATION OF THE HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, *COST-BENEFIT ANALYSIS: WONDER TOOL OR MIRAGE?* 3 (Comm. Print 1980) [hereinafter cited as *COST-BENEFIT ANALYSIS*].

246. Exec. Order No. 12,291, 3 C.F.R. 127 (1982). This Executive Order established the Office of Management and Budget as a centralized review authority of major rulemakings and made cost-benefit analysis the official review methodology for assessing regulation.

247. Exec. Order No. 12,498, 50 Fed. Reg. 1036 (1985). The order further extends OMB's authority. It requires each executive branch agency to submit to OMB each year a statement of its regulatory policies, goals, and objectives for the coming year, as well as information on all regulatory actions underway or planned. OMB has the authority then to define the regulatory actions each agency will take, subject to appeal by the agency to the President or other executive forum. *Id.*

quately measured because the pain, suffering, and frustration felt by individual accident victims cannot be expressed in economic terms.

. . . If the focus of policy decisions were purely the economic consequences of motor vehicle accidents, the most tragic and, in both individual and societal terms, possibly the most costly aspect of the toll of such accidents would be overlooked.²⁴⁸

While we believe regulatory agencies should thoroughly investigate economic costs and benefits before promulgating regulations, cost-benefit analysis is no substitute for the complex moral and scientific considerations that must inform regulatory judgment. Despite their apparent objectivity, numbers and dollars are like shadows: they give a fuzzy approximation of regulatory benefits but they do not capture the essence of the benefits, which are distinctly qualitative. Yet because economic categories of thought tend to prevail in much of the scholarly literature and political debate about regulation, the most significant benefits (and sometimes costs) of regulation are sometimes obscured.

In response to this criticism, defenders of cost-benefit decisionmaking often argue that what is needed are better economic models to ascertain the dollar value of a worker's life or clean air.²⁴⁹ Market entities such as corporations, after all, prefer economic yardsticks. But to consumers, whose lives are not so bounded by market concerns, regulatory benefits can never be expressed through numbers or dollars alone. For its beneficiaries, regulation is a public health program, a means for protecting one's personal health and safety. For consumers, no numerical scale or economic analysis can truly reflect the extra-market value of averting human suffering.

Cost-benefit analysis shifts debate from the world of anecdotal experience to an abstracted economic realm of dollars. By so doing, cost-benefit analysis not only distorts the perception of regulatory benefits, but as well, it effectively disenfranchises citizens who cannot discuss regulation in a highly technical, economic manner. Only recognized "experts" are given credibility in the regulatory process. The empirical judgments and anecdotal testimony of victims are considered unimportant. In this sense, cost-benefit analysis is profoundly anti-democratic.

Cost-benefit analysis is anti-democratic in quite another sense. In the guise of improving policy analysis with objective methods, cost-benefit

248. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., *THE ECONOMIC COST TO SOCIETY OF MOTOR VEHICLE ACCIDENTS* I-1, I-7—I-8 (Jan. 1983).

249. Evidence that this sentiment is widely shared can be found in the many articles proposing such models. See, e.g., M. JONES-LEE, *THE VALUE OF LIFE* (1976); Blomquist, *The Value of Human Life: An Empirical Perspective*, *ECON. INQUIRY*, Jan. 1981, at 157; Linnerooth, *The Value of Human Life: A Review of the Models*, *ECON. INQUIRY*, Jan. 1979, at 52.

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analysis substitutes economic criteria for the ethical and political judgments that lie at the core of regulation. Yet many of those judgments are ones Congress already made in enacting regulatory statutes in the first place. For those who oppose social regulation, cost-benefit analysis is attractive because it depoliticizes a political struggle in which industry has lost the first round; it purports to offer value-neutral criteria in a second struggle, at the rule-making stage, over how regulation should proceed. In this fashion, cost-benefit analysis operates as a *post hoc* attempt to substitute economic criteria for the democratic mandates of Congress. Where Congress has intended cost-benefit analysis to dictate regulatory outcomes, it has said so explicitly.²⁵⁰ But few regulatory statutes explicitly require the application of cost-benefit analyses before an agency can go forward with regulation.²⁵¹ Nonetheless, by mandating the use of cost-benefit analysis, the Reagan Administration has shifted the focus of regulatory debate from the qualitative benefits that Congress sought to secure for all citizens to the quantifiable costs that are so important to regulated industries. In this way, cost-benefit analysis is used to justify regulatory inaction in the face of known human hazards in the workplace, the environment, and in motor vehicle design.²⁵² Cost-benefit thus suspends the moral and political judgments that inspired the remedial legislation in the first place.

When Congress first created the National Traffic Safety Administration in 1966, for example, its foremost concern was the prevention of an escalating human tragedy.²⁵³ Despite industry complaints that federal legisla-

250. *American Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490, 510-11 (1981) ("Congress uses specific language when intending that an agency engage in cost-benefit analysis.").

251. Some statutes explicitly make cost-benefit analysis a relevant but not dispositive factor. The Clean Air Act, for instance, requires the EPA to perform economic analysis for certain regulations but states that such analysis does not alter the factors the Administrator is required to consider. 42 U.S.C. § 7617 (1982). Other statutes require a finding of feasibility, but the courts have found that agencies need not conduct a cost-benefit analysis to satisfy these requirements. The Supreme Court found that OSHA was not required to perform a cost-benefit analysis under a statute requiring consideration of feasibility. *American Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490, 506-12 (1981).

252. See J. CLAYBROOK & THE STAFF OF PUBLIC CITIZEN, *supra* note 15, at 84, 119. The abuse of cost-benefit analysis in the NHTSA automatic crash protection standard is an important example. In *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983), the Supreme Court overturned NHTSA's rescission of the automatic crash protection standard because of flaws in the agency's cost-benefit analysis. NHTSA accepted the industry's contentions that it would install automatic belts instead of air bags, and that motorists would detach the belts and render them useless. By this reckoning, the proposed standard was not cost-beneficial. But the Supreme Court chided NHTSA, saying, "If, under the statute, the agency should not defer to the industry's failure to develop safer cars, which it surely should not do, *a fortiori* it may not revoke a safety standard which can be satisfied by current technology simply because the industry has opted for an ineffective seatbelt design." *Id.* at 49. See also Fisher, *Controlling Government Regulation: Cost-Benefit Analysis Before and After the Cotton Dust Case*, 36 AD. L. REV. 179 (1984).

253. As Senator Hartke of the Senate Commerce Committee said "we must stop highway slaughter, . . . we must prevent the continuation of . . . murder by motor." *Traffic Safety: Hearings on S. 3005 Before the Senate Comm. on Commerce*, 89th Cong., 2d Sess. 29 (1966). Senator Ribicoff

tion might lower productivity and cost workers jobs,²⁵⁴ Congress was convinced of the need to institute remedial motor vehicle performance standards. Congress found the raw evidence of crippled auto crash victims compelling in its own right, and was disturbed that even though auto safety remedies were available and could prevent such horrible human tragedies, the remedies were not being used.²⁵⁵ The latter-day advocates of cost-benefit analysis, however, place little weight upon such democratic judgments, and find little value in such moral insights.

This evisceration of the moral rationale for regulation is perhaps the most disturbing distortion of regulatory perception. Cost-benefit analysis, we have seen, is an unreliable tool for regulatory decisionmaking because it cannot comprehend or assess the ethical and social concerns that motivate regulation in the first place. In deciding how to regulate, we make "tragic choices,"²⁵⁶ whether or not we are attentive to that fact. We cannot evade the moral consequences of our decisions by the pretense that they are but exercises in accounting.²⁵⁷ Yet cost-benefit, as a rule of decision, is falsely perceived as just that. As Guido Calabresi and Phillip Bobbit have argued:

Attempts to weigh precisely the social costs and benefits associated with different responses to a tragic choice result more often in the valuation of only what we can measure than in the measurement of all that we value. Costs which are difficult to measure, such as the affront to the value of human life entailed by a decision to authorize medical experimentation with the terminally ill, will often be left out of the accounting altogether, though the resulting narrowness of the premises will poison the conclusions.²⁵⁸

acknowledged that "numbers cannot tell the whole story. The problem of traffic safety today has an ingredient of human tragedy that simply cannot be measured. How can we put a price on the love and influence of a young father whose death leaves a widow and children at home?" *Id.* at 31.

254. See, e.g., *Traffic Safety: Hearings Before the Comm. on Commerce on S. 3005*, 89th Cong., 2d Sess. 365, 376 (1966) (testimony of John S. Bugas, Vice President, Ford Motor Co. and Chairman of the Automobile Manufacturers Association Safety Administrative Committee).

255. The Senate Commerce Committee Report stated:

The Committee heard compelling testimony that passenger cars can be designed and constructed so as to afford substantial protection against the 'second collision' for both driver and passenger; further, that some of these design changes can be achieved at little or no additional manufacturing cost.

S. REP. NO. 1301, *supra* note 32, at 3.

256. G. CALABRESI & P. BOBBIT, *TRAGIC CHOICES* (1978).

257. Ford Motor Company's approach to the marketing of its Pinto automobile illustrates the moral hazards. Aware that the model's gas tank had a tendency to explode upon impact, the automaker decided to conduct a cost-benefit analysis of the safety risk. Ford concluded that installation of a plastic device to prevent an estimated 180 deaths and 180 burn injuries from car fires was not cost-beneficial: the potential costs of liability suits waged by those few motorists who would find out about the defect were too low to justify the \$11 modification necessary to prevent the harm. See Dowie, *supra* note 215, at 18-32.

258. G. CALABRESI & P. BOBBIT, *supra* note 256, at 204.

Regulatory Benefits

Cost-benefit analysis does more than poison regulatory conclusions. To the extent that it blinds regulatory participants and observers to the moral dimension of regulatory activity, it poisons all perception of regulatory benefits.

The theoretical shortcomings of cost-benefit analysis in accurately expressing regulatory benefits are compounded by its practical misapplications. Over the past five years of the Reagan Administration, it has become clear that cost-benefit analysis is not a tool that its advocates are wont to use rigorously. Working with Vice President Bush's Task Force on Regulatory Relief, OMB in 1981 became a clearinghouse for an unprecedented anti-regulatory campaign by industry.²⁵⁹ A key tool in this campaign has been cost-benefit analysis, which, in the hands of OMB and the agencies, has led to the consistent overstatement of regulatory costs and the trivialization or neglect of benefits.

In assessing potential regulatory costs, federal agencies routinely fail to take into account the learning curve that makes compliance progressively cheaper;²⁶⁰ the availability of cheaper substitutes for existing product designs or hazardous substances;²⁶¹ and the actual profits that regulation can help generate by forcing the creation of new products and innovations such as new pollution control technologies.²⁶²

As for regulatory benefits, OMB has consistently ignored serious assessments of the benefits of federal regulation before initiating wholesale revocations of regulations or quashing pending regulatory proposals.²⁶³ On OMB's summary worksheets employed in the review of agencies' regulatory proposals, no space is provided for even itemizing anticipated benefits of regulation.²⁶⁴ OMB has slanted the outcome of cost-benefit analyses, also, through its discounting system. The OMB methodology requires future streams of regulatory costs and benefits to be discounted to present

259. S. TOLCHIN & M. TOLCHIN, *supra* note 9, at 20-22.

260. *Use of Cost-Benefit Analysis by Regulatory Agencies: Joint Hearings Before the Subcomm. on Oversight and Investigations and the Subcomm. on Consumer Protection and Finance of the House Comm. on Interstate and Foreign Commerce*, 96th Cong., 1st Sess., 67 (1979) (testimony of Dr. Nicholas Ashford).

261. *See, e.g.*, M. GREEN & N. WAITZMAN, *supra* note 242, at 37, 69 (experience with different materials led to a less expensive way of meeting NHTSA bumper standard).

262. For a discussion of new, profit-enhancing technologies in hazardous waste disposal, for example, see Marcus, *The Recycling of Chemical Waste*, N.Y. Times, Jan. 8, 1984, at F4. *See also* M. CAMPBELL & W. GLENN, *PROFIT FROM POLLUTION PREVENTION* (1982).

263. Reagan's 1981 blueprint for regulatory reform for the automobile industry, for example, focused almost exclusively on regulatory costs in justifying the rescission, revision, or reproposal in weaker form of 34 specific NHTSA and EPA standards and regulations. *See* *Actions to Help the Auto Industry*, *supra* note 24, at 4. In claiming that these changes would save the auto industry \$1.3 billion and consumers \$8 billion over five years, the White House relied entirely on the projected economic consequences of the changes with little or no regard for the qualitative social benefits that would accrue to consumers from the standards and regulations. *See id.* at 4, A-60, A-61.

264. OMB Regulatory Docket Worksheet (copy on file with the *Yale Journal on Regulation*).

value.²⁶⁵ While the methodology has some merit in financial investment decision-making, it is inappropriate for evaluating proposed health and safety regulations. The benefits of health and safety regulation, while often enjoyed well into the future, do not typically arise in the short run. Regulatory compliance costs, however, are incurred immediately. Thus, use of a high social discount rate understates prospective benefits while fully representing present-day costs in the equation. Moreover, the assumptions underlying the discounting of health and safety benefits have been called into question:

[T]he propriety of applying rates of discount to most types of benefits is open to serious challenge. This is essentially a question of equity over time. Is the monetary value of preventing severe birth defects 20 years in the future any less than preventing them now? Or consider the case of preventing irreparable harm done to the environment. Is a usable environment worth less to future generations than it is to us in the present?²⁶⁶

While professing the need for thorough cost-benefit analyses, OMB hypocritically has also impaired the ability of federal agencies to collect needed data from industry and to make independent assessments of the data. Pursuant to the Paperwork Reduction Act of 1980, OMB has the authority to review all agency documents that request information from companies.²⁶⁷ OMB has chosen to impose quotas on agency questionnaires and surveys of industry, and has slashed agencies' information collection budgets.

Industry itself, while advocating cost-benefit, is often obstructionist when it comes to supplying data to agencies, thus making accurate independent analyses difficult or impossible. It is common for companies to refuse to provide full and complete information promptly.²⁶⁸

In sum, cost-benefit analysis has become a policy subterfuge. As a theoretical tool, it forces the qualitative goals of regulation into a quantitative strait-jacket. As practiced by OMB and the agencies under its sway, cost-benefit analysis does not rationalize or expedite the regulatory process but instead stymies it. The widespread use of cost-benefit in these ways

265. See, e.g., OFFICE OF MANAGEMENT & BUDGET, CIRCULAR NO. A-94 (1972) (describing OMB's methodology for discounting future costs and benefits).

266. COST-BENEFIT ANALYSIS, *supra* note 245, at 24.

267. Pub. L. No. 96-511 § 2(a) 94 Stat. 2812 (codified as amended at 44 U.S.C. §§ 3504, 3506 (1982)).

268. See, e.g., *United States v. Firestone Tire & Rubber Co.*, 455 F. Supp. 1072, 1075 (D.D.C. 1978) (detailing Firestone's persistent refusal to provide complete responses to information requests by NHTSA).

Regulatory Benefits

obscures the actual health and safety improvements achieved through regulation.

Conclusion

Because the achievement of regulatory benefits is usually separated in time from the passage of the original enabling statutes, the circumstances that inspired those statutes are often forgotten. The horrible human and environmental tragedies that were once common are now mitigated or eliminated through regulation. Over time, the absence of once-common tragedies has come to be considered normal.

This revisionist perspective on regulation is reinforced by the systemic imbalance of power between industry and consumers in regulatory debate. Like the regulatory process itself, public discourse about regulation remains dominated by powerful, wealthy industries which emphasize its costs, inconveniences and complexity. Except for the environmental movement, there are few organized constituencies that have been able to amass the resources and expertise to develop an intellectual tradition exploring the benefits of regulation.

Still, the realities of history cannot be so easily denied. Now that most of the regulatory programs established in the 1960's and early 1970's are fully functional, the existence of regulatory benefits is no longer speculative but real. As individuals and as a society, we are demonstrably better off because of federal regulation. Daily life is more civilized. Our freedom from harm has been enhanced in diverse ways, both obvious and subtle. The history of this liberation, however, has yet to be written.

A challenge awaits the academic community to explore new methodologies for evaluating the success of regulation. While economic and statistical tools must play a valuable role, they are ultimately incapable of assessing the most profound and important results of social regulation, which will forever remain anecdotal, personal, and moral. The challenge is to find more sensitive non-numerical methodologies for reliably assessing the full extent of noneconomic regulatory benefits. This is an undertaking that deserves far more attention and study.

In the meantime, regulatory measures such as FMVSS 214 and countless major and minor federal standards constitute one of the most effective, and underrated, forms of preventive medicine in America today. While it is difficult for our political culture to acknowledge this fact, the benefits of regulation are becoming more palpable. But until this reality is given its due in academic literature, legislative debate, and other public forums, we will be deprived of the many additional civilizing benefits that regulation could yet confer on our society.

