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Shifting Out of Neutral: A New Approach to Global Road Safety

Kevin M. McDonald

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Shifting Out of Neutral: A New Approach to Global Road Safety

Kevin M. McDonald*

ABSTRACT

On April 14, 2004, the United Nations dedicated "World Health Day" to improving global road safety. In explaining the need to focus the world's attention on road safety, Secretary General Kofi Annan declared that "World Health Day is an occasion for us to highlight the [road safety] problem and ... to underscore the fact [that crashes] are avoidable, they are not just accidents, they are human errors which[,] with proper governmental policy[,] can be dealt with." Just what the "proper governmental policy" should be, however, requires an understanding of the factors associated with vehicle crashes. thesethe examining factors. Author discusses After international responses to date and recommends that, as an initial step, countries seeking to improve road safety create a single governmental agency that would function similarly to the National Highway Traffic Safety Administration (NHTSA).

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For every action, there is an equal and opposite reaction. Isaac Newton's Third Law of Motion

I. INTRODUCTION

The next time you get into a car, consider this: each year, more than 1.2 million people die in traffic crashes—more than 3,200 each day.² By the time you finish reading this Article (assuming it takes you about thirty minutes), more than 270 people will die on roads somewhere throughout the world.³ That amounts to more than two people every minute.⁴ In the United States alone, traffic crashes killed 42,643 people and crippled or injured 2.89 million in 2003.⁵ Traffic crashes constitute the leading cause of death for Americans two years of age and those between the ages of four and thirty-three.⁶

In recognition of this global health concern, the World Health Organization (WHO)⁷ dedicated World Health Day 2004 to the theme

4. Please see *supra* note 3 about relying too much on "averages."

5. See Press Release, NHTSA, DOT Announces Historic Low Highway Fatality Rate in 2003 (Aug. 10, 2004), available at http://www.nhtsa.dot.gov/nhtsa/ announce/press/pressdisplay.cfm?year=2004&filename=pr35-04.html. For a sampling of media reaction to these numbers, see Eric C. Evarts, Safety Gadgets on Cars Help Cut Fatalities on the Nation's Roads, CHRISTIAN SCI. MONITOR, Aug. 12, 2004, at 2; Jayne O'Donnell, Seat Belts, Sobriety Laws Send Road Death Rate to Record Low, USA TODAY, Aug. 11, 2004, at 1A; Amy Schatz, Fatal Car Crashes Start to Decline, WALL ST. J., Aug. 11, 2004, at D1; Matthew L. Wald, Motoring Deaths Drop for First Time in 6 Years; Seat Belt Use is Cited, N.Y. TIMES, Aug. 11, 2004, at A17; Jia Lynn Yang, U.S. Traffic Deaths Down in 2003, L.A. TIMES, Aug. 11, 2004, at A12.

6. See Long Range Strategic Planning, 69 Fed. Reg. 39,542, 39,543 (June 30, 2004).

7. The World Health Organization, established on April 7, 1948, is the United Nations' specialized agency for directing and coordinating international health matters and public health. All countries that are members of the United Nations may become members of the WHO by accepting its constitution. Countries that are not members of the United Nations may also be admitted as members when their application has been

^{2.} See WORLD HEALTH ORGANIZATION, WORLD REPORT ON ROAD TRAFFIC INJURY PREVENTION 3 (2004) [hereinafter WORLD REPORT].

^{3.} To be precise, this is only an *average* number. The actual number of fatalities in a given half-hour timeframe will depend on what time of the day you read the Article. As Dr. Leonard Evans cautions, "[a]verages should be interpreted with a caution well captured in the quip: An average is like a bikini swimsuit—what it reveals is interesting, but what it conceals is crucial. It has been remarked that the average human has approximately one breast and one testicle." See LEONARD EVANS, TRAFFIC SAFETY 60 (2004). For example, in the United States, there are consistently far fewer fatal crashes in February, but consistently more in July and August than other months. Id. at 62. And more than four times the amount of fatal crashes occur from 1:00 AM to 3:00 AM on Saturday and Sunday than from 2:00 AM to 6:00 AM on weekdays. Id.

of road safety.⁸ On April 7, 2004, hundreds of organizations around the world hosted events to help raise awareness about traffic injuries, their grave consequences, and the enormous costs to society.⁹

Throughout the world, sales of cars and trucks continue to grow. In the thirty member countries of the Organization for Economic Cooperation and Development (OECD),¹⁰ the number of vehicles is expected to increase by sixty-two percent between 2003 and 2015, to 705 million.¹¹ Asian countries are projected to experience the greatest growth in the number of vehicles in the near future.¹²

For example, China's automobile market is the fastest growing in the world.¹³ By 2010, China's vehicle market will likely overtake Japan's as the second largest in the world; by 2025, it could well

8. See WHO, Road Safety: A Public Health Issue (Mar. 24, 2004), available at http://www.who.int/features/2004/road_safety/en.

9. See WHO, World Health Day 2004: Road Safety, available at http://www.who.int/world-health-day/2004/en (n.d.).

Founded in Paris, France on December 14, 1960, the OECD's goals are to 10. promote policies that (1) "achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy," (2) "contribute to sound economic expansion in Member as well as non-member countries in the process of economic development," and (3) "contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations." Convention for the Organization for Economic Co-Operation and Development, Dec. 14, 1960, art. 1, 12 U.S.T. 1726, 888 U.N.T.S. 179. The original Member Countries of the OECD are Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Id. The forerunner organization of the OECD, the Organization for European Economic Co-Operation (OEEC), was formed to administer aid to Europe under the Marshall Plan. "Since it took over from the OEEC in 1961, the OECD vocation has been to build strong economies in its member countries, improve efficiency, hone market systems, expand free trade and contribute to development in industrialized as well as developing countries." See Organisation for Economic Co-Operation and Development, History of the OECD, available at http://www.oecd.org/document/63/ 0,2340,en_2649_201185_1876671_1_1_1_1,00.html.

11. See WORLD REPORT, supra note 2, at 73.

12. See id. Much of this growth will be in motorized two-wheelers and threewheelers. Id. In Vietnam, such vehicles compose ninety-five percent of all motor vehicles. Id.

13. See Tim Johnson, Eager Drivers Wreak Havoc on China's Streets, DETROIT FREE PRESS, July 20, 2004, at 1A. In 2003, car sales grew more than 76%. Id. 2004 estimates are around 20% growth. Id. For additional background on how the U.S. automobile companies are responding to the growth in China, see Christine Tierney, GM Hustles to Dominate China, DETROIT NEWS, June 27, 2004, at 1A.

approved by a simple majority vote of the World Health Assembly. Currently, the WHO has 192 Member States. WHO's mission, as set out in its constitution, is the attainment by all peoples of the highest possible level of health. Health is defined in WHO's constitution as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." See Constitution of the World Health Organization, opened for signature July 22, 1946, 62 Stat. 2679, 14 U.N.T.S. 185. For more information about the WHO, see http://www.who.int/about/en/.

overtake the U.S.'s vehicle market as the largest.¹⁴ In real numbers, ten million vehicles will be sold annually in China by 2010, growing to thirty million by 2019.¹⁵

In China, as in other Asian countries, the increased number of vehicles poses a cost to society—humans are losing their lives or suffering serious, often permanent, injuries. Vehicles are increasingly being driven on roads or trails that were built for and are populated with pedestrians, bicyclists, and livestock.¹⁶ Even though only 1.9 percent of the world's cars are in China, drivers in that country cause fifteen percent of road deaths worldwide.¹⁷ In comparison, 30 percent of the world's cars are located in the United States,¹⁸ where drivers cause 3.55 percent of road deaths worldwide.¹⁹

The urbanization of the developing world is only one part in the complex issue of global road safety. Another part is developing effective solutions. To date, solutions have been offered by a diverse variety of academics,²⁰ statisticians,²¹ physicians,²² public safety experts,²³ and economists.²⁴ This Article seeks to contribute to this

16. See Joey Ledford, Carnage Rises on Third World Roads, ATLANTA J.-CONST., Dec. 26, 2003, at E2.

17. See Johnson, supra note 13 (citing numbers from the Chinese Ministry of Public Safety). In 2003, traffic crashes in China killed 104,372 people. Id.

18. Id.

19. In 2003, traffic crashes in the United States killed 42,643 people. See DOT Announces Historic Low Highway Fatality Rate in 2003, *supra* note 5.

20. See, e.g., FORENSIC ACCIDENT INVESTIGATION: MOTOR VEHICLES (Thomas L. Bohan & Arthur C. Damask eds., 2004); Christopher Murray & Alan D. Lopez, The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries, and Risk Factors in 1990 and Projected to 2020, available at: http://www.worldbank.org/transport/roads/saf_docs/gbd.pdf (n.d.).

21. See, e.g., Barbara E. Sabey & Harold Taylor, The Known Risks We Run: The Highway, in SOCIETAL RISK ASSESSMENT: HOW SAFE IS SAFE ENOUGH? 43 (Richard C. Schwing & Walter A. Albers eds., 1980).

22. See, e.g., Thomas B. Cole, Global Road Safety Crisis Remedy Sought, 291 J. AM. MED. ASS'N 2351 (2004) (focusing on better road design, especially in poorer countries, as a means to improve road safety); T.C. Doege, Sounding Board – An Injury is No Accident, 298 NEW ENG. J. MED. 509, 510 (1978); Erik von Elm, Prehospital Emergency Care and the Global Road Safety Crisis, 292 J. AM. MED. ASS'N 923 (2004) (focusing on improving pre-hospital emergency medical services as well as in-hospital emergency care, especially in poorer countries, as a means to improve road safety).

23. See, e.g., EVANS, supra note 3; Ken Smith, Road Safety: Past, Present and Future (June 8, 2000), available at http://www.driveandstayalive.com.

24. See, e.g., NHTSA, The Economic Impact of Motor Vehicle Crashes (2002), available at http://www.nhtsa.dot.gov/people/economic/EconImpact2000; Caroline Ghee

^{14.} See International Trade Administration, China's Automotive Market (July 15, 2002), available at http://www.ita.doc.gov/td/auto/chinajune02.html.

^{15.} See First Anniversary of Entry to WTO: Auto Market Thriving, CHINA DAILY, Dec. 11, 2002, available at: http://www.china.org.cn/english/BAT/50879.htm. Overcapacity is a looming problem in the Chinese market. Currently, about sixteen automakers generate 90 percent of China's vehicle sales. See Tierney, supra note 13. But some industry executives expect that number to drop to less than eight in the coming years. Id.

ongoing interdisciplinary debate from the perspective of a product regulatory attorney. Part II describes the problem of global road safety generally by providing a statistical overview and brief explanation of the chief factors associated with crashes. Part III analyzes the response of the United Nations to the problem by discussing harmonization efforts and applicable resolutions of the General Assembly. Part IV offers insight into the workings of the National Highway Traffic Safety Administration (NHTSA) and recommends that, as an important first step, countries create a single government agency that would function much similar to the NHTSA.

II. THE PROBLEM OF ROAD SAFETY

The World Health Organization (WHO)²⁵ describes the problem of global road safety as follows:

Throughout the world, roads are bustling with cars, buses, trucks, motorcycles, mopeds and other types of two- and three-wheelers. By making the transportation of goods and people faster and more efficient, these vehicles support economic and social development in many countries. But while motorized travel provides many benefits, it can also do serious harm unless safety is made a priority. Pedestrians and cyclists using roads are particularly at risk. Crashes are frequent. Deaths and injuries are common.²⁶

This Part discusses the problem of road safety by (1) providing a statistical overview of the epidemic, (2) explaining the key factors associated with crashes, and (3) forecasting future events if current trends continue.

A. Traffic Crashes Are a Global Epidemic

1. Deaths and Injuries

According to the World Report on Road Traffic Injury Prevention, co-published by the WHO and the World Bank in 2004,²⁷ traffic crashes worldwide kill approximately 1.2 million people each year.²⁸ This breaks down to more than 3,287 people daily who die somewhere on the world's roads. In 2002, road crashes caused 2.1 percent of all global deaths, making auto accidents the eleventh leading cause of

et al., Socio-Economic Aspects of Road Accidents in Developing Countries, available at http://www.worldbank.org/transport/roads/saf_docs/socio.pdf (n.d.).

^{25.} For additional background on the WHO, see *supra* note 7.

^{26.} See Road Safety: A Public Health Issue, supra note 8.

^{27.} See infra notes 179-80 and accompanying text.

^{28.} See WORLD REPORT, supra note 2, at 3.

death in the world.²⁹ Worldwide, traffic crashes trail only childhood infections and AIDS as the highest killer of people between the ages of five and thirty.³⁰

Aside from deaths, globally nearly fifty million annual injuries occur as a result of traffic crashes.³¹ Data from the WHO global Burden of Disease study in 2002 reveal that, of those injured severely enough to require medical attention, nearly one-quarter had traumatic brain injury and one-tenth had open wounds.³² Fractured bones constituted most of the other injuries.³³ In almost all countries, traffic crashes are the leading cause of traumatic brain injuries.³⁴

In the United States alone, 42,643 people died and 2.89 million people were injured in 2003.³⁵ In the European Union, traffic crashes kill more than 40,000 people³⁶ and injure 1.7 million each year,³⁷ permanently disabling more than 150,000 people annually.³⁸ And in Japan, traffic crashes killed 7,702 people in 2003 and injured a record-high 1.2 million.³⁹

Traffic death rates have decreased in high-income countries since the 1960s and 1970s.⁴⁰ Success rates, however, vary within

31. See WORLD REPORT, supra note 2, at 3.

32. Id. at 48.

33. Id.

34. Id.

35. See DOT Announces Historic Low Highway Fatality Rate in 2003, supra note 5. In 2003, motorcycle fatalities continued a six year trend and rose 12% to 3,661. Id. Fifty-six percent of those killed in passenger vehicles were not wearing safety belts. Id. Since the first twenty-six deaths were recorded in 1899 when highway travel began, over three million people have died on U.S. roads through 2003. See Advocates Charts 3.2 Million Traffic Deaths from 1899 through 2003, Highway & Vehicle Safety Report, Oct. 25, 2004, at 4.

36. See WORLD REPORT, supra note 2, at 5 (reporting data gathered prior to the recent expansion of the European Union). In April 2004, the EU announced an "Action Programme on Road Safety" (to accompany World Health Day's road safety theme) with the aim of halving the 40,000 deaths per year on EU roads by 2010. See Christine Newman, Campaign to Halve Road Deaths by 2010: Transport Ministers and Motoring Organisations Sign Up to Ambitious Safety Initiative, IRISH TIMES, Apr. 7, 2004, at 5.

37. See European Commission, White Paper: European Transport Policy for 2010: Time to Decide (2001), at 65, available at http://europa.eu.int/comm/energy_transport/library/lb_texte_complet_en.pdf [hereinafter White Paper].

38. See WORLD REPORT, supra note 2, at 5.

39. See Road Traffic Accident Deaths Down, Ratio of Aged Up in 2003, JAPAN ECON. NEWSWIRE, May 31, 2004, available at LEXIS.

40. See WORLD REPORT, supra note 2, at 36. The terms "low income," "middle income," and "high income" countries are based on the World Bank's analytical income categories. The main criterion used by the Bank to categorize economies is gross national income (GNI) per capita (previously referred to as gross national product, or GNP). Based on its GNI per capita, every economy is classified as low income, middle income, or high income. Low-income and middle-income economies are sometimes

^{29.} See id. at 33.

^{30.} See David Brown, Traffic Fatalities a Growing Threat Worldwide, WHO Reports, WASH. POST, Apr. 7, 2004, at A26 (citing the World Report on Road Traffic Injury Prevention).

these countries. For example, in North America, from 1975 through 1998, the traffic fatality rate per 100,000 population declined by 63 percent in Canada and 27 percent in the United States.⁴¹

In contrast, fatality rates have *increased* in low- to middleincome countries.⁴² From 1975 through 1998, traffic fatality rates rose by 44 percent in Malaysia and 243 percent in China.⁴³ Developing and transitional countries cumulatively represent more than 85 percent of all road traffic deaths.⁴⁴ Forty-four percent of all road traffic deaths occur in the Asia/Pacific region, even though the area only has 16 percent of the world's total number of motor vehicles.⁴⁵

2. Financial Burden

In addition to death and inquiry, traffic crashes cause tremendous financial losses to society. Globally, traffic crashes cost \$518 billion a year.⁴⁶ When broken down, this cost equates to one percent of the gross national product (GNP) of low-income countries, 1.5 percent of middle-income countries, and two percent in highincome countries.⁴⁷ Low-income and middle-income countries must shoulder \$65 billion a year, which is more than they receive in development assistance.⁴⁸

Traffic crashes tend to affect the poor disproportionately in at least four ways.⁴⁹ First, in sheer numbers, poorer people suffer the majority of deaths.⁵⁰ Second, poorer people lack ongoing support in the event of a long-term injury.⁵¹ Third, poorer people have limited access to post-crash emergency care. Fourth, in many developing countries, the costs of prolonged medical care, the loss of the family

43. See WORLD REPORT, supra note 2, at 37.

46. See WORLD REPORT, supra note 2, at 5.

47. See id. at 51.

referred to as "developing economies." According to 2003 GNI per capita, the groups are (1) low income, \$765 or less; (2) middle (lower) income, \$766-\$3,035; (3) middle (upper) income, \$3,036-\$9,385; and (4) high income, \$9,386 or more. See also World Bank Group, Country Classification, available at http://www.worldbank.org/data/ countryclass/countryclass.html (providing additional information on the Bank's categorization and classification tables)

^{41.} WORLD REPORT, *supra* note 2, at 37.

^{42.} *Id.* For additional information on how the World Bank distinguishes between "low," "middle," and "high" income countries, see *supra* note 40.

^{44.} See Global Road Safety Steering Committee, The Coming Plague of Road Traffic Injuries: A Preventable Burden for Rich and Poor Countries, available at http://www.globalroadsafety.org (n.d.).

^{45.} Id. The Latin America/Caribbean region has the second highest crash costs behind Asia. Id.

^{48.} Id.

^{49.} Id. at 50-52.

^{50.} Id.

^{51.} Id.

breadwinner, the cost of a funeral, and the loss of income because of a disability can push families into poverty. 52

In the European Union, vehicle crashes cost around €45 billion each year.⁵³ Indirect costs, including physical and psychological damage suffered by both the victims as well as their families, are around €135 to 140 billion each year.⁵⁴ According to the European Commission, "[t]he annual figure is put at EUR 160 billion, equivalent to two percent of the EU's GNP."⁵⁵

In the United States, vehicle crashes cost the economy around \$230 billion annually, which amounts to about 2.3 percent of the U.S. gross domestic product, or \$820 per person.⁵⁶ This cost "includes \$33 billion in medical expenses, \$61 billion in lost workplace productivity, and \$59 billion in total property damage."⁵⁷ The individuals involved in the crashes pay 26 percent of overall costs; the public pays the remaining 74 percent through insurance premiums, taxes, and increased health care costs.⁵⁸ Serious injuries, such as brain and spinal cord injuries, cost an average of \$332,457 per injury.⁵⁹ The average cost for a critically injured survivor is roughly \$1.1 million over a lifetime.⁶⁰ Many of these costs could be avoided had those involved in the crashes made more responsible choices before getting behind the wheel: alcohol-related crashes cost more than \$50 billion a year, accounting for 22 percent of all crash costs, and the failure to wear safety belts costs \$18 billion each year.⁶¹

B. Factors Involved in Traffic Crashes

The statistics, as grave as they are, can only quantify the problem of global road safety. Just as the physician seeks to identify underlying causes of a disease in order to prescribe appropriate treatment, so must the researcher seek to identify the underlying factors of increased global road injuries and fatalities in order to recommend appropriate public policy. As Dr. Leonard Evans, a leading expert on traffic safety, writes:

^{52.} Id.

^{53.} See White Paper, supra note 37, at 65.

^{54.} Id.

^{55.} Id. at 65 n.68.

^{56.} See Long Range Strategic Planning, 69 Fed. Reg. 39,543 (June 30, 2004); DOT Announces Historic Low Highway Fatality Rate in 2003, supra note 5.

^{57.} See Long Range Strategic Planning, 69 Fed. Reg. at 39,543.

^{58.} Id.

^{59.} WORLD REPORT, supra note 2, at 49.

^{60.} Safe, Accountable, Flexible and Efficient Transportation Equity Act of 2003: Hearing On H.R. 3550 Before the Senate Comm. On Commerce and Transp., 108th Cong. (2003) (statement of Dr. Jeffrey Runge, Administrator, National Highway Traffic Safety Administration), available at http://www.nhtsa.dot.gov/nhtsa/announce/ testimony/2003SAFETEAStatement.html.

^{61.} Long Range Strategic Planning, 69 Fed. Reg. at 39,543.

Instead of focusing on a single cause, we generally think in terms of a list of factors, which, if different, would have led to a different outcome. The goal in safety analysis is to examine factors associated with crashes with the aim of identifying those than can be changed by countermeasures (or interventions) to enhance future safety.⁶²

In the case of global road safety, this task is made more difficult because each country has its own unique set of circumstances. For example, while one country may struggle with inadequate roads, another country may struggle with getting its citizens to "buckle up" or to abstain from driving while intoxicated. Moreover, not every country has reliable crash data, and some countries have no crash data at all.

Despite these challenges, the United Nations recently set out to identify some of the chief causes of global road crashes. In 2003, the Secretary General published its findings in a report titled *Global Road Safety Crisis*. The report identified the following seven common factors behind global road crashes: speeding, alcohol, helmets, safety devices, road design and roadway environment, and vehicle inspection programs. This Article will discuss each in turn.

1. Speeding

Sammy Hagar's ode to velocity notwithstanding,⁶³ speed is a major contributing factor in global road crashes.⁶⁴ Although the effective movement of people and goods is no doubt better served by ever-increasing speeds,⁶⁵ a *decrease* in speed of only one percent decreases the occurrence of death by four to six percent and injury by two to three percent.⁶⁶ Pedestrian injuries are also affected by vehicle speed: as a vehicle's speed increases from about eighteen to thirty-one miles per hour, "the likelihood of a pedestrian death increases by a factor of eight."⁶⁷ Contributing to the "need for speed" are peer pressure and competition among commercial vehicles, which are common in many developing countries.⁶⁸ To reduce crashes from speeding, the Secretary General's report identified "[s]imple measures such as rumble strips and enforcement of speed limits."⁶⁹

^{62.} See EVANS, supra note 3, at 7.

^{63.} SAMMY HAGAR, I Can't Drive 55, on VOA (Geffen Records 1990).

^{64.} Global Road Safety Crisis: Report of the Secretary-General, U.N. GAOR 58th Sess., Agenda Item 162, at 228, ¶ 23, U.N. Doc. A/58/228 (2003) [hereinafter SG Report].

^{65.} See EVANS, supra note 3, at 2 (identifying the "primary goal" of transportation as "the effective movement of people and goods").

^{66.} SG Report, supra note 64, ¶ 23.

^{67.} Id.

^{68.} Id.

^{69.} Id.

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suggested reducing the speed limit and prohibiting radar detectors. In the United States, the Governors Highway Safety Association⁷⁰ is focusing its efforts on reducing speeding by encouraging the use of cameras to catch speeders and drivers who run red lights.⁷¹

2. Alcohol

Drivers and pedestrians under the influence of alcohol are more likely to be involved in a road crash than those under no such influence.⁷² The Secretary General has therefore called for the passage and enforcement of drunk driving laws.⁷³ Such laws have been passed in certain parts of the world. For example, Great Britain, Sweden, and the Netherlands, which have the safest roads in the world, have all passed strict drunk driving laws. "In Sweden, where the legal blood-alcohol concentration limit is 0.02 percent..., drinking and driving also spells social ostracism."⁷⁴ Most recently, Croatia passed a strict zero tolerance blood alcohol concentration law, making it the first country in Europe to have such a stringent law.⁷⁵

represents the highway safety programs of states and territories on the human behavioral aspects of highway safety. Such areas include occupant protection, impaired driving, speed enforcement, aggressive driving, and pedestrian and bicycle safety, as well as highway safety issues relating to older and younger drivers, drowsy driving and distracted driving. In addition to the behavioral aspects of driving, GHSA also represents other aspects of highway safety, such as traffic records and training. GHSA's mission is to provide leadership in the development of national policy to ensure effective highway.

For more information on GHSA, see http://www.statehighwaysafety.org. For more information on the growing effect of drowsiness on road safety in the United States and Canada, see Drunk or Drowsy-AAA Foundation Survey Finds Many Police Officers Mistake Tired Drivers for Drunk Drivers, CCNMatthews Canadian Corporate Newswire, Nov. 23, 2004, LEXIS, Nexis Library, CCN File. See also AAA Foundation for Traffic Safety, Wake Up!, available at http://www.aaafoundation.org/pdf/wakeup.pdf (n.d.) (informing drivers of risks and symptoms associated with drowsy driving); Foundation, What is Drowsy Driving, available National Sleep at http://www.drowsydriving.org (n.d.) (providing information on how to recognize signs of drowsy driving and effective countermeasures).

71. O'Donnell, *supra* note 5.

72. SG Report, supra note 64, ¶ 24; see also Yang, supra note 5 (citing Steve Kohler, a California Highway Patrol spokesman, as identifying both speeding and drunk driving as problems that cause injuries and deaths in California).

73. See SG Report, supra note 64, ¶ 24.

74. See Brown, supra note 30 (citing the World Report on Road Traffic Injury Prevention).

75. See Karl-Peter Schwarz, Null Komma Null [Zero Comma Zero], FRANKFURTER ALLGEMEINE ZEITUNG, Aug. 30, 2004, at 12. Expressing his support for the law, Minister President Ivo Sanader noted that, since Croatian Independence in 1991, 11,500 people died on Croatian roads. Id. If the trend continues, more Croats will

^{70.} According to its website, the Governors Highway Safety Association (GHSA) "is the states' voice on highway safety." The GHSA

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In the United States, alcohol-related fatalities dropped significantly from 2002 to 2003.⁷⁶ The NHTSA credited the drop to more states having adopted stricter drunk driving laws (0.08 percent),⁷⁷ although other strategies have also helped, such as using high-visibility enforcement backed by a media campaign (e.g., "You Drink & Drive. You Lose").⁷⁸ These strategies have also proved successful in reducing road deaths in Costa Rica.⁷⁹

3. Helmets

Motorcycles are increasingly the vehicle of choice in rapidly developing low- and middle-income countries.⁸⁰ Not surprisingly, as the number of motorcycles increases, so do the number of injuries that result from not wearing helmets. Although studies have shown that the use of properly designed helmets reduces the risk of head injury in a crash by 20 to 45 percent, helmet use in low and middleincome countries remains infrequent because helmets "are considered to be hot, uncomfortable and expensive."⁸¹ In the United States, thirty states still need a motorcycle helmet law for all riders. The Secretary General has called for countries to require and enforce

have died on Croatian roads than in the Balkan War (20,000). *Id.* Alcohol-impaired drivers are involved in approximately 13% of the road fatalities in Croatia. *Id.*

^{76.} Press Release, NHTSA, States' Progress Drops Drunk Driving Deaths to Lowest Level Since 1999, NHTSA Press Release No. 38-04 (Aug. 25, 2004), available at http://www.nhtsa.dot.gov/nhtsa/announce/press/pressdisplay.cfm?year=2004&filename =pr38-04.html. In 2003, a total of "17,013 alcohol-related fatalities were recorded . . . down by 511, or almost 3 percent, from the total of 17,524 of 2002." *Id.* "The greatest reduction in fatalities was among those in crashes where the highest blood-alcohol content (BAC) was .08 and above." *Id.* BAC measures the percent of alcohol (by weight) in blood. *See* EVANS, *supra* note 3, at 265.

^{77.} DOT Announces Historic Low Highway Fatality Rate in 2003, *supra* note 5. 2004 is the first year in which all states, including the District of Columbia and Puerto Rico, have .08% blood alcohol content laws. *Id.* For the first time since 1999, alcoholrelated deaths declined in 2003. *Id.* When Congress adopted the Transportation Equity Act for the 21st Century (TEA-21) in 1998, it provided \$500 million in incentives to states that implemented .08 BAC laws. *See* Press Release, NHTSA, All U.S. States Now Have .08 BAC Laws, With Passage of Legislation in Delaware, NHTSA Press Release No. 29-04 (July 2, 2004), *available at* http://www.nhtsa.dot.gov/ nhtsa/announce/press/pressdisplay.cfm?year=2004&filename=pr29-04.html (n.d.). With Delaware's passage of a .08 BAC level in 2004, all fifty states met the requirements for those incentive grants. *Id.*

^{78.} NHTSA, Stop Impaired Driving, available at http://www.stopimpaired driving.org (n.d.).

^{79.} FIA Foundation, Seat Belt Campaign Saves Lives, available at http://new.fiafoundation.com/policy/road_safety/news/campaign_saves_lives.html (n.d). For additional information of FIA, see *infra* note 174.

^{80.} See SG Report, supra note 64, ¶ 25.

^{81.} Id.

helmet usage as a means to "substantially reduce fatalities and injuries among motorbike users."⁸²

4. Safety Devices

As with using helmets on motorcycles, using safety belts in vehicles can "significantly reduce the severity of injury in road crashes."⁸³ Research suggests that safety belt usage reduces a driver's risk of death in a crash by about 42 percent.⁸⁴ Although many suggestions have been made as to how best to increase safety belt usage (e.g., mandating "entertainment interlocks," which would shut down the vehicle's radio system until the safety belt is buckled),⁸⁵ two of the more effective means to raise belt usage rates are passing and enforcing "primary belt laws," which mandate safety belt usage. In Australia, which has a primary belt law requiring occupants of vehicles to wear safety belts or else be subject to penalty or fine, the belt usage rate has been greater than 95 percent for many years.⁸⁶

Within the United States, only the District of Columbia, twentyone states, and three U.S. territories⁸⁷ have primary laws (i.e.,

84. See EVANS, supra note 3, at 305; Evans Responds, 94 AM. J. PUB. HEALTH 171 (Feb. 2004). Not much data are available on safety belt usage by passengers. For example, the NHTSA does not measure rear seat safety belt usage among all motorists, only in cases of fatalities. A recent study into the usage rates of passengers in the United States conducted by the University of Buffalo and the Center for Transportation Injury Research concluded that "more than eight hundred lives could be saved annually and 65,000 injuries [avoided] if ninety-five percent of rear-seat occupants used safety belts." Rick Popely, Unbelted Riders Can Turn Into Deadly Bullets, DETROIT FREE PRESS, Sept. 16, 2004, at 1A, available at 2004 WL 90643620.

85. See, e.g., Denial of Petition for Rulemaking, Federal Motor Vehicle Safety Standards; Occupant Crash Protection, 69 Fed. Reg. 60,968, 60,969 (Oct. 14, 2004). In this case, NHTSA denied a petition for rulemaking that would have required manufacturers to prevent the radio sound system from operating unless safety belts are fastened. In denying the petition, NHTSA relied in large part on a study conducted by the National Academy of Sciences, which found that such "interlocks" are not as effective as one might expect because certain drivers (e.g., older drivers who do not use the radio or drivers on short trips) might not trigger the "entertainment interlock." Denial of Petition for Rulemaking, Federal Motor Vehicle Safety Standards; Occupant Crash Protection, 69 Fed. Reg. at 60,968, 60,969.

86. Australian Government, Dept. of Transport and Regional Services, Vehicle Transport, available at http://www.dotars.gov.au/transreg/str_airbag.htm (n.d.). Australian law provides for two exemptions from the safety belt wearing requirement: (1) if a driver is driving the vehicle in reverse and (2) if a person is "engaged in door to door delivery or collection of goods, or the collection of waste or garbage, and is required to get in or out/or off and on the vehicle at frequent intervals and is traveling [at a speed under] 25 kilometers per hour [15.5 miles per hour]." Vic. Stat. R. Regs. & B., SR. No. 120/1999, 16.264, 267, available at http://www.vicroads.vic.gov.au.

87. These states and territories are Alabama, California, Connecticut, Delaware, Georgia, Hawaii, Illinois, Indiana, Iowa, Louisiana, Maryland, Michigan, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Texas,

^{82.} Id.

^{83.} Id. ¶ 26.

primary enforcement safety belt laws).⁸⁸ Another twenty-nine states have secondary laws, which allow police to issue a safety belt citation only after stopping a motorist for a different violation.⁸⁹ The effectiveness of these laws in increasing usage rates is welldocumented;⁹⁰ for example, states with primary belt laws averaged a belt usage rate 11 percent higher than states with only secondary laws (84 percent versus 73 percent).⁹¹

One often-overlooked safety device is the child restraint. The General Assembly reported on a study in Greece that found that "two-thirds of all childhood injuries from car crashes could have been avoided through the proper use of child restraints."⁹² The use of child safety seats and other child restraints varies through throughout the world.⁹³

In the United States, although the use of child restraints has increased steadily over the years (currently about 71.5 percent), nearly 73 percent of all child restraints are installed *improperly*,⁹⁴ increasing the risk of passenger child injury or death. Worse, between 80 to 90 percent of children between the ages four and eight do not

88. See NHTSA, States with Primary Safety Belt Laws (July 2004), http://www.nhtsa.dot.gov/people/outreach/state_laws-belts04/safeylaws-states.htm.

89. Id. New Hampshire is the only state with no adult safety belt law. Id.

90. NHTSA, Campaign Safe and Sober, *Do Primary Belt Laws Work? You Bet!*, *available at* http://www.nhtsa.dot.gov/people/outreach/safesobr/18qp2/bualaws.htm (n.d.). The NHTSA provides the following evidence:

California: One year after adopting a primary enforcement law, belt use increased from 70% to 83%, a 13 point increase. Five years later, belt use has increased to over 90%. Georgia: After adopting primary enforcement belt use increased 11% in just five months—from 51% to 62%. Two years later, belt use has increased a total of 23 percentage points to 74%. Louisiana: Belt use increased from 50% under secondary enforcement to 59% under primary enforcement. One year later it increased to 69%—a ten point jump. Maryland: One year after its primary belt law went into effect, belt use had increased 13 percentage points to 83%.

Id.

91. See Primary Safety Belt Laws Save Lives, IIHS Confirms, HIGHWAY & SAFETY REP., Jan. 31, 2004, at 5.

92. See SG Report, supra note 64, ¶ 26.

93. Id.

94. Press Release, NHTSA, Survey Finds Nearly 73 Percent of Child Restraints Misused, NHTSA Press Release No. 06-04 (Feb. 11, 2004), available at http://www.nhtsa.dot.gov/nhtsa/announce/press/pressdisplay.cfm?year=2004&filename =pr06-04.html.

Washington; Guam, Puerto Rico, and U.S. Virgin Islands. The states with the highest belt usage rates are Arizona (95.3%) and Hawaii (95.1%); those with the lowest usage rates are Mississippi (63.2%) and Massachusetts (63.3%). See Press Release, NHTSA, New Data Show Rising Safety Belt Use Rates in Most States, NHTSA Press Release No. 46-04 (Nov. 23, 2004), available at http://www.nhtsa.dot.gov/nhtsa/announce/press/ pressdisplay.cfm?year=2004&filename=pr46-04.html.

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ride in a booster seat while traveling in a vehicle,⁹⁵ which exposes them to potentially serious injury or death, not to mention the risk of ejection from the vehicle in the event of a crash.⁹⁶ For this reason, the National Transportation Safety Board (NTSB)⁹⁷ recommends that Member States require that children between the ages of four and eight be restrained in booster seats.⁹⁸ Currently, twenty-four states have no booster seat requirement; only eighteen states have laws that at least partially address the NTSB's concern.⁹⁹ Twenty-two states still need a booster seat law.

5. Trauma Care

Many countries lack adequate trauma reaction to road crashes.¹⁰⁰ The "lack of timely... pre-hospital care and long intervals between crash and hospital admission" also affect the ultimate outcome of a traffic injury.¹⁰¹ Once an injured person is admitted to the hospital, either trained personnel, medicine, or supplies may be inadequate or unavailable, which often increases the likelihood that the crash will result in death.¹⁰²

6. Road Design and Roadway Environment

According to the Secretary General's report, "[t]here is a huge potential to reduce road traffic injuries through better road design

^{95.} NHTSA, The Ad Council and NHTSA Launch Campaign to Promote Booster Seat Use, NHTSA Now (Feb. 11, 2004), available at http://www.nhtsa.dot.gov/nhtsa/announce/NhtsaNow/2004/v10-2/index.html.

^{96.} Press Release, NHTSA, NHTSA Brings Focus to Child Safety Issue: Booster Seat Use Low Among Young Children, NHTSA Press Release No. 41-04 (Sept. 23, 2004), available at http://www.nhtsa.dot.gov/nhtsa/announce/press/pressdisplay. cfm?year=2004&filename=pr41-04.html. According to a telephone survey conducted by NHTSA, only "twenty-one percent of children age four to eight are 'at least on occasion' riding in a booster seat while in a vehicle." *Id.* NHTSA provides the following guidelines: "Children who have outgrown their child safety seat should ride in a booster seat until they are at least eight years old or 4 feet, 9 inches tall." *Id.*

^{97.} According to its Mission Statement: "The National Transportation Safety Board [NTSB] is an independent Federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in the other modes of transportation—railroad, highway, marine and pipeline—and issuing safety recommendations aimed at preventing future accidents." NTSB, *History and Mission* (Sept. 2004), *available at* http://www.ntsb.gov/ Abt_NTSB/history.htm.

^{98.} NTSB, Safety Recommendation H-96-14 (Oct. 26, 1997), available at http://www.ntsb.gov/recs/mostwanted/child_occupant.htm.

^{99.} Press Release, NTSB, NTSB Calls on States to Act on Highway, Boating Issues; Adds School Bus Grade Crossing to Most Wanted List, NTSB Press Release No. SB-04-26 (Sept. 14, 2004), available at http://www.ntsb.gov/Pressrel/2004/040914.htm.

^{100.} SG Report, supra note 64, \P 27.

^{101.} *Id*.

^{102.} Id.

and maintenance."¹⁰³ For example, in Indonesia, according to the head of the Jakarta Police Traffic Law Enforcement Division, poor road conditions constitute one of the three leading factors behind road crashes.¹⁰⁴ When planning roads, safety assessments should be made to eliminate otherwise avoidable risks.¹⁰⁵ For example, "better signs and markings" also offer a low-cost way to improve road safety.¹⁰⁶

7. Lack of Vehicle Inspection Programs

Finally, the Secretary General identified the "lack of proper maintenance" of both vehicles and heavy vehicles as "a contributing factor" in road crashes.¹⁰⁷ Many countries, including the United States, have no inspection requirements for the annual registration of vehicles.¹⁰⁸ The absence of inspection requirements may be due to either a lack of training for inspection personnel or a lack of resources allocated to this problem.¹⁰⁹

8. Summary

The list identified by the Secretary General sheds light on the factors that cause road crashes and injuries. But the list is by no means exhaustive. For example, other factors associated with crashes include inadequate driver training, driver distraction (such as the use of cellular telephones¹¹⁰ or eating while driving),¹¹¹ older vehicles on

111. Driver distraction is defined as "any activity that takes a driver's attention away from the task of driving." See Thomas A. Ranney et al., NHTSA Driver Distraction Research: Past, Present, and Future (July 5, 2000), available at http://wwwnrd.nhtsa.dot.gov/departments/nrd-13/driver-distraction/PDF/233.PDF. What makes distraction such a problem is the mixture of the distraction, such as talking or eating, and the unexpected occurrence of events on the road, such as a sharp curve or a sudden

^{103.} Id. ¶ 28.

^{104.} See Evi Mariani, Safety Audit Urgent to Reduce Vehicular Accidents, JAKARTA POST, Apr. 7, 2004, 2004 WL 56586984. The other two leading factors behind road crashes in Indonesia are the condition of the vehicles and the condition of the drivers. *Id.*

^{105.} SG Report, *supra* note 64, ¶ 28.

^{106.} Id.

^{107.} Id. ¶ 32.

^{108.} Id.

^{109.} Id.

^{110.} To be fair, the verdict is still out on the dangers of using cellular phones while driving. A recent study conducted jointly by the American Enterprise Institute and the Brookings Joint Center examined the effect of a ban on cellular phone use while driving and concluded that "estimates of the reduction in accidents from a ban on cell phone use while driving are both lower and less certain than previous studies indicate." For more information on this study, see ROBERT W. HAHN & JAMES E. PRIEGER, THE IMPACT OF DRIVER CELL PHONE USE ON ACCIDENTS (2004), available at http://www.aei-brookings.org. See also Jesse Drucker & Karen Lundegaard, Warning Call: As Industry Pushes Headsets in Cars, U.S. Agency Sees Danger, WALL ST. J., July 19, 2004, at A1, available at 2004 WL 56935048.

the roads performing worse than newer vehicles, and the lack of individual responsibility (including careless or reckless driving). Nevertheless, the report is helpful because it draws international attention to the problem of global road safety.

Although each factor identified in the list is important to understand in attempting to reduce traffic crashes, "[t]he key to reducing crashes is obeying traffic law."¹¹² Two of the factors most affecting whether a crash occurs are intoxication of the driver and the speed of the car. And one of the greatest factors affecting whether an occupant survives a crash is the use of a safety belt. Generally speaking, countries should prioritize the three factors of (1) speed, (2) alcohol, and (3) safety belts as those most associated with crashes. Unlike many of the other identified factors (such as road design and trauma care), these three factors also require the most *personal* responsibility.

C. Absent Any Action, the Problem of Traffic Crashes Will Worsen

Current projections indicate that the annual fatality rate of 1.2 million and the injury rate of fifty million will increase by about 60 to 65 percent over the next twenty years.¹¹³ By 2020, although deaths are predicted to drop "by thirty percent in the industrialized world," they will rise "eighty percent elsewhere."¹¹⁴ For example, barring action, India's traffic death rate is not predicted to decline until 2042.¹¹⁵

Finally, the elderly population will likely be dealt the hardest blow. The death rate in low- and middle-income countries is highest for people greater than sixty years of age.¹¹⁶ Elderly people are more likely than younger people to sustain serious injury or death in a crash because they are generally less resilient.¹¹⁷ The United Nations projects that people sixty years and older will compose an increasingly greater portion of *all* countries' populations over the next thirty years.¹¹⁸ As a result, "[t]he vulnerability of elderly people to

break. See Lauren Fix, The Most Dangerous Foods You Shouldn't Eat While Driving, The Yearbook of Experts, July 23, 2004, LEXIS, Nexis Library, YBEXNW File. NHTSA has found that driver distraction caused about 25% of police-reported vehicle crashes. See NHTSA Driver Distraction Research: Past, Present, and Future, supra.

^{112.} See EVANS, supra note 3, at 424.

^{113.} WORLD REPORT, supra note 2, at 3.

^{114.} Brown, supra note 30 (citing the World Report on Road Traffic Injury Prevention).

^{115.} *Id*.

^{116.} See WORLD REPORT, supra note 2, at 13.

^{117.} Id.

^{118.} Id. at 13-14 (emphasis added).

road traffic death and serious injury will be of increasing concern globally."¹¹⁹

III. THE RESPONSE OF THE UNITED NATIONS

Far from sitting in park and issuing only reports and warnings, the United Nations has attempted to drive toward solutions to global The U.N. has consistently encouraged greater road safety. individual international cooperation and Member State responsibility. This Part begins by discussing the importance of harmonization to safety improvements and the U.N.'s role in fostering such harmonization. It concludes by discussing General Assembly global road safety resolutions and the impact these resolutions have on both U.N. institutional bodies and Member States.

A. Harmonization of Vehicle Regulations-WP29¹²⁰

1. Purpose of Harmonization

Harmonization is the attempt by at least two countries to facilitate free trade by standardizing production laws and regulations.¹²¹ Harmonization relieves trade tensions among countries by allowing standards, such as safety or emissions standards, to be regulated in a non-competitive fashion.¹²² In other words, "harmonization allows two or more countries to recognize each

121. See Margaret Renee Herman, Note, Are We Learning From the Mistakes of Environmentalists? The Application of Environmental Harmonization Models to the Automotive Industry, 16 ARIZ. J. INT'L & COMP. L. 543, 545 (1999).

^{119.} Id. at 14.

^{120.} The Author would like to thank Dr. Romain Hubert (UNECE, Transport Division), who, in reviewing this Article, accurately pointed out the difference from the viewpoint of an international body between a "regulation" and a "standard." A "standard" is usually established by a non-governmental organization (NGO) and covers technical specifications for the construction of a component or a test method. Manufacturers are not bound to follow standards. In contrast, a "regulation" is usually established by an international organization or national governmental institution and is performance-oriented. A regulation may also have technical specifications for the construction of a component, but with specific test requirements, including limit values, that must be met. This Article thus uses the terms "standard" and "regulation" accordingly, particularly in the international context. Note that U.S. law does not necessarily distinguish so clearly. The NHTSA, a government agency within the DOT, sets safety "standards." *See infra* notes 219-38 and accompanying text.

^{122.} See Anne Klosterman, Air and Atmosphere: The United Nations' Agreement to Adopt Uniform Technical Regulations for Wheeled Vehicles: An Important Step Toward International Harmonization for Vehicle Emissions Regulations, 2000 COLO. J. INT'L ENVTL. L. & POL'Y 239, 241 (2000).

other's law as equivalent to their own laws; therefore, these foreign laws carry the same weight as domestic statutes."¹²³

Harmonization of vehicle safety regulations is important for several reasons. First, harmonization guarantees that vehicles will be built in accordance with internationally agreed-upon safety regulations.¹²⁴ The growth of the world vehicle population and its effect on society underscore the need for increased safety regulations.¹²⁵ Second, harmonization optimizes research funds by duplication.¹²⁶ avoiding repetition and In other words. "[h]armonization saves automakers money because they can use more of the same parts for vehicles sold in multiple markets."¹²⁷ Finally, because designing and developing different versions of a particular vehicle to comply with different regulatory requirements can add as much as 10 percent to the production cost,¹²⁸ harmonization decreases production costs by removing the need to design and manufacture vehicles to meet different requirements.¹²⁹

2. Role of the United Nations in Harmonization of Safety Regulations: WP.29¹³⁰

The United Nations has embraced the harmonization of vehicle safety regulations since 1949, when Resolution Number 45 of the Subcommittee on Road Transport of the United Nations Economic Commission (UNECE) established a working party of experts specialists in technical requirements for vehicles—to implement the general technical provisions set forth in the Convention on Road Traffic (adopted in 1949).¹³¹ These provisions identified certain vehicle characteristics as a major cause of road traffic crashes, deaths, and injuries.¹³²

Responding to the 1949 Resolution, on June 6, 1952, the Subcommittee of Road Transport created the Working Party on the

132. Id.

^{123.} See Herman, supra note 121, at 545 (citing LEWIS A. PRESNER, THE INTERNATIONAL BUSINESS DICTIONARY AND REFERENCE 153 (1991)).

^{124.} Id. at 562-64.

^{125.} See id.

^{126.} See Klosterman, supra note 122, at 241.

^{127.} See Harry Stoffer, Federal Regulators: New Lighting Rules Will Improve Vehicle Safety, AUTOMOTIVE NEWS, Sept. 6, 2004, at 31.

^{128.} See Office of Automotive Affairs, U.S. Dep't of Commerce, Transatlantic Automotive Industry Conference on Regulatory Harmonization: Overall Conclusions (Apr. 11, 1996), available at http://www.ita.doc.gov/basic/chapeau.html.

^{129.} See Klosterman, supra note 122, at 241.

^{130.} See supra note 120.

^{131.} See World Forum for Harmonization of Vehicle Regulations, U.N. Economic Commission for Europe (2002), at 5.

Construction of Vehicles (WP.29).¹³³ Effective with the 120th session of WP.29, held in March 2000, the organization became the "World Forum for Harmonization of Vehicle Regulations (WP.29)."

Organizationally, WP.29 is a working party under the United Nations Economic Commission (UNECE) for Europe's Inland Committee.¹³⁴ Its multifaceted roles are to (1) initiate and pursue action aimed at harmonizing vehicle regulations; (2) foster the reciprocal recognition of approvals, certificates, and technical inspections among the contracting parties; (3) serve as the technical expert for the UNECE by developing recommendations for improving the uniformity of vehicle regulations; (4) encourage and foster worldwide participation in its activity; and (5) ensure openness and transparency in its work.¹³⁵ The WP.29 meets at the United Nations in Geneva, Switzerland annually in March, June, and November.¹³⁶

Any country that is a member of the U.N. and any regional economic integration organization established by U.N. countries may participate in the activities of WP.29, either fully or in a consultative capacity. Furthermore, such a country may become a contracting party to the three Agreements administered by WP.29,¹³⁷ which are

135. See Article 1 of World Forum for Harmonization of Vehicle Regulations (WP.29) Terms of Reference and Rules of Procedure, U.N. Economic Commission for Europe, U.N. Doc. TRANS/WP.29/690 (Nov. 18, 1999), available at http://www.unece.org/trans/main/wp29/wp29tor.pdf.

136. See Klosterman, supra note 122, at 240.

^{133.} WP.29 held its first meeting from February 10-13, 1953, in which nine governments (Belgium, France, Italy, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States [representing the occupational zones of Germany]) and five non-governmental organizations (World Touring and Automobile Organization [OTA], International Road Federation [IRF], International Road Transport Union [IRU], International Organization for Standardization [ISO], International Permanent Bureau of Motor Manufacturers [BPICA]) attended. The first report reflected the concerns of the time, e.g., whether one or two red lights should be installed on the rear of vehicles. Over time, the focus moved toward accident prevention (active safety). For example, an Agreement signed in Rome in 1956 between Germany, France, Italy, and the Netherlands called for uniform and harmonized regulations for headlamps emitting an asymmetrical passing beam. For additional background on WP.29, see id.

^{134.} The UNECE was established in 1947 by the Economic and Social Commission of the United Nations. It is one of five regional commissions of the United Nations. The main goal of the UNECE is to "encourage greater economic cooperation among its 55 Member States [by focusing] on economic analysis, environment and human settlements, statistics, sustainable energy, trade, industry and enterprise development, timber and transport." See United Nations Economic Commission for Europe, Introduction (Aug. 23, 2004), available at http://www.unece.org/oes/nutshell/introduction.htm. The UNECE has various Working Parties, for example, on Vehicle Regulations (WP.29), on Road Safety (WP.1), and on Transport Statistics (WP.6).

^{137.} See Rule 1 of World Forum for Harmonization of Vehicle Regulations (WP.29) Terms of Reference and Rules of Procedure, U.N. Economic Commission for Europe, U.N. Doc. TRANS/WP.29/690 (Nov. 18, 1999), available at http://www.unece.org/trans/main/wp29/wp29tor.pdf. Non-governmental organizations (NGOs) may participate in a consultative capacity in WP.29 so long as they have first

(1) the 1958 Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts,¹³⁸ (2) the 1997 Agreement on Periodical Technical Inspections,¹³⁹ and (3) the 1998 International Agreement Concerning the Establishing of Global Technical Regulations for Wheeled Vehicles (1998 Global Agreement).¹⁴⁰

The 1958 Agreement was done at Geneva on March 20, 1958 and entered 138. into force on June 20, 1959. It provides procedures not only for establishing uniform regulations of vehicles and equipment but also for reciprocal acceptance of approvals issued in the Agreement. Currently, reciprocal recognition applies only to vehicle systems, parts, and equipment, not for the entire vehicle. Under this Agreement, 116 regulations are in force with an additional five new regulations likely to come into force in March 2005. This Agreement has forty-one contracting parties, but three other member countries (Ireland, Cyprus, and Malta) also apply the UNECE Regulations because these countries joined the Agreement by virtue of their recent accession to the Agreement by the European Community (European Union). See Status of Agreement, U.N. Economic Commission for Europe, U.N. Doc. TRANS/WP.29/343/Rev.12/Amend.1 (June 16, 2004), available at http://www.unece.org/trans/main/wp29/wp29wgs/ wp29gen/wp29fdoc/TRANS-WP29-343rv12am1.pdf. Notably, the United States is not a party to this agreement. According to the NHTSA, the United States did not become a contracting party to the 1958 Agreement because "(1) it was not feasible to develop regulations regarding motor vehicle safety in what was then a primarily common European regulatory development forum and (2) NHTSA's enforcement procedures precluded the U.S. from engaging in the 1958 Agreement's mutual recognition obligations." See Agency Policy Goals and Public Participation in the Implementation of the 1998 Agreement on Global Technical Regulations; Statement of Policy, Final Rule, 65 Fed. Reg. 51,236, 51,237 n.6 (Aug. 23, 2000). Ultimately, the U.S. determined in talks with the contracting parties to the 1958 Agreement that the most desirable course of action was to develop a new parallel agreement (the 1998 Global Agreement). Agency Policy Goals and Public Participation in the Implementation of the 1998 Agreement on Global Technical Regulations; Statement of Policy, Final Rule, 65 Fed. Reg. at 51,236, 51,237 n.6.

139. The 1997 Agreement on Periodical Technical Inspections provides the legal framework and procedures for the adoption of uniform rules for carrying out technical inspections of vehicles in use and for reciprocal recognition of the certificates of such inspections. This Agreement entered into force on January 7, 2001. Currently this Agreement has seven contracting parties; eighteen countries have signed it but have not yet ratified it. Under this Agreement only one rule (rule number one on the protection of the environment) is in force. See Informal Document No. WP.29-133.2. For additional background on both Agreements, see World Forum for Harmonization of Vehicle Regulations, U.N. Economic Commission for Europe (2002).

140. See Agreement concerning the Establishment of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or Used on Wheeled Vehicles, U.N. Economic Commission for Europe, U.N. Doc. ECE/TRANS/132 (June 25, 1998) [hereinafter Global Agreement].

received accreditation for a consultative status to the Economic and Social Council of the United Nations. *Id.* Depending on the topic, the number of NGOs participating in the activities of WP.29 (and its various working bodies) varies between six and fifteen. *See* "World Forum for Harmonization of Vehicle Regulations," UN/ECE (2002), at 8. NGOs often contribute technical data and advice in areas of vehicle safety. *Id.*

3. 1998 Global Agreement

Of the three Agreements administered by the WP.29, the 1998 Global Agreement will likely have the greatest effect over time. As the name implies, the 1998 Global Agreement attempts to establish a global process "by which contracting parties from all regions of the world can jointly develop technical regulations regarding the safety, efficiency. and anti-theft environmental protection. energy performance" of motor vehicles.¹⁴¹ Other enunciated goals of the Global Agreement include ensuring transparency in the development of global technical regulations (GTRs)¹⁴² and reducing barriers to international trade "through harmonizing existing technical regulations of contracting parties."¹⁴³ According to NHTSA, the 1998 Global Agreement and its GTRs will likely "lead to a significant degree of convergence in motor vehicle regulations at the regional and national levels."144

With the support of at least one-third of the members, a contracting party government can enter a regulations proposal in a compendium of candidate regulations.¹⁴⁵ A consensus on the proposal makes it binding.¹⁴⁶ The harmonized regulations and those pending acceptance are contained in a "Global Registry."¹⁴⁷

Contracting parties do not, however, have to adopt a regulation into their own laws,¹⁴⁸ and the Agreement explicitly recognizes the right of national and subnational authorities to adopt and maintain technical regulations "that are more stringent[ly]" protective of health and environment than those established at the global level.¹⁴⁹ Thus, although WP.29 is multilateral in scope, "it is sort of a hybrid multilateral agreement because contracting parties may pick and choose which provisions they find most attractive or necessary and totally disregard the others."¹⁵⁰ If a contracting party votes to

^{141.} Id. art. 1.1.1. Covered equipment and parts include vehicle construction, exhaust systems, tires, engines, acoustic shields, anti-theft alarms, warning devices, and child restraint systems. Id. at annex A, pt. 7.

^{142.} Id. art. 1.1.4.

^{143.} Id. art. 1.1.6.

^{144.} See Agency Policy Goals and Public Participation in the Implementation of the 1998 Agreement on Global Technical Regulations; Statement of Policy, Final Rule, 65 Fed. Reg. 51,236, 51,237 (Aug. 23, 2000).

^{145.} See Global Agreement, supra note 140, art. 7.1.

^{146.} Id. art. 7.2.

^{147.} Id. art. 6.

^{148.} Id. art. 7.3. But a contracting party that decides not to adopt a global technical regulation into its domestic law must inform the Secretary General of the WP.29 "in writing ..., within 60 days of its decision and the basis for its decision." Id.

^{149.} Id. at pmbl., art. 1.1.5.

^{150.} See Herman, supra note 121, at 569.

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establish a regulation, then it must initiate the domestic procedures to adopt the regulation.¹⁵¹

Eager to continue harmonization of vehicle regulations, the United States was the first country to sign the Global Agreement, on June 25, 1998,¹⁵² followed by Canada, Japan, France, the European Union, Germany, South Africa, and the Russian Federation.¹⁵³ Once the Russian Federation joined, the Agreement had the assent of eight members and entered into force on August 25, 2000.¹⁵⁴ There are currently twenty-two contracting parties to the 1998 Global Agreement.¹⁵⁵

Based on the Global Agreement, certain technical regulations relating to safety, environment, and quality are set to be established by 2005, with others scheduled for $2010.^{156}$ There are currently seventeen GTRs in development.¹⁵⁷

The first GTRs will minimize the likelihood of occupants being ejected from a vehicle as a result of a crash by regulating door locks and door retention components; these regulations were adopted by the contracting parties at the WP.29's 134th session in November 2004.¹⁵⁸ In the United States, 15 percent of all ejections from vehicles

^{151.} See Global Agreement, supra note 140, art. 7.

^{152.} See World Forum for Harmonization of Vehicle Regulations, U.N. Economic Commission for Europe (2002), at 6. But at least one commentator believes the United States may be pushing global harmonization of vehicle regulations in WP.29 "more [because of] protectionism than improving safety quality." See Herman, supra note 121, at 575.

^{153.} The Russian Federation was the eighth signatory, enabling the Global Agreement to enter into force on August 25, 2000. See Press Release, UN/ECE, Global Agreement on Vehicle Regulations Set To Enter Into Force, ECE/Trans/00/9, Geneva (Aug. 5, 2000), available at http://www.unece.org/press/00trans9e.htm; see also Global Agreement, supra note 140, art. 11.2 (requiring minimum of eight countries and/or regional economic integration organization [at least one of which must either be the European Community, Japan, or the United States] to become contracting parties before Agreement can enter into force).

^{154.} See Global Agreement on Vehicle Regulations Set to Enter Into Force, supra note 153.

^{155.} See Informal Document No. WP.29-133-1, June 21-25, 2004, agenda item 5.1, Depositary Notification C.N.557.2000.TREATIES-8, dated Aug. 14, 2000.

^{156.} See Toshio Aritake, Japan: Automobile Lobby Groups Reach Agreement on Establishing Global Standards, BNA INT'L TRADE DAILY, June 20, 2000, at D12.

^{157.} See World Forum for Harmonization of Vehicle Regulations: Report of the Inland Transport Committee, U.N. Economic Commission for Europe, annex 3, $\P\P$ 86-112, U.N. Doc. TRANS/WP.29/1016 (July 12, 2004).

^{158.} See Press Release, NHTSA, NHTSA Administrator Announces Major Step Toward Saving Lives Worldwide (Nov. 18, 2004), available at http://www.nhtsa.dot.gov/ nhtsa/announce/press/pressdisplay.cfm?year=2004&filename=pr0011-04.html. According to a NHTSA official, the GTR on door locks and door retention components will lead to stronger car door latches and require a secondary latch for sliding minivan doors and a warning if they become open. See Jayne O'Donnell, Global Auto-Safety Standards On Way, USA TODAY, Nov. 16, 2004, at 1B (citing Stephen Kratzke, NHTSA "rulemaking chief"). In addition to the GTR on door lock and door retention requirements, progress is being made on two other GTRs: (1) a Canadian proposal for a draft GTR on Lighting and Light-

occur through doors, which are the focus of this particular GTR.¹⁵⁹

In short, this GTR requires that *sliding* doors—often used on SUVs and minivans—either have (1) a backup latched position, "which increases the likelihood that a striker will remain engaged with the latch when the door is incompletely closed" or (2) a visual telltale that signals when the door is not fully closed.¹⁶⁰ In addition, the GTR adds requirements for rear-hinged side doors to prevent them from inadvertently opening while the vehicle is moving.¹⁶¹

From a cost-benefit standpoint, NHTSA noted that the improvements proposed in the GTR will "prevent 7 deaths and 4 serious injuries" every year in the United States.¹⁶² NHTSA estimates the costs to manufacturers of adding a second latch to sliding doors that do not currently have one at "slightly over \$8 million."¹⁶³ In addition, NHTSA noted that "[v]ehicle manufacturers, and ultimately, consumers, both here and abroad, can expect to achieve cost savings through the formal harmonization of different sets of regulations when the contracting parties . . . implement the new [GTR]."¹⁶⁴

With door locks behind them, the contracting parties to the 1998 Global Agreement are currently considering GTRs governing lighting (i.e., placement of interior lights in vehicles); braking (i.e., how to test and rate brake systems);¹⁶⁵ and will later consider head rests, and perhaps even airbags and safety harnesses.¹⁶⁶ According to NHTSA, the pace of vehicle harmonization is likely to increase over the coming years.¹⁶⁷

Signaling Devices for Road Vehicles and (2) a German proposal for a draft GTR on Safety Glazing. See 69 Fed. Reg. 60,460, 60,463 (Oct. 8, 2004).

^{159.} See Federal Motor Vehicle Safety Standards; Door Locks and Door Retention Components and Side Impact Protection, Notice of Proposed Rulemaking, 69 Fed. Reg. 75,020 (Dec. 15, 2004).

^{160.} See Federal Motor Vehicle Safety Standards; Door Locks and Door Retention Components and Side Impact Protection, Notice of Proposed Rulemaking, 69 Fed. Reg. at 75,022.

^{161.} Id.

^{162.} Id.

^{163.} Id.

^{164.} Id.

^{165.} See O'Donnell, supra note 158.

^{166.} See Global Cooperation Will Push Auto Safety Ahead, DETROIT NEWS, Nov. 17, 2004, at 12A. Note that "airbag" should be treated as one word because "it shortens, simplifies, and avoids ambiguities." See EVANS, supra note 3, at 7.

^{167.} See Stoffer, supra note 127 (quoting NHTSA associate administrator, Steve Kratzke, who indicated that the pace would increase because many proposed international regulations are now based on scientific research and include cost-benefit analyses, without which NHTSA regulations cannot be promulgated).

B. General Assembly Resolutions

1. World Health Day 2004

In response to "the rapid increase in road traffic deaths, injuries and disabilities globally,"¹⁶⁸ the United Nations General Assembly adopted two resolutions in 2003¹⁶⁹ and one in 2004¹⁷⁰ designed primarily to "rais[e] awareness [at a high level¹⁷¹] of the importance of road safety as a public policy issue."¹⁷² One way the United Nations raised awareness was by holding a plenary meeting of the General Assembly on April 14, 2004, in connection with World Health Day.¹⁷³ According to United Nations Secretary General Kofi Annan, the "World Health Day is an occasion for us to highlight the [road safety] problem and . . . to underscore the fact these [accidents] are avoidable, they are not just accidents, they are human errors which[,] with proper governmental policy[,] can be dealt with."¹⁷⁴

Before World Health Day 2004, the Secretary General issued a report titled *Global Road Safety Crisis*.¹⁷⁵ This report (1) emphasized the grave public health crisis that road traffic injuries and deaths pose; (2) described the magnitude of the problem; (3) highlighted successful intervention strategies used by other countries to reduce the injury and fatality rates; and (4) called on Member States, especially developing countries, "to stimulate a new level of commitment" in addressing the issue of road safety.¹⁷⁶ Perhaps most

176. Id.

^{168.} See G.A. Res. 309, U.N. GAOR, 57th Sess., U.N. Doc. A/Res/57/309 (2003).

^{169.} See id.; G.A. Res. 9, U.N. GAOR, 58th Sess., U.N. Doc. A/Res/58/9 (2003); G.A. Res. L.60, U.N. GAOR, 58th Sess., U.N. Doc. A/58/L.60/Rev.1 (2004).

^{170.} G.A. Res. L.60, U.N. GAOR, 58th Sess., U.N. Doc. A/58/L.60/Rev.1 (2004).

^{171.} See G.A. Press Release GA/10236, General Assembly Invites World Health Organization to Act (Apr. 14, 2004) (discussing Resolution 58/9 as "calling for the holding of the [plenary] meeting in order to increase awareness, at a high level, of the magnitude of the road traffic injury problem").

^{172.} See G.A. Res. 309, U.N. GAOR, 57th Sess., U.N. Doc. A/Res/57/309 (2003).

^{173.} G.A. Res. 9, *supra* note 169.

^{174.} See Interview with Kofi Annan, Secretary General, United Nations, in New York, N.Y. (Jan. 7, 2004), available at http://www.fiafoundation.com/content/media/Kofi_Annan_transcript.doc. The FIA was established in the United Kingdom as a registered charity with an endowment of \$300 million made by the Fédération Internationale de l'Automobile (FIA), the nonprofit federation of motoring organizations and the governing body of world motor sport. The FIA Foundation supports an international program of activities promoting safety, environment, and sustainable mobility. For example, the FIA was deeply involved with events surrounding World Health Day 2004. For more information on the FIA, see FIA Foundation, Message from Chairman of FIA Foundation for the Automobile and Society, available at http://www.fiafoundation.comabout/index.html (n.d.).

^{175.} SG Report, supra note 64.

important, the report recommended identification of a coordinating body within the United Nations system—the World Health Organization—to address the global road safety crisis. The report encouraged each Member State to improve its data on road safety, and called on each Member State to establish "a single agency or focal point" to be responsible for road safety issues.¹⁷⁷

In addition to declaring World Health Day 2004 the year of "road safety," the WHO issued the first major report on the health consequences of road crashes since 1962.¹⁷⁸ The report, co-authored by the World Bank, is titled *World Report on Road Traffic Injury Prevention.*¹⁷⁹ It summarizes current knowledge of the global road traffic injury problem and offers scientific evidence and solutions to remedy the problem. The report took 100 experts worldwide more than eighteen months to prepare.¹⁸⁰

In its most recent resolution, the General Assembly responded to the report of the Secretary General by calling on the WHO "to act as a coordinator on road safety issues within the United Nations system."¹⁸¹ In its role as a coordinator, the WHO is to work closely with the United Nations regional commissions, such as the UNECE.¹⁸² But despite increasing the WHO's role in the area of road safety, the General Assembly recognizes that "responsibility for road safety rests [ultimately] at the local, municipal and national levels."¹⁸³

179. See WORLD REPORT, supra note 2. Unlike the report in 1962, titled "Road Traffic Accidents," this report does not use the word "accident" because its authors believe that "accident" suggests the deaths and injuries are largely unavoidable. See Brown, supra note 178.

180. See Brown, supra note 178.

181. G.A. Res. L.60, *supra* note 169, ¶ 2.

182. Id. By working with the UNECE, the WHO can draw on the UNECE's experience in dealing with the multiple regional commissions of the United Nations. In other words, the UNECE:

[O]ffers the potential to strengthen and share road safety cooperation among the other UN Regional Economic Commissions. Around the world, the range of specific road safety issues can differ quite substantially from country to country depending on factors such as the composition of the vehicle fleet and levels of motorization. For this reason, there is a strong argument in developing regional road safety action plans that reflect more closely the road traffic conditions of the countries involved.... Since UNECE has the most developed structure of road safety actions it would be the obvious candidate to lead coordination among the structure of regional Commissions.

A Global Role for UNECE Working Party on Road Traffic Safety, U.N. Economic Commission for Europe, 44th Sess., U.N. Doc. TRANS/WP.1/2004/5 (2004).

183. G.A. Res. L.60, supra note 169.

^{177.} Id. ¶ 44(a), (c), (f).

^{178.} See David Brown, Traffic Fatalities a Growing Threat Worldwide, WHO Reports, WASH. POST, Apr. 7, 2004, at A26 (citing the World Report on Road Traffic Injury Prevention). The report from 1962 is WORLD HEALTH ORGANIZATION, ROAD TRAFFIC ACCIDENTS: EPIDEMIOLOGY, CONTROL AND PREVENTION (1962).

2. So What? A Word About General Assembly Resolutions

A fair question to ask at this point is "so what?" In other words, what legal effect do the Assembly resolutions have on the Member States (or anyone else, for that matter)?

Although representatives of some Member States (mainly the developing nations) have argued on occasion that consistent reiteration in Assembly resolutions of the same general principles, such as those concerning human rights, amounts to law,¹⁸⁴ the resolutions do not ipso facto have any legal effect.¹⁸⁵ The International Court of Justice, which resolves disputes on the basis of international law, identifies four sources of international law, none of which include Assembly resolutions.¹⁸⁶ And the *Restatement (Third)* of the Foreign Relations Law of the United States, which represents the opinion of the American Law Institute¹⁸⁷ as to the rules that an international tribunal would apply if called upon to decide a case under international law,¹⁸⁸ identifies three sources of international law, none of which include Assembly resolutions.¹⁸⁶

184. L.C. Green, The Raw Materials of International Law, 29 INT'L & COMP. L.Q. 187, 189 (1980).

185. Id. at 190.

186. Article 38 of the Statute of the International Court of Justice calls out four sources of international law: (1) international conventions, (2) international custom, (3) general principles of law recognized by civilized nations, and (4) judicial decisions and teachings of highly qualified publicists of various nations. Statute of the International Court of Justice, June 26, 1945, art. 38, 59 Stat. 1055, U.S.T.S. 993. Federal courts have recognized Article 38 of the ICJ Statute as providing an "authoritative" guide for determining the appropriate sources of international law. See, e.g., Flores v. S. Peru Copper Corp., 343 F.3d 140, 157 (2d Cir. 2003); U.S. v. Yousef, 327 F.3d 56, 100-01 (2d Cir. 2003); Filartiga v. Pena-Irala, 630 F.2d 876, 880-81 n.8 (2d Cir. 1980) (citing Article 38 as an authoritative statement of the sources of international law).

187. The American Law Institute (ALI) was founded in 1923 "to promote the clarification and simplification of the law and its better adaptation to social needs, to secure the better administration of justice, and to encourage and carry on scholarly and scientific legal work." See http://www.ali.org. The ALI is composed of American legal scholars who are responsible for the Restatements in the various areas of law and who, jointly with the National Conference of Commissioners on Uniform States Law, prepare some of the Uniform State Laws, e.g., the Uniform Commercial Code. Id., see also BLACK'S LAW DICTIONARY 53 (6th ed. 1991).

188. See RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE U.S., Introduction (1987). The Restatement contains rules of international law as those rules apply to the United States and its relations with other states as well as rules of U.S. domestic law that influence the foreign relations of the United States. See LOUIS HENKEN ET AL., INTERNATIONAL 125 (3d ed. 1993). For an excellent overview of the Restatement (Third), see Rudolf Bernhardt et al., Restatement of the Law Third: The Foreign Relations Law of the United States, Vols. 1 and 2, 86 AM. J. INT'L L. 608 (1992).

189. The Restatement identifies the following three sources of international law: (1) customary law (i.e., resulting from a "general and consistent practice of state followed by them from a sense of legal obligation"); (2) international agreements (e.g., treaties); and (3) general principles "common to the major legal systems, even if not intepretation is consistent with the United Nations Charter, which limits the powers of the Assembly to, inter alia, initiating studies and making recommendations to promote international cooperation in a wide array of areas, such as economic, social, cultural, education, and health.¹⁹⁰

Simply because resolutions (especially resolutions that do not concern human rights) have no legal effect certainly does not mean they have *no* effect. To the contrary, resolutions such as the Global Road Safety Resolutions may form what is known as "soft law." Although not legally binding, these resolutions can certainly stimulate debate on the issues within the Member States and lead to passage of domestic laws implementing elements of the resolutions.

IV. BEYOND JUST WORDS: ADOPTING A "SYSTEMS" APPROACH TO SOLVE THE CRISIS—USING NHTSA AS A WORLD MODEL

A. Overview

As the World Bank and the WHO noted in their World Report on Road Traffic Injury Prevention, "[g]lobally there is a need to improve the safety of traffic systems for users, and to reduce current inequalities in the risk of incurring road crash injuries."¹⁹¹ The dramatic crash data discussed in Part II of this Article underscore this need for improvement.

To date, many measures designed to improve road safety have failed because countries have tended to treat traffic injuries one dimensionally.¹⁹² According to the Secretary General, "[a]n examination of strategies that have been successful in reducing road traffic injuries suggests that there is an urgent need for a shift to a multisectoral approach, with public health playing an instrumental role."¹⁹³ This role should include (1) data collection,¹⁹⁴ (2) ensuring

incorporated or reflected in customary law or international agreement." RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE U.S. § 102 (1987).

^{190.} U.N. CHARTER art. 13, \P 1. Note that the Assembly may also "call the attention of the Security Council to situations which are likely to endanger international peace and security." *Id.* \P 3.

^{191.} See WORLD REPORT, supra note 2.

^{192.} See SG Report, supra note 64, ¶ 33.

^{193.} Id.

^{194.} The role of data collection, inter alia, is to quantify the health and economic effect of traffic crashes and to coordinate also with other data gathering sources, such as police departments. *Id.* ¶ 38. In the United States, for example, NHTSA collects data not only on motor vehicle crashes, but also on selected non-traffic or non-crash motor vehicle-related hazards, such as information on (1) persons left in a vehicle's passenger compartment or who lock themselves in the trunk of a vehicle in hot weather, (2) children strangled by a vehicle's power window or sunroof, (3) persons killed or injured

appropriate trauma care and rehabilitation for injured persons, (3) monitoring and evaluating road safety interventions, and (4) promoting a multisectoral approach to the prevention of road traffic injuries.¹⁹⁵

Traditionally, a country's transportation ministry has been responsible for ensuring public health vis-à-vis road safety, although other government departments such as police, justice, health, planning, and education have shared that responsibility.¹⁹⁶ In its *World Report*, the WHO and World Bank conclude that the "[e]xperience of several countries [including NHTSA and the Swedish National Road Administration] indicates that effective strategies for reducing traffic injury have a greater chance of being applied if there is a separate government agency with the power and budget to plan and implement its [programs]."¹⁹⁷

Not surprisingly, the WHO and World Bank recommend that each country specifically identify an agency in government to lead its national road traffic safety effort.¹⁹⁸ The lead agency should have the "authority and responsibility to make decisions, control resources and coordinate efforts by all sectors of government—including those of health, transport, education and the police."¹⁹⁹ The Secretary General has recommended that the General Assembly call on Member States to identify a "single agency or focal point [that is] responsible and accountable for road safety issues, with sufficient authority and resources to fulfill a leadership role."²⁰⁰ The European Union recently echoed this recommendation and passed a revised Directive on Product Safety, calling on its Member States to appoint an agency in charge of market surveillance and enforcement of product safety laws.²⁰¹

as a result of a vehicle backing up, and (4) persons killed or injured as a result of vehicle-generated carbon monoxide. See NHTSA, Data Collection Study: Deaths and Injuries Resulting from Certain Non-Traffic and Non-Crash Events, available at http://www.nhtsa.dot.gov/cars/problems/studies/ (n.d.).

^{195.} SG Report, *supra* note 64, ¶ 38.

^{196.} WORLD REPORT, supra note 2, at 6.

^{197.} Id. (citing GORDON W. TRINCA, REDUCING TRAFFIC INJURY: THE GLOBAL CHALLENGE 1988)).

^{198.} Id. at 39.

^{199.} Id.

^{200.} SG Report, supra note 64, \P 44(f) (also citing Oman as an example of a country that has established such an agency, namely, a National Committee for Road Safety, which is an independent institution with the authority to (1) pass legislation, (2) promote the improvement of transportation services, and (3) raise awareness of the road safety problem).

^{201.} See European Parliament and Council Directive 2001/95, art. 6, 2001 O.J. (L 001). The revised Directive came into force on January 15, 2004. The Directive mentions a wide range of monitoring and intervention powers that must be given to the authorities in question, in addition to the power to impose sanctions.

The WHO and World Bank specifically mention the NHTSA as an example of an agency that effectively carries out the public health role identified in its report. This Part explores exactly why the NHTSA may be a model for an institutional response to the problem of road safety. After first describing the state of the U.S. automobile market, this Part shows how NHTSA, the U.S. market's governing authority, attempts to keep the roads free of vehicles with safetyrelated defects. Because of these efforts and successes, this Part argues that NHTSA may serve as a model for other countries seeking to implement the call of the Secretary General, the WHO, and the World Bank.

B. A Brief Drive Into the U.S. Auto Industry

From a global standpoint, the United States is one of the most important markets for automobiles.²⁰² The United States is the world's largest single-country producer and consumer of motor vehicles.²⁰³ In 2004, manufacturers sold 16.9 million passenger vehicles in the United States.²⁰⁴ Consumers spent \$266 billion to purchase these vehicles.²⁰⁵ The United States is the most important country in the world for investment by and competition among global motor vehicle producers.²⁰⁶ Two of the world's largest automakers, General Motors Corporation and Ford Motor Company, are based in the United States.²⁰⁷

203. See OFFICE OF INDUSTRIES, U.S. INTERNATIONAL TRADE COMMISSION, INDUSTRY & TRADE SUMMARY (MOTOR VEHICLES) 3 (2002) [hereinafter U.S. ITC INDUSTRY & TRADE SUMMARY]. As a region, the EU is the world's largest motor vehicle producer, ahead of the NAFTA region (United States, Canada, and Mexico). Id. at 49.

204. Christine Tieney, Big 3 Market Share Dips to All-Time Low, DETROIT NEWS, Jan. 5, 2004, at 1A. In 2003, automakers sold 16.6 million passenger vehicles. See OFFICE OF AUTOMOTIVE AFFAIRS, INTERNATIONAL TRADE ADMINISTRATION, THE ROAD AHEAD FOR THE U.S. AUTO INDUSTRY 2 (2004) [hereinafter U.S. ITA THE ROAD AHEAD]. Passenger vehicles are further broken down into "light trucks" and "passenger automobiles" (or cars). U.S. ITC INDUSTRY & TRADE SUMMARY, supra note 203, at 4. Cars include sedans, station wagons, convertibles, and sports cars. Id. Light trucks include pickup trucks, sport utility vehicles (SUVs), vans, and minivans. Id. Of the 16.6 million units sold, nine million of these were light trucks and 7.6 million of these were cars. See U.S. ITA THE ROAD AHEAD, supra, at 32.

205. See U.S. ITA THE ROAD AHEAD, supra note 204, at 3. Of the \$260 billion, consumers spent a record \$168.7 billion on trucks and \$97.3 billion on cars. Id. at 32.

206. U.S. ITC INDUSTRY & TRADE SUMMARY, supra note 203, at 3.

207. U.S. ITA THE ROAD AHEAD, supra note 204, at 6. GM and Ford are the only remaining U.S.-owned automakers. *Id.* Chrysler Motor Corporation and German-based Daimler-Benz AG merged in 1998 to create a \$92 billion entity, DaimlerChrysler AG,

^{202.} Despite the importance of the U.S. automobile industry, the "fundamentals of the auto industry for every manufacturer are bad," making U.S. auto stocks "some of the most unloved investments on Wall Street." See Meg Richard, Investors Turn Away From Auto Stocks, DETROIT NEWS, July 4, 2004, at 5B (quoting Phil Guziec, an equity analyst from Morningstar Inc.). The "bad fundamentals" include lower sales, higher fuel costs, and rising interest rates, as well as overproduction. Id.

Automobile production is one of the largest manufacturing industries in the United States, contributing substantially to employment, productivity, and economic growth.²⁰⁸ According to the Alliance of Automobile Manufacturers, a trade association of nine car and light truck manufacturers, "no other industry" is as connected to U.S. manufacturing or generates more retail business or employment than the automobile industry.²⁰⁹ Indeed, the Alliance notes that the automobile industry is responsible for 6.6 million jobs in the United States, or five percent of all private sector jobs.²¹⁰ When jobs dependent on the industry are included, the Alliance notes that the automobile industry provides one of every ten jobs in the United States, or ten percent of all private sector jobs.²¹¹ In short, "[n]o other industry is linked to so much U.S. manufacturing or generates more retail business and employment."²¹²

Overseeing this important industry is the National Highway Traffic Safety Administration. NHTSA has more than 600 employees and a \$434 million annual budget (FY 2003) and is led by an Administrator (currently Dr. Jeffrey W. Runge, a nationally recognized physician in motor vehicle injury care and prevention).²¹³ Housed within the Department of Transportation (DOT),²¹⁴ NHTSA's stated mission is to "save lives, prevent injuries and reduce traffic-

210. Alliance of Automobile Manufacturers, Fact Sheet (2001), available at http://autoalliance.org/archives/000109.html. According to the Alliance, the automobile industry employs more than 1.3 million Americans; suppliers employ more than 2.2 million Americans; and industry employee support another 3.1 million jobs in their communities. Alliance of Automobile Manufacturers, Automobile People, They're Everywhere (2005), available at http://www.autoeverywhere.com.

211. About the Alliance, supra note 209.

212. Id.

213. NHTSA, Welcome to the National Highway Traffic Safety Administration, available at http://www.nhtsa.dot.gov/nhtsa/welcome/message.html.

214. National Traffic and Motor Vehicle Safety Act, 49 U.S.C. § 30101 (2004). Pursuant to 49 C.F.R. § 1.50 (2004), DOT has delegated much of its authority under the Vehicle Safety Act to NHTSA. The original Act conferred authority to issue safety standards on the Secretary of Commerce. See 15 U.S.C. §§ 1392(a), 1391(10) (repealed). By subsequent legislation, Congress transferred all powers of the Act to the Secretary of Transportation. See 49 U.S.C. § 1655(a)(6)(A). The Secretary delegated these powers, with several exceptions, to the Federal Highway Administrator until March 22, 1970, at which time they were withdrawn and delegated to the National Highway Safety Bureau (the predecessor of NHTSA) contemporaneous with the Bureau's separation from the Highway Administrator and elevation within the Department to the status of an Administration. By terms of the Highway Safety Act of 1970, the National Highway Safety Bureau became the NHTSA.

which at the time was the largest merger (acquisition) ever undertaken in the industrial world. Id.

^{208.} U.S. ITC INDUSTRY & TRADE SUMMARY, supra note 203, at 3.

^{209.} Alliance of Automobile Manufacturers, *About the Alliance* (2005), *available at* http://www.autoalliance.org/about/. The nine manufacturers are BMW Group, DaimlerChrysler, Ford Motor Company, General Motors, Mazda, Mitsubishi Motors, Porsche, Toyota, and Volkswagen.

related health care and other economic costs."²¹⁵ The agency carries out this mission by developing, promoting, and implementing educational, engineering, and enforcement programs.²¹⁶ NHTSA's

215. See Long Range Strategic Planning, 69 Fed. Reg. 39,543 (June 30, 2004). NHTSA's commitment to improving motor vehicle safety extends beyond the borders of the United States. NHTSA's priorities in international activities are as follows: (1) identifying, developing, and adopting best practices around the world for vehicle safety research programs and safety standards; (2) minimizing differences in vehicle safety standards by coordinating research and assessing regulatory alternatives; (3) coordinating with other countries in gathering reliable data; (4) helping other countries establish vehicle and traffic safety programs; and (5) promoting public participation by inviting all persons and organizations to be heard and considered. See NHTSA, Agency Priorities in International Activities, available at http://www.nhtsa.dot.gov/cars/rules/international/Priority/index.html (n.d.).

216. Agency Priorities in International Activities, supra note 215. To be sure, there have been some controversial steps along the way, such as "ignition interlocks," which provided for vehicles built in 1974 to prevent the engine from operating if either the driver or front seat outboard passenger failed to fasten his safety belt. Public resistance to the belt-starter interlock eventually reached Congress in 1974, which then amended the Vehicle Safety Act to prohibit NHTSA from requiring or permitting as a means of compliance any seat belt interlock system. See National Traffic and Motor Safety Act Amendments of 1974, Pub. L. No. 93-492, 88 Stat. 1470. In signing the bill into law, President Ford noted:

This system had the laudable goal of encouraging motorists to wear their safety belts. In practice, however, it has proved to be intensely unpopular with the American motorist. I can fully understand why drivers might object to being forced by the Federal Government, in effect, to buckle up. This constitutes an unacceptable governmental intrusion into the life of the individual.

President Gerald R. Ford, Statement on Signing the Motor Vehicle and School Bus Safety Amendments of 1974 (Oct. 28, 1974), available at http://www.presidency. ucsb.edu/ws/index.php?pid=45148st=drivers&st=. NHTSA has been criticized by both the industry and safety advocates. For an example of industry criticism, see Richard Dauch, Commentary, High Costs Imperil Big 3, DETROIT NEWS, May 30, 2004, at 16A (stating that the "regulatory compliance burden" in the United States "is the equivalent of a 12 percent excise tax" and contributes to a "disadvantage burdening U.S. [automobile] manufacturers," which "equates to nearly \$5 per hour worked relative to [non-U.S.] manufacturers"). Mr. Dauch, who is the chairman and chief executive officer of American Axle & Manufacturing (a leading automotive supplier) also said that tort litigation in the United States "adds nearly \$1 per hour of expense." Id. According to Bill Ford, CEO of Ford Motor Company, companies in the U.S. paid \$233 billion in legal costs in 2002; moreover, U.S. companies spend twice as much on lawsuits as companies in other industrial companies. See Jeff Plungis, Bill Ford Calls for Health Care Fix, DETROIT NEWS, Nov. 11, 2004, at 2C; see also PATRICK J. BUCHANAN, WHERE THE RIGHT WENT WRONG 171 (2004) (citing Gus Stelzer, former GM executive, as claiming that "50 percent of the sticker price of a new Cadillac goes to pay taxes-Social Security, Medicare, state and federal income taxes withheld from the wages and salaries of GM workers and executives, GM's corporate tax, the property taxes on factories, offices, and dealerships, and state sales taxes"). For an example of criticism coming from the media, see Jayne O'Donnell, Will More Safety Rules Save Many More Lives? Regulators, Automakers, Consumer Advocates, Lawmakers in Debate, USA TODAY, Feb. 26, 2004, at 1B (citing "USA Today research and NHTSA interviews" as showing that NHTSA "might be at the point of diminishing returns when it comes to building more safety into cars. Aside from safety belts and air bags,

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enforcement programs could serve as models for other countries. For this reason, these programs are discussed here in more detail.

C. Enforcement Programs

NHTSA's chief mission is "setting and enforcing safety performance standards and investigating safety defects in motor vehicles."²¹⁷ In implementing its enforcement programs, NHTSA is governed by the National Traffic and Motor Vehicle Safety Act (hereinafter, Vehicle Safety Act).²¹⁸ The purpose of the Vehicle Safety Act, originally passed in 1966, "is to reduce traffic accidents and deaths and injuries resulting from traffic accidents."²¹⁹ NHTSA effects this purpose through three main activities: (1) setting safety standards; (2) investigating potential safety-related defects and, if necessary, ordering a recall; and (3) overseeing recalls.

1. Set Safety Standards

NHTSA prospectively prescribes safety standards that all new motor vehicles must meet before they may be sold.²²⁰ These "federal motor vehicle safety standards" (FMVSS) set performance levels for those parts of the vehicle that most affect safe operation (e.g., brakes, tires, lighting) or that protect drivers and passengers from death or serious injury in the event of a crash (e.g., air bags, safety belts).²²¹

220. 49 U.S.C. § 30111.

221. For background on the NHTSA rulemaking process to adopt or amend safety standards, see Safety Research & Strategies, Inc., A Brief Overview of the

no rules have been estimated to reduce the car crash death toll by more than 800 lives a year").

^{217.} NHTSA, About the National Highway Traffic Safety Administration, available at http://www.nhtsa.dot.gov/nhtsa/whatis/ (n.d.).

^{218.} National Traffic and Motor Vehicle Safety Act, 49 U.S.C. §§ 30101-70 (2004).

⁴⁹ U.S.C. § 30101; see also Senate Commerce Committee Report and 219. Conference Report accompanying bill; United States v. Ford Motor Co., 574 F.2d 534, 536 (D.C. Cir. 1978) (finding the purpose of the Vehicle Safety Act is to protect the public against unreasonable risks of accidents that might be caused by defects in design, construction, or performance of motor vehicles and against unreasonable risk of death or injury as a result of such accidents); Chrysler Corp. v. Dep't of Transp., 472 F.2d 659, 671 (6th Cir. 1972) (finding explicit purpose of the Vehicle Safety Act, as amplified in the legislative history, is to foster the development and application of new technology by manufacturers to improve safety design of automobiles as readily as possible); Chamberlain v. Ford Motor Co., 314 F. Supp. 2d 953, 962-63 (N.D. Cal. 2004) (finding "primary" purpose of the Vehicle Safety Act, based on the text of the Act as well as legislative history [i.e., Senate Commerce Committee Report and Conference Report accompanying bill], is "safety"); Truck Safety Equip. Inst. v. Kane, 466 F. Supp. 1242, 1248 (M.D. Pa. 1979) (classifying the Vehicle Safety Act as a "detailed and pervasive regulatory scheme designed to reduce traffic accidents and deaths and injuries to persons resulting from traffic accidents throughout the United States by requirement of uniform national standards").

On March 1, 1967, FMVSS 209, which regulates seat belt assemblies, was the first standard to become effective.²²² The first safety standards were based mainly on existing industry standards from the Society of Automotive Engineers.²²³

Federal law establishes a self-certification system, which means that motor vehicle and equipment manufacturers themselves certify that their products comply with all applicable FMVSSs.²²⁴ NHTSA enforces compliance with FMVSSs by randomly purchasing and testing vehicles.²²⁵ If a vehicle is found not to comply with applicable standards or is found to have a safety defect, the manufacturer is responsible for remedying the noncompliance or defect at no charge to the customer.²²⁶ NHTSA does not test, approve, disapprove, endorse, or grant clearances for products before their introduction into the retail market.²²⁷

When considering safety standards, NHTSA's goal is "to reduce the number of crashes" by (1) identifying safety problem areas, (2)

National Highway Traffic Safety Administration's Rulemaking Process, available at http://www.strategicsafety.com/overview_of_rulemaking.html (n.d.).

222. A number of FMVSSs became effective for vehicles manufactured on and after January 1, 1968. U.S. Dept. of Transportation, *Federal Motor Vehicle Safety Standards and Regulations Foreword* (Mar. 1999), *available at* http://www.nhtsa.dot. gov/cars/rules/import/fmvss/#SN209. These initial safety standards covered the strength and quality of safety belts and anchorages, safety glass, impact-absorbing steering columns and rearward displacement in a frontal collision, safety door latches and hinges, location of dash instrumentation, padded dash and visors, and mounting of fuel tanks and filler spouts. Other safety standards covered performance criteria for brakes, tire tread, lights, and windshield wipers. *Id*. New standards and amendments to existing standards are published in the Federal Register.

223. Id. According to the Society's website:

SAE is a non-profit educational and scientific organization dedicated to advancing mobility technology to better serve humanity. Over 83,000 engineers and scientists, who are SAE members, develop technical information on all forms of self-propelled vehicles including automobiles, trucks and buses, offhighway equipment, aircraft, aerospace vehicles, marine, rail, and transit systems. SAE disseminates this information through its meetings, books, technical papers, magazines, standards, reports, professional development programs, and electronic databases.

SAE International, SAE Purpo se and Vision (2005),available at 1967, the General Service http://www.sae.org/about/general/vision.htm. In Administration used these safety standards, Federal Motor Vehicle Safety Standards and Regulations Foreword, supra note 222, in purchasing vehicles for the federal government. There were also efforts to establish federal safety belt laws and brake fluid laws before 1966. See Pub. L. No. 88-201, §§ 1-3, 77 Stat. 361 (repealed 1966); Pub. L. No. 87-637, §§ 1-3, 76 Stat. 437 (repealed 1966).

224. National Traffic and Motor Vehicle Safety Act, 49 U.S.C. § 30115 (2005).

225. Letter from Samuel J. Dubbin, Chief Counsel, NHTSA, to Ken Van Scriver, Scriver Corp. (Oct. 13, 1995), *available at* http://www.nhtsa.dot.gov/cars/rules/interps/gm/95/nht95-4.97.html.

226. National Traffic and Motor Vehicle Safety Act, 49 U.S.C. § 30120 (2005); see also infra note 266 and accompanying text.

227. Letter from Samuel J. Dubbin, supra note 225.

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developing countermeasures, and (3) collecting and analyzing information.²²⁸ As a federal agency, NHTSA follows the rulemaking procedures set forth in Administrative Procedure Act.²²⁹

Accordingly, when proposing a new or revised standard, NHTSA publishes a "Notice of Proposed Rulemaking" (NPRM) in the *Federal Register*. The notice contains:

(1) a statement of the time, place, and nature of the proposed rulemaking proceeding; (2) a reference to the authority under which it is proposing the rule (e.g., statutory mandate); (3) a description of the subjects and issues involved or the substance and terms of the proposed rule; (4) a statement of the time within which written comments must be submitted; and (5) a statement of how and to what extent interested persons may participate in the proceedings.²³⁰

The "interested persons" are usually companies affected by the proposal, such as automobile manufacturers or parts suppliers. Consumer groups, insurance companies, and safety advocates often participate too.

After considering the comments submitted to the NPRM, NHTSA moves toward publishing a "final rule."²³¹ The final rule is prepared by the office concerned (in the case of a safety standard, the Senior Associate or Administrator for Vehicle Safety²³²) as well as the Office of the Chief Counsel.²³³ The final rule is then submitted to the Administrator of NHTSA. If the Administrator adopts it, it is published in the *Federal Register*,²³⁴ and the final rule then becomes law. Objecting parties may file "petitions for reconsideration" within forty-five days of publication; however, the Administrator does not have to consider "repetitious petitions."²³⁵

Although determining the precise effect of safety standards is difficult, one estimate is that the "combined effect of all the standards [reduces] occupant fatality risk by . . . about 15–20%."²³⁶ Even if the exact effect is not precisely knowable, the standards have certainly

^{228.} NHTSA, NHTSA Vehicle Safety Rulemaking Priorities and Supporting Research: 2003-2006, available at http://www.nhtsa.dot.gov/cars/rules/rulings/ PriorityPlan/FinalVeh/Index.html#idx1.

^{229. 5} U.S.C. §§ 551-706 (2004). For an excellent description of the rulemaking process, see Cary Coglianese, *E-Rulemaking: Information Technology and Regulatory Policy*, Regulatory Policy, Program Report No. RPP-05 (2004), at 5-11.

^{230. 49} C.F.R. § 553.15 (2005); see also 49 C.F.R. §§ 553.13, 553.17 (2004).

^{231.} See 49 C.F.R. § 553.29 (2004).

^{232.} See 49 C.F.R. § 501.8 (2005).

^{233.} Id. § 553.29.

^{234.} Id.

^{235.} See 49 C.F.R. § 553.35(c) (2005).

^{236.} See EVANS, supra note 3, at 117.

made a contribution to vehicle safety.²³⁷ As of December 2004, NHTSA had eighty-four active rulemaking proceedings.²³⁸

2. Investigate Safety-Related Defects

In passing (and amending) the Vehicle Safety Act, Congress empowered NHTSA to investigate noncompliance or whether a safety-related defect²³⁹ exists and, if so, to issue a recall order—that

238. See Harry Stoffer, No Longer a Rule for Every Problem; NHTSA Focuses of Fewer, Broader Areas, AUTOMOTIVE NEWS, Dec. 6, 2004, at 4.

The Vehicle Safety Act defines the term "defect" rather circularly, to 239.include "any defect in performance, construction, components, or materials in motor vehicles or motor vehicle equipment." 49 U.S.C. § 30102(a)(2) (2000). A defect is "safety-related" if it presents an "unreasonable risk of accidents." 49 U.S.C. § 30102(a)(8). More specifically, a vehicle or vehicle component contains a "safetyrelated defect" if it is subject to a significant number of failures in normal operation, including failures that occur either during specified use or result from owner abuse (including inadequate maintenance) that is reasonably foreseeable, but excluding failures attributable to normal deterioration of a component as a result of age and wear. See United States v. General Motors Corp., 518 F.2d 420, 441 (D.C. Cir. 1975) (Wheels). Prima facie proof of a defect in a class of vehicles requires only a showing that a "significant" number in the class failed as a result of the defect. Id. A "significant" number is merely a "non-de minimis" quantity; the "significant" number need not be "a substantial percentage of the total." Id. at 438 n.84. Evidence of a non-de minimis number of defect-induced failures establishes a rebuttable presumption of the existence of a class-wide defect in the vehicles, and the burden of proof shifts to the motor vehicle manufacturer to rebut the government's prima facie showing. In determining the existence of a "defect," courts should also adopt a "commonsense" approach in ascertaining what constitutes an unreasonable risk. See United States v. General Motors Corp., 565 F.2d 754, 757 (D.C. Cir. 1977) (Carburetors). But as a general proposition, any defect that involves a loss of control presumptively presents an unreasonable risk of accidents as a matter of law. See United States v. General Motors Corp., 561 F.2d 923 (D.C. Cir. 1977) (per curiam) (Pitman Arms), cert. denied, 434 U.S. 1033 (1978). A defect that "creates problems" only in the presence of certain weather conditions does not per se constitute a "safety-related" defect because such a defect would not "lead to failures or crashes." See Ctr. for Auto Safety, Inc. v. NHTSA, Civ. No. 04-392 (ESH), slip op. at 10, 24 (D.D.C. Sept. 30, 2004) (quoting Letter from NHTSA, to Center for Auto Safety (Nov. 1, 2002)). For example, a "defect" that creates problems only after long-term exposure to snow may constitute a "safety-related" defect in cold weather states, but it is not a "safety-related defect" in hot weather states, where the defect "would not adversely affect 'the performance of the vehicle' in a way that contributes to an 'unreasonable risk of death or injury in an accident." Id. at 21-22 (citing 49 U.S.C. § 30102(a)(8)). According to NHTSA, whether a particular risk is "unreasonable"

[c]annot be quantified and must be decided after consideration of all relevant circumstances. ODI assesses the risk to safety by evaluating the complaint reports, the potential for injury, the defect trend (is it likely to worsen over time), and comparing the risk to that presented by peer vehicles or items of equipment.

See Memorandum from Kathleen C. DeMeter, Director, Office of Defects Investigation (ODI), to Alrik Svenson et al. (July 30, 2003) (on file with NHTSA under filename "INME-EA02037-16123P.pdf" at investigation EA02-037). An absence of injuries,

^{237.} See also id.

is, require a manufacturer to notify consumers and remedy the defect or noncompliance.²⁴⁰

The Vehicle Safety Act grants the DOT broad powers (which DOT has delegated to NHTSA) to conduct investigations necessary to the Act's enforcement.²⁴¹ Manufacturers are required to maintain information and to produce such information upon request in conjunction with an investigation.²⁴² NHTSA may ask manufacturers for performance or technical data and may require manufacturers to furnish written answers under oath.²⁴³

NHTSA's defect screening and investigation process is conducted among four divisions within the Office of Defects Investigation (ODI), which is the enforcement arm of NHTSA.²⁴⁴ The following describes this process in more detail:²⁴⁵

Divisions of ODI. The four divisions of ODI are (1) Defect Analysis Division; (2) Vehicle Control Division; (3) Vehicle Integrity Division; and (4) Medium and Heavy Duty Division. The process consists of an analysis to identify potential safety defects ("screening"), an agreement to begin an investigation ("review panel"), preliminary evaluation ("investigation"), engineering analysis ("upgraded investigation"), and product recall. Within the Defect Analysis Division, eight analysts conduct the "screening" for potential safety defects. 24 investigators in the Vehicle Control, Vehicle Integrity, and Medium and Heavy Duty Vehicle Divisions conduct the defects investigations.

Defect Analysis and Identification. The Defect Analysis Division is responsible for collecting and analyzing information to identify potential safety defects, which can take one to three months (i.e.,

240. 49 U.S.C. § 30166 (2000).

241. 49 U.S.C. § 30166(b)(1). NHTSA's information gathering powers under the Vehicle Safety Act includes issuing subpoenas to compel "any person . . . to provide information at any information gathering hearing." See 49 C.F.R. § 510.5(a) (2005).

242. 49 U.S.C. § 30166(e).

243. 49 U.S.C. § 30166(f).

244. In 2000, the ODI had forty-seven employees, which reflects the same number it had in 1980. Its budget is about \$3 million, which is a third lower than its budget in 1980 (after adjusting for inflation). See Cindy Skrzycki, NHTSA Will Share Hearing Spotlight, WASH. POST, Sept. 5, 2000, at E1. A perceived understaffing and underfunding (when compared to earlier years) led Congress after the Ford-Firestone hearings to pass legislation authorizing additional funding for NHTSA. See Transportation Recall Enhancement, Accoutability, and Documentation (TREAD) Act, Pub. L. No. 106-414, 114 Stat. 1800 (2000). As a result, the number of employees and annual budget will likely continue to increase.

245. Unless otherwise noted, the description of the process reflects the description provided by the Office of the Inspector General (Office of the Secretary of Transportation). See NHTSA, Follow-Up Audit of the Office of Defects Investigation (Sept. 23, 2004), at 37-38, available at http://www.oig.dot.gov:8080/StreamFile?file=/ data/pdfdocs/mh2004088.pdf.

although not necessarily a "critical element of a safety relatedness finding," is an important factor in the determination of a safety-related defect. *See* Closing Resumé, Engineering Analysis of NHTSA No. EA 03-020, at 4.

"screening").²⁴⁶ During this time, staff members interview and verify complaints by phoning owners and vehicle operators; clarifying information in complaints filed with NHTSA; and comparing data from peer vehicles (e.g., warranty claims; property damage; field reports). When sufficient consumer complaint and industry information is compiled to indicate a potential safety defect, an analyst in the Defect Analysis Division prepares an initial evaluation (IE) package describing pertinent information about the potential defect, and forwards it to the Defect Analysis Division Chief for final review and preparation. After the Chief's review, the package is forwarded to members of the review panel two weeks before the review panel meeting.

Review Panel. The review panel, which consists of the ODI Director; Assistant Director; the four ODI Division Chiefs; and usually screening and investigative staff members, meets biweekly to discuss and evaluate investigation proposals presented in IE packages. The panel decides whether or not to open an investigation. If a decision is made to open an investigation, personnel in the appropriate investigative division prepare a preliminary evaluation (PE) opening resumé to explain the reasons for opening the investigation.²⁴⁷ Manufacturers have about six weeks to provide written answers to NHTSA's PE questions. A PE usually lasts four months.²⁴⁸ If the manufacturer does not issue a recall, NHTSA will either close the file or upgrade to the investigation. According to NHTSA, ODI opens between 80 and 100 defect investigations per year, of which more than half result in recall.²⁴⁹

Engineering Analysis. During the PE stage, if the ODI Director and responsible Division Chief decide that more analysis of the potential safety defect is needed, they recommend an upgrade to an engineering

246. Information received and screened in ODI includes complaints submitted by consumers through (1) NHTSA's toll-free hotline, (2) NHTSA's website, and (3) traditional letters (snail mail). ODI personnel enter these complaints into a complaint database, which is routinely monitored to identify potential defect trends. These three sources of complaints (phone, website, and mail) generate at least 50,000 complaints per year. Other sources of information received and reviewed include reports from consumer groups, accident investigation teams, other governmental agencies, sources under contract to NHTSA, manufacturer technical service bulletins (submitted on a regular basis), automotive periodicals, manufacturer recalls, research reports, and reports from state and local police agencies. *See* U.S. GENERAL ACCOUNTING OFFICE, MOTOR VEHICLE SAFETY: NHTSA'S ABILITY TO DETECT AND RECALL DEFECTIVE REPLACEMENT CRASH PARTS IS LIMITED 8 (2001) [hereinafter GAO].

247. A PE can also be opened as the result of a petition analysis, which is the process ODI uses to analyze individual petitions, usually from consumer agencies. See 49 U.S.C. § 30162; 49 C.F.R. § 552. Any person may submit a petition requesting NHTSA to investigate an alleged safety-related defect. After conducting a technical analysis of this petition, ODI informs the petitioner whether the petition has been granted or denied. If granted, NHTSA opens a formal investigation. If denied, NHTSA must set forth and publish the reasons in the *Federal Register*.

248. During the PE, ODI obtains certain information from the manufacturer, such as data on customer complaints, vehicle crashes, injuries, warranty claims, product modifications, and part sales. The manufacturer may also present its views regarding the alleged defect. ODI usually needs about four months to complete the PE, which is closed because either further investigation is unwarranted or the manufacturer has decided to recall its product.

249. See GAO, supra note 246, at 9.

analysis (EA). PEs are upgraded to EAs in about 26 percent of the cases.²⁵⁰ In the EA, ODI conducts a more thorough analysis of the character and scope of the alleged defect. This phase of the investigation supplements information gathered during the PE. The supplemental information is obtained not only through inspections, surveys, and tests, but also through additional information provided by the manufacturer. Manufacturers have about seven weeks to provide written answers to NHTSA's EA questions. An EA can last up to one year. According to a NHTSA spokeswoman, investigations at the EA level lead to vehicle recalls approximately 60 to 80 percent of the time.²⁵¹ At the completion of the EA, if the manufacturer does not issue a recall, NHTSA will either close the file or move the investigation to the "Panel".

 $Panel.^{252}$ If ODI continues to believe that a safety-related defect trend may exist, then the Associate Administrator for Safety Assurance²⁵³ is briefed. With the Associate Administrator's approval, the ODI investigator, for purposes of peer review, briefs a panel of experts (including the general counsel) from within NHTSA.

Recall Request Letter and Initial Decision. ODI then notifies (verbally) the manufacturer of the panel's result. At this point, the manufacturer may present any new analysis or data. If the panel agrees with ODI's recommendations, then ODI may send a formal "Recall Request Letter" to the manufacturer.²⁵⁴ If the manufacturer refuses to conduct a recall

250. See Auto Industry Report: Minivans May Be Recalled, DETROIT FREE PRESS, July 13, 2004, available at http://www.freep.com/money/autonews/irep13e_20040713.htm; see also Rip Watson, NHTSA Investigating Ford Truck Fires; 2000-Model-F150s Could Have Problem in Cruise Switch, WASH. POST, Nov. 24, 2004, at E03 (claiming that PEs are upgraded to EAs in "25 percent" of the cases).

251. See Greg Schneider, Honda Fire Inquiry Reopened, WASH. POST, Sept. 14, 2004, at E01; see also Auto Industry Report, supra note 250 (stating that "about seven in ten" of the cases that reach the EA level result in a recall).

252. The remaining account (Panel; Recall Request Letter and Initial Decision; and Public Meeting) is based in large part on 49 C.F.R. § 554 as well as NHTSA, *Motor Vehicle Defects and Recall Campaigns, available at http://www.nhtsa.gov/Hotline/RecallProcess/RecallProcess.htm.* Rather than cite every sentence to this regulation, the Author wishes to refer the reader to this regulation for further reading.

253. The Associate Administrator for Safety Assurance overseas all ODI (and Office of Vehicle Safety Compliance) operations and reports directly to the Executive Director of NHTSA. As the principal advisor to the NHTSA Administrator on the enforcement of FMVSSs and regulations, he or she directs and administers programs to ensure compliance with federal laws, standards, and regulations relating to motor vehicle safety, fuel economy, theft prevention, damageability, consumer information, and odometer fraud. See 49 C.F.R. § 501.3(c)(3) (2005).

254. Before 1995, ODI sent the "Recall Request Letter" at the close of the EA phase, but not necessarily after the manufacturer had the opportunity to present any new analysis or data. This practice led to three main criticisms by Congress: (1) the Letter—as it was being used—could have an adverse effect on the safety reputation of the product and manufacturer; (2) it was being exploited by product liability lawyers; and (3) it could be issued by ODI personnel without having appropriate input from higher-level agency officials. Responding to this criticism, NHTSA revised its process in 1995 to (1) place the "Recall Request Letter" at the end of ODI's technical evaluation and (2) provide for agency-wide input into the decision as to whether such a letter should be sent at all. After ODI has analyzed all technical information, it calls a defect panel to meet and provide a technical peer review. If the panel agrees, ODI informs the

in response to the Recall Request Letter, then NHTSA's Associate Administrator for Safety Assurance may issue an "Initial Decision" that a safety-related defect or noncompliance exists.

Public Meeting. An Initial Decision is followed by a public meeting on the issue, where the manufacturer and all interested members of the public can present information and arguments. Prior to the public meeting, ODI sends the manufacturer all information justifying NHTSA's decision to order the recall. Also, a copy of the file is made available for the public through NHTSA's Technical Information Services. During the meeting, the manufacturer may attempt to refute NHTSA's evidence and offer new evidence and data. Interested parties, such as trade associations, consumer advocate groups, and consumers may also present information that NHTSA's Administrator may consider before finally making a determination on the existence of a safety-related defect or noncompliance. After the meeting, the NHTSA Administrator reviews the entire investigative record. Upon review, she or he may issue a Final Decision that a safety-related defect or noncompliance exists and order the manufacturer to conduct a recall pursuant to the notification and remedy duties set forth under the Vehicle Safety Act.²⁵⁵

Once NHTSA has made a Final Decision of noncompliance or a safety-related defect and issues a recall order, the affected manufacturer has two options: either challenge the order in federal district court²⁵⁶ or ignore the Final Decision and attack it in an enforcement action if NHTSA sues.²⁵⁷ This latter strategy, however, risks exposing the company to massive penalties if the court sustains the Final Decision, because failing to comply with a recall order is

257. Technically, NHTSA does not bring the enforcement action. If NHTSA wishes to sue in order to enforce compliance with a recall order, NHTSA must refer the matter to the Attorney General, who may bring an enforcement action in a federal district court to recover civil penalties as well as to obtain appropriate injunctive relief. See 49 U.S.C. § 30163 (2005).

manufacturer (verbally) that it plans to send the letter. After a set amount of time (usually several days), ODI sends the letter (assuming the manufacturer takes no action). See Memorandum from Kathleen C. DeMeter, supra note 239.

^{255.} Final Decisions of no safety-related defect or no noncompliances must be published in the Federal Register. See 49 C.F.R. § 554.11(c) (2005).

Judicial review of agency determinations may be sought under 28 U.S.C. 256 § 1331 (general federal question jurisdiction statute); 28 U.S.C. § 1337 (2005) (federal jurisdiction over commerce issues); 28 U.S.C. § 2201 (2005) (Declaratory Judgment Act); and terms of the Administrative Procedure Act, 5 U.S.C. § 702 (2000). On the Administrative Procedure Act (APA), see General Motors Corp. v. Volpe, 321 F. Supp. 1112 (D. Del. 1970), modified on other grounds, 457 F.2d 922 (3d Cir. 1972) (finding a Final Decision constitutes "final agency action" within the meaning of 5 U.S.C. § 704). Presumably, the Mandamus and Venue Act, 28 U.S.C. § 1361(2005) (permitting the federal district courts to hear suits "in the nature of mandamus to compel an officer or employee of the United States or any agency thereof to perform a duty owed to the plaintiff") would also serve as a basis for jurisdiction. Interestingly, the Vehicle Safety Act does not provide an independent basis for jurisdiction until after a manufacturer refuses its notification and remedy duty. In other words, the Vehicle Safety Act prefers for the government to bring an action to restrain a manufacturer's violation so much so that it does not even provide the manufacturer with a basis of jurisdiction to sue the government. See United States v. General Motors Corp., 518 F.2d 420 (D.C. Cir. 1975).

itself a violation of the Act.²⁵⁸ Specifically, the Vehicle Safety Act provides for civil penalties of \$5,000 per violation and \$16,050,000 for a related series of violations.²⁵⁹

Once a case is in court, regardless of whether the suit is brought by the manufacturer or the government, the manufacturer is afforded trial de novo with the burden of proof on the government to establish noncompliance or the existence of a safety-related defect by a preponderance of the evidence.²⁶⁰ While the case is pending, the manufacturer may be required to notify consumers in writing that NHTSA made a Final Decision of noncompliance or a safety-related defect but that the merits of the Final Decision are being challenged

259. The Vehicle Safety Act considers a "violation" the manufacture, sale, delivery, or importation of substandard vehicles. See 49 U.S.C. §§ 30112, 30117-30122, 30165. Frustration with the perceived malfeasance by top management at Ford and Firestone for their handling of the Firestone tire recall in 2000 resulted in the increased penalties; indeed, some "safety advocates" even urged Congress to establish penalties with no ceilings. See also Civil Penalties, 69 C.F.R. § 57864 (2004) (amending 49 C.F.R. § 578.6(a)(1)-(2) to increase the maximum aggregate civil penalty from \$15,000,000 to \$16,050,000 for a related series of motor vehicle safety violations).

260. United States v. General Motors Corp., 518 F.2d 420 (D.C. Cir. 1975). "[T]he government may discharge its burden of establishing the defect by showing a *significant number of failures* without any showing of cause," *id.* at 427 (emphasis added), but "the manufacturer may prove, as an affirmative defense, that the failures resulted from unforeseeable owner abuse (gross abuse) or unforeseeable neglect of vehicle maintenance." *Id.* In a de novo proceeding to enforce a Final Decision, the government must prove by a preponderance of the evidence (1) the existence of a "defect which is (2) related to "motor vehicle safety." *Id.* at 438, 442 n.112 (citations omitted); *see* United States v. Ford Motor Co., 574 F.2d 534, 537 n.5 (D.C. Cir. 1978) (quoting 15 U.S.C. § 1412 (Supp. V 1975)). First, to establish the existence of a defect, the government must show only that a component

[i]s subject to a significant number of failures in normal operation, including failures either occurring during specified use or resulting from owner abuse (including inadequate maintenance) that is reasonably foreseeable (ordinary abuse), but excluding failures attributable to normal deterioration of a component as a result of age and wear.

General Motors, 518 F.2d at 427 (noting as factors courts should consider in determing "[w]hether a defect exists in a particular case [to be] the nature of the component involved, the circumstances in which the failure occurred, and the number of failures experienced"). Second, to establish the relationship of a defect to "motor vehicle safety," the government need only show an "unreasonable risk of accidents, death, or injury" presented by the established defect. *Id.* at 442.

^{258.} See 49 U.S.C. § 30165 (2005); Ford Motor Co. v. Coleman, 402 F. Supp. 475, 490 (D.D.C. 1975), aff'd, 425 U.S. 927 (1975) (upholding the constitutionality of the Vehicle Safety Act's penalty scheme to deter frivolous litigation by placing a risk of civil penalties on the manufacturer that litigates the merits of a recall order after failing to obtain temporary relief). But see United States v. Chrysler, 158 F.3d 1350, 1354 (D.C. Cir. 1998) (holding that due process principles and the Vehicle Safety Act, 49 U.S.C. §§ 30112(b)(2)(4), 30115 (2004), protect vehicle manufacturers from being found out of compliance with an FMVSS if NHTSA has failed to give fair notice of what is required by that FMVSS; absent such notice, NHTSA may not order a recall based solely on noncompliance).

in court by the manufacturer.²⁶¹ In the history of NHTSA, only a handful of cases have ever gone this far.²⁶²

3. Oversee Recalls

In practice, most disputes over noncompliance or the existence of a safety-related defect are resolved through *voluntary* recalls. During the thirty-three year period from the Vehicle Safety Act's birth in 1966 to 1999, automobile manufacturers conducted more than 7,200 vehicle recalls that involved more than 259 million vehicles; nearly *all* of these recalls were initiated voluntarily by manufacturers.²⁶³ In 2003, vehicle manufacturers conducted 529 recalls.²⁶⁴ Of these recalls, manufacturers undertook 75 percent (401 recalls) without NHTSA having even investigated the underlying issue.²⁶⁵

In conducting a recall, the Vehicle Safety Act requires manufacturers to (1) notify all affected consumers and dealers in writing and (2) remedy the underlying problem at no cost to the consumer; together, this is known as the "notification and remedy duty."²⁶⁶ To ensure that manufacturers fulfill this duty and

263. See Letter from Josephine S. Cooper, President & CEO, Alliance of Automobile Manufacturers, to Dr. Sue Bailey, Administrator, National Highway Traffic Safety Administration 2 (Sept. 15, 2000) (on file with author). Historically, nearly 80% of recalls are conducted without any NHTSA involvement. *Id.* The remaining 20%, again conducted voluntarily, are "NHTSA-influenced." *Id.* Indeed, in these few cases legitimate engineering and interpretive questions may exist regarding the presence or absence of a "safety-related defect." Yet even in these cases the issues are reconciled through the NHTSA investigation. *Id.*

264. See Motor Vehicle Safety; Reimbursement Prior to Recall, Response to a Petition for Reconsideration, 69 Fed. Reg. 49,819, 49,821 (Aug. 12, 2004) (in relation to 49 C.F.R. §§ 573, 577).

265. Motor Vehicle Safety; Reimbursement Prior to Recall, Response to a Petition for Reconsideration, 69 Fed. Reg. at 49,819, 49,821

See 49 U.S.C. §§ 30118(c), 30120 (2000). Under 49 U.S.C. § 30118(c)(1), a 266. manufacturer of a motor vehicle or replacement equipment must notify NHTSA if the manufacturer "learns the vehicle or equipment contains a defect and decides in good faith that the defect relates to motor vehicle safety." Notification is also required if a manufacturer "decides in good faith that the vehicle or equipment does not comply with an applicable motor vehicle safety standard issued under this chapter." See 49 U.S.C. § 30118(c)(2). The manufacturer's self-start remedy provisions now found in 49 U.S.C. § 30120 did not appear in the original 1966 Act but were added by the Motor Vehicle and Schoolbus Safety Amendments of 1974, Pub. L. No. 93-492, 88 Stat. 1470. The notification and remedy duty for noncompliance arises whether a motor vehicle manufacturer actually determines, or should have determined, that its vehicles contain a safety-related defect. See United States v. General Motors Corp, 656 F.2d 1555, 1559 n.5 (D.D.C. 1987) (X-Cars) (noting its previous holding that "a manufacturer cannot evade its statutory obligations that exist when it determines that a defect is safetyrelated 'by the expedient of declining . . . to reach its own conclusion as to the

^{261. 49} U.S.C. § 30121.

^{262.} See generally Kevin M. McDonald, Judicial Review of NHTSA-Ordered Recalls, 47 WAYNE L. REV. 1301, 1322-36 (2002) (discussing the "handful of court decisions that have interpreted [the] recall provisions of the Vehicle Safety Act").

"adequately inform and effectively motivate" consumers to have their defective or noncompliant vehicles remedied,²⁶⁷ NHTSA regulates in detail what must be done to satisfy both parts of the duty.

Taking the remedy duty first, manufacturers must, as a matter of course, provide a remedy *at no cost* to the consumer.²⁶⁸ The remedy must take one of three "R" forms: (1) repair of the vehicle; (2) replacement of the vehicle with an identical or reasonably equivalent vehicle; or (3) a refund of the purchase price, minus a reasonable allowance for depreciation.²⁶⁹ Manufacturers must also provide a plan for reimbursing owners or purchasers who incurred the cost of the remedy within a reasonable time before initiation of the remedy.²⁷⁰

NHTSA has the authority to alter a manufacturer's chosen remedy. If NHTSA determines that a chosen remedy program is not likely to be capable of completion within a reasonable time²⁷¹ and that a risk of serious injury or death exists if the program is not accelerated, then NHTSA can order a manufacturer to accelerate the remedy program,²⁷² either by expanding the sources of replacement parts, expanding the number of authorized repair facilities, or both.²⁷³

267. See 49 C.F.R. § 577.2 (2005).

268. See 49 U.S.C. § 30120 (2000) (emphasis added). If the remedy is to replace the vehicle or part, a description of the replacement must be provided. 49 C.F.R. § 577.5(g)(1)(v) (2005). If the remedy is to refund the purchase price of the vehicle (minus depreciation), then a description of how the depreciation was assessed must be provided. See 49 C.F.R. § 577.5(g)(1)(vi).

269. See 49 U.S.C. § 30120.

270. See 49 U.S.C. § 30120(d). For background on the statutory requirement of a disclosed reimbursement plan, see Kevin M. McDonald, Don't TREAD On Me: Faster Than a Tire Blowout, Congress Passes Wide-Sweeping Legislation That Treads on the Thirty-Five Year Old Motor Vehicle Safety Act, 49 BUFF. L. REV. 1163, 1204 (2001).

271. See 49 U.S.C. § 30120(c)(3). Failure to repair a motor vehicle or replacement equipment adequately not later than sixty days after its presentation is prima facie evidence of failure to repair within a "reasonable time." See 49 U.S.C. § 30120(c)(2); see also McDonald, supra note 270, at 1201-04, n.184.

272. See 49 U.S.C. § 30120(c)(3). The "remedy acceleration" amendment was part of the "TREAD Act," short for Transportation Recall Enhancement, Accountability, and Documentation Act, Pub. L. No. 106-414, 114 Stat. 1800 (2000). The TREAD Act was considered passed by the House of Representatives on October 11, 2000, and by the Senate on October 12, 2000. President Clinton assented to the Act with his signature on November 1, 2000. For background and analysis of the TREAD Act, see McDonald, *supra* note 270.

273. See 49 U.S.C. § 30120(c)(3)(B).

relationship between a defect in its vehicles and . . . safety" (quoting United States v. General Motors Corp., 575 F. Supp. 1047, 1050 (D. D.C. 1983)). But one United States Court of Appeals has held that a breach of the duty to disclose information or notify under the Vehicle Safety Act, 49 U.S.C. § 30118(c), does not constitute mail and wire fraud sufficient to establish predicate acts under state or federal racketeering laws. See Ayres v. General Motors Corp., 234 F.3d 514, 521-22 (11th Cir. 2000) (holding "that the Safety Act was not meant to create the kind of duty, a breach of which would create criminal liability or civil liability under RICO statutes").

With regard to the notification duty, NHTSA specifies both the content and timing of every consumer notification (recall letter).²⁷⁴ Little discretion is left to the manufacturer: the content of the letter and envelope is prescribed by regulation and must be used verbatim.²⁷⁵ In addition to mandating what manufacturers may say and how they must say it, NHTSA also mandates what manufacturers may *not* say.²⁷⁶

As with content, NHTSA strictly controls the time and manner of all notifications. The manufacturer's proposed "earliest remedy date," which NHTSA must approve, must be "the earliest date that parts and facilities reasonably can be expected to be available to remedy the defect or noncompliance."²⁷⁷ As for the manner, in addition to a mailed notice, NHTSA may order manufacturers to conduct print or media advertising after considering "the magnitude of the risk to motor vehicle safety caused by the defect or noncompliance" and "the cost of public notice compared to the additional number of owners the notice may reach."²⁷⁸ If the initial notification campaign does not result "in an adequate number of motor vehicles . . . being returned for remedy," then NHTSA may order the manufacturer to send a second notification.²⁷⁹

As noted above,²⁸⁰ the intended purpose of this detailed notification duty is "to ensure that notifications of defects...adequately inform and effectively motivate owners of potentially defective . . . motor vehicle[s or equipment] . . . to have such vehicles or equipment inspected and, where necessary, remedied

^{274.} The notification must include (1) "a clear description of the defect or noncompliance," (2) "an evaluation of the risk to motor vehicle safety," (3) "the measures to be taken to obtain a remedy," (4) a statement that the manufacturer "will remedy the defect or noncompliance without charge," (5) "the earliest date the defect or noncompliance without charge," (6) the procedure to follow to inform NHTSA if "a manufacturer, distributor, or dealer does not remedy the defect or noncompliance without charge," and (7) other information NHTSA may prescribe by regulation. See 49 U.S.C. § 30119(a) (2000).

^{275.} Federal law requires a recall manufacturer to mark the outside of each envelope in which it sends an owner notification letter with a notation that includes the words "SAFETY," "RECALL," and "NOTICE" all in capital letters and in type font that is larger than that used in the address section, and is also distinguishable from the other type in a manner other than size. Each manufacturer must submit the envelope format it intends to use to NHTSA at least five business days before mailing to owners for NHTSA approval. See 49 C.F.R. § 577.5(a) (2005).

^{276.} For example, a manufacturer may not include any statement or implication that there is no defect or noncompliance condition or that the condition does not exist in the owner's vehicle. With respect to a safety defect, the manufacturer may not state or imply that the defect does not relate to motor vehicle safety. See 49 C.F.R. § 577.8 (2005).

^{277. 49} U.S.C. § 30119(b) (2000) (Earliest remedy date).

^{278. 49} U.S.C. § 30119(d)(3)(A), (B) (Means of providing notification).

^{279. 49} U.S.C. § 30119(e) (Second notification).

^{280.} See 49 C.F.R. § 577.2 (2005); supra text accompanying note 267.

as quickly as possible."²⁸¹ To monitor the consumer response rate, currently estimated at 72 percent,²⁸² NHTSA requires manufacturers to provide quarterly status reports on each recall, beginning with the calendar quarter in which owner notification begins.²⁸³ If NHTSA believes a recall is either not reaching enough owners or not reaching the right scope of vehicles, NHTSA may issue a "Recall Query," which is an information request to the manufacturer, which must answer questions in writing on details of the recall.

Since its inception in 1966, NHTSA and its predecessor agencies have overseen well over 10,000 recalls involving hundreds of millions of vehicles.²⁸⁴ In 2002, NHTSA oversaw 436 recalls covering 18.3 million vehicles.²⁸⁵ In 2003, NHTSA oversaw recalls covering 19.5

283. 49 C.F.R. § 577.2 (Quarterly reports). Quarterly status reports are required from the quarter the notification begins through six consecutive quarters. *Id.* In accordance with 49 C.F.R. § 573.6 (2005) ("Defect and noncompliance information report"), manufacturers are required to submit consecutive quarterly status reports for every safety recall. Failure to submit these reports on time can result in civil penalties, see 49 U.S.C. § 30165 (2005), or lead to an action for injunctive relief. See 49 U.S.C. § 30163 (2005).

284. According to NHTSA, since enactment of the Vehicle Safety Act in 1966 through mid-2001, NHTSA oversaw "over 9,000 recalls involving millions of motor vehicles and items of motor vehicle equipment." See NHTSA, Safety Recall Compendium: A Guide for the Reporting, Notification, and Remedy of Motor Vehicle and Motor Vehicle Equipment in Accordance with Title 49 of the United States Code, Chapter 301 and Supporting Federal Regulations 16 (June 2001), available at http://www.nhtsa.dot.gov/cars/rules/standards/recompendium.pdf.

285. Telephone Interview with Tim Hurd, Office of the Assistant Secretary for Public Affairs, National Highway Transportation Safety Administration (May 6, 2003). Using light vehicle sales figures from 2002, it appears that almost 1.5 million more vehicles were recalled than sold that year. See Haig Stoddard, Sales down, incentives up, WARD'S AUTO WORLD, Mar. 1, 2003, at 3, available at http://www.findarticles.com/ p/articles/mi_m3165/is_3_39/ai_99101955 (citing U.S. sales of 16.8 million light vehicles for 2002). Historically, the component category with the largest number of vehicles recalled is powertrain, while service brakes have the most recall campaigns overall and fuel systems have the most recalls after NHTSA has opened an investigation. See JOHN A. VOLPE, NATIONAL TRANSPORTATION SYSTEMS CENTER, EARLY WARNING REPORTING CATEGORIES ANALYSIS OF RECALL AND COMPLAINTS DATA 3 (2001).

^{281. 49} C.F.R. § 577.2.

^{282.} See Press Release, NHTSA, NHTSA Publishes List of December, January Recalls (Mar. 13, 2003), available at http://www.nhtsa.dot.gov/nhtsa/announce/press/ pressdisplay.cfm?year=2003&filename=pr06-03.html. In Germany, the government body with authority over recalls (*Kraftfahrtbundesamt*) considers a 75% response rate a successful recall; however, it is currently seeking a 100% rate. See Ingo Kruse, *European Automotive Recalls*, FOR THE DEFENSE, Sept. 2004, at 82. Owners of vehicles who do not get their vehicles repaired after receiving notification of a recall might not be able to drive the vehicle because the German government would revoke the vehicle's registration. *Id.* As Mr. Kruse indicates in his article, however, this plan might be "unrealistic." *Id.*

million vehicles.²⁸⁶ And in 2004, NHTSA oversaw a record 598 recalls covering a record 30.6 million vehicles.²⁸⁷

4. Summary

One of the most effective strategies identified by the United Nations in reducing road traffic injuries is for countries to establish a functioning agency that can evaluate and implement safety interventions. Such interventions should entail setting vehicle performance safety standards and investigating safety-related defects. Experience in the United States has shown that such an agency, NHTSA, has met these goals. As detailed as NHTSA's regulatory and investigatory process is, it provides for transparency and maintains predictability while preserving flexibility. For these reasons, NHTSA and NHTSA's processes can serve as a model for other countries.

V. CONCLUSION

Throughout history, automobiles have provided many benefits, including increased personal mobility, increased productivity in business, and significant contributions to gross domestic product through sales and production of vehicles.²⁸⁸ As the world becomes both increasingly more populated (current projections from the United Nations are that there will be fifty-seven million more people

^{286.} See Harry Stoffer, Government's Early Warning System Hasn't Shown Big Payback, AUTOMOTIVE NEWS, Oct. 18, 2004, at 4.

^{287.} See Jeff Plungis, Carmakers Staggered by Record '04 Recalls, DETROIT NEWS, Jan. 4, 2005, at 1A; see also Jeff Plungis, Vehicle Recalls Hit Record, DETROIT NEWS, Nov. 5, 2004, at 1A. NHTSA points out that the number of recalled vehicles does not mean that vehicle safety or quality is decreasing. Id. Indeed, the number of recalled vehicles varies "wildly from year to year," according to NHTSA. Id. The United States is not the only market that experienced a record number of recalls in 2004. Germany also witnessed a record year in 2004, both in the number of recalls (greatly exceeding 144) and the number of affected vehicles (estimated at 1.5 million). RÜCKRUF-BILANZ 2004: Rekord der Rückläufer [2004 – Record Recalls], SPIEGEL ONLINE, Jan. 4, 2005, at http://www.spiegel.de/auto/werkstatt/0,1518,335409,00.html.

^{288.} For example, according to data of the Center for Automotive Research, in 2002, greater than 3.3% of the total GDP in the United States was generated by the sale and production of new light vehicles. See Center for Automotive Research, Alliance of Automobile Manufacturers, How Many U.S. Jobs Can You Fit Inside One Auto: An Overview of the Economic Contributions of the U.S. Automobile Industry, available at http://www.autoalliance.org/archives/ecssummary.pdf (n.d.). Data compiled in the last-cited piece are from tow studies: (1) "Contribution of The Automotive Industry to the U.S. Economy" was prepared by the University of Michigan and the Center for Automotive Research and issued in March 2001 and (2) "Economic Contribution of the Automotive Industry to the U.S. Economy—An Update" was prepared by the Center for Automotive Research and issued in 2003. Id.

every year now through 2050²⁸⁹) as well as more motorized—with more cars and trucks on the world's roads than ever before—the issue of global road safety will continue to gain importance.²⁹⁰ Current projections indicate that the annual fatality rate of 1.2 million and injury rate of fifty million will increase by about 60 to 65 percent over the next twenty years. At greatest risk are the poorer and most populous countries of the world. According to the WHO:

If current trends continue, the number of people killed and injured on the world's roads will rise by more than 60% between 2000 and 2020. Most of these injuries will occur in developing countries where more and more people are using motorized transport. In these countries, cyclists, motorcyclists, users of public transport, and pedestrians are especially vulnerable to road traffic injuries.²⁹¹

This Article has highlighted several areas of international response to this problem by discussing the role of the United Nations in harmonizing vehicle safety regulations, the work of the General Assembly resolutions on global road safety, and the effect of World Health Day 2004.

Ultimately, responsibility for turning the tide will rest with the individual countries. To this end, the United Nations, World Bank, and World Health Organization are unanimous in urging countries to establish a focal-point agency with oversight over traffic safety. Although establishing such an agency is by no means a cure-all solution, by highlighting its enforcement programs—standards, investigation, and oversight—this Article has argued that the NHTSA can serve as a model to other countries seeking to implement these recommendations.

^{289.} Press Release, United Nations, United Nations Projects World Population to Stabilized at Around 9 Billion People by Year 2300: Without Continuing Fertility Declines in Developing World, Figure Could Reach 44 Billion by 2100, According to Projections (Nov. 11, 2004), available at http://www.un.org/News/Press/docs/2004/ pop910.doc.htm.

^{290.} See WORLD REPORT, supra note 2; discussion supra Part I.C.

^{291.} Road Safety: A Public Health Issue, FEATURES 2004 (WHO/Geneva, Switzerland), Mar. 29, 2004, available at http://www.who/int/features/2004/road_safety/en/.

