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A New Form of WMD?: Driving With Mobile Devices and Other Weapons of Mass Destruction

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A NEW FORM OF WMD? DRIVING WITH MOBILE DEVICE AND OTHER WEAPONS OF MASS DESTRUCTION

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INTRODUCTION

Cell phones and other mobile communication devices[1] feature prominently in current media accounts of traffic disasters. Stories of young drivers who kill—and are killed—while texting,[2] tales of bicyclists and pedestrians killed by cell phone-wielding drivers,[3] and accounts of deadly crashes caused by distracted driving make newspaper and Internet headlines.[4] A recent study found that texting by drivers increased fifty percent from 2009 to 2010, with nearly one-fifth of motorists responding to a survey admitting that they have texted or emailed while driving, despite an increasing number of states that have enacted bans on this conduct.[5] Teens are especially likely to text while driving.[6] Many drivers say they feel less safe on the road than in previous years, with

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[1] Throughout this article, I will use "mobile devices" as a generic term, recognizing that these devices increasingly function as much more than phones and that outside the United States they are typically referred to as "mobiles."

[2] *See, e.g.*, Larry Copeland, *Word to Youth: Texting, Driving Don't Mix: AT&T is the Latest Company to Push Safety Campaign*, U.S.A. TODAY, Mar. 8, 2010, at A5; Robert Mills, *Lowell: Tewksbury Man Killed in Lowell Crash Was Texting*, THE SUN (Lowell, Mass.), Dec. 15, 2009; Andrew J. Nelson, *Texting, Speeding Cited in Fatal Crash: The Iowa Teen Faces Motor Vehicle Homicide Charges in the Accident That Killed Two Preschoolers*, OMAHA WORLD-HERALD, Apr. 28, 2011, at A1; Press Release, Nat'l Transp. Safety Bd., No Call, No Text, No Update Behind the Wheel: NTSB Calls For Nationwide Ban on PEDs While Driving (Dec. 13, 2011), *available at* http://www.ntsb.gov/news/2011/111213.html.

[3] *See, e.g.*, Cynthia Dizikes, *Facebook User Sued in Fatal Crash: Motorist Accused of Updating Page While Driving*, CHI. TRIB., Feb. 16, 2011, at C13; Patricia C. McCarter, *Cell Phone Use Cited in Death*, HUNTSVILLE TIMES (Huntsville, Ala.), July 31, 2009, at A1; Emily Opilo, *Driver Was Using Cell Phone During Crash That Killed a Harrisburg Teacher, Court Reports Say*, PENNLIVE.COM (Sept. 17, 2009), http://www.pennlive.com/midstate/index.ssf/2009/09/driver_was_using_cell_phone_du.html.

[4] *See, e.g.*, David Chanen, *Motorist Gets 4 Years in Crash That Killed Boy: Driver Jessica Howe Was Reaching for a Dropped Cellphone and Speeding in Rear-End Collision*, MINNEAPOLIS STAR TRIB., Apr. 27, 2011, at B1; Mark Strassman, *Suing the Sender? Distracted Driving Lawsuit Blames Both Texters for Crash*, CBS NEWS (May 23, 2012), http://www.cbsnews.com/8301-505263_162-57439808/suing-the-sender-distracted-driving-lawsuit-blames-both-texters-for-crash/.

[5] Joan Lowy, *Study Shows Increase in Drivers Texting Behind the Wheel*, POST-TRIBUNE (Dec. 8, 2011), http://posttrib.suntimes.com/news/9328300-418/study-shows-increase-in-drivers-texting-behind-the-wheel.html; *see also infra* Part II.B.

[6] *See* Larry Copeland, *Campaign Aims to "Stop Texts, Stop Wrecks,"* USA TODAY, Oct. 28, 2011, at A3.

nearly a third of these drivers attributing their insecurity to the phenomenon of distracted driving.[7]

In December 2011, the National Transportation Safety Board recommended that all 50 states and the District of Columbia ban texting while driving.[8] At the federal level, President Obama has issued an executive order banning federal employees from texting while driving,[9] Transportation Secretary Ray LaHood has convened two national summits on the dangers of distracted driving,[10] and the Department of Transportation has promulgated regulations that ban holders of commercial motor vehicle licenses from texting while driving in interstate commerce.[11] However, there has been pushback from members of Congress who believe that the issue raises states' rights concerns. In the semiannual reauthorization process for federal highway support, a proposal that the federal government fund a $39 million grant program to give states a financial incentive to ban teens from using any mobile device while driving, as well as texting by all drivers, has been challenged as an infringement on states' rights.[12] Georgia Representative Robert Woodall has offered an amendment to prohibit the Department of Transportation from regulating telecommunications devices in motor vehicles.[13]

Yet beyond the headlines, the data about the dangers of driving while talking or texting are equivocal. Although there is no doubt that mobile device use is distracting[14] whether or not the person is wielding a hands-free device,[15]

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[7] ELIZABETH VERMETTE, GOVERNORS HIGHWAY SAFETY ASS'N, CURBING DISTRACTED DRIVING: 2010 SURVEY OF STATE SAFETY PROGRAMS 6 (2010), *available at* http://www.ghsa.org/html/publications/pdf/survey/2010_distraction.pdf.

[8] Press Release, Nat'l Transp. Safety Bd., *supra* note 2.

[9] *See* Exec. Order No. 13,513, 3 C.F.R. 246 (2010).

[10] Press Release, U.S. Dep't. of Transp., Transportation Secretary Ray LaHood Announces Second National Distracted Driving Summit (July 27, 2010), *available at* http://www.dot.gov/affairs/2010/dot14710.html.

[11] *See* Limiting the Use of Wireless Communication Devices, 75 Fed. Reg. 59,118 (Sept. 27, 2010) (codified at 49 C.F.R. pts. 383-84, 390-92).

[12] *See Where Your Eyes and Mind Should Be*, THE FOCUS (Feb. 20, 2012), http://blog.focusdriven.org/tag/government-agencies/.

[13] *See* H. COMM. ON RULES, 112TH CONG., AMENDMENT TO RULES COMM. PRINT OF H.R. 7 OFFERED BY MR. WOODALL OF GEORGIA (Comm. Print 2012), *available at* http://www.rules.house.gov/amendments/Woodall3213121239403940.pdf.

[14] This is true not only of drivers but of walkers and dinner party guests. *See* David Carr, *Keep Your Thumbs Still When I'm Talking to You*, N.Y. TIMES, Apr. 17, 2011, at ST1; *Texting While Walking Banned in New Jersey Town*, ABCNEWS (May 13, 2012), http://abcnews.go.com/blogs/headlines/2012/05/texting-while-walking-banned-in-new-jersey-town/.

[15] Numerous studies have found that it is the act of being engaged in conversation on a mobile device, rather than holding the device in one's hand, that is the primary source of distraction, and thus of potential injury. Crash data support the argument that no safety advantage is conferred by using a hands-free device, and the availability of hands-free devices may even lead to their greater use. *See* Robert W. Hahn & Patrick M. Dudley, *The Disconnect Between Law and Policy Analysis: A Case Study of Drivers and Cell Phones*, 55 ADMIN. L. REV. 127, 151-66 (2003); David L. Strayer et al., *Cell Phone-Induced Failures of Visual Attention During Simulated Driving*, 9 J. EXPERIMENTAL PSYCHOL.: APPLIED 23, 31 (2003); *see also infra* Part II.B.

mobile devices are far from the only cause of distracted driving.[16] The exponential increase in mobile device use while driving in the first decade of the twenty-first century was not matched by a comparable increase in traffic injuries and fatalities.[17] Contrary to what one might anticipate in light of media coverage of distracted driving, American driving fatalities are lower now than at any time since the 1930s.[18] In an intriguing twist on the deterrent impact of law on motor vehicle accidents, a recent study found that laws banning texting while driving did not result in a decrease in accidents, injuries, or fatalities and actually may have led to a slight increase in these harms.[19] Thus, before pursuing any new legislative or regulatory action to address the "epidemic" of mobile device use while driving, it is important to pause and consider what we know—and don't know—about the causes and effects of distracted driving. In this inquiry it is essential to be aware of the limits of law's role in shaping behavior. We must

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[16] Distracted driving has been variously defined and is only one aspect of inattentive driving, which is also caused by fatigue and other physical and emotional conditions of the driver. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., DISTRACTED DRIVING 2009 1, 5 (2010), *available at* http://www.distraction.gov/research/PDF-Files/Distracted-Driving-2009.pdf.

[17] *Id.* at 2-3 (estimating that the number of people injured in motor vehicle crashes declined from 2,699,000 in 2005 to 2,217,000 in 2009 and noting that the number of fatal crashes declined from 39,252 in 2005 to 30,797 in 2009, with 43,510 fatalities in 2005 and 33,808 fatalities in 2009). On the other hand, one study has calculated that the increased use of cell phones from 1980 to 2004 does correlate with increasing traffic fatality rates. *See* Richard Fowles et al, *The Cell Phone Effect on Motor Vehicle Traffic Fatality Rates: A Bayesian and Classical Econometric Evaluation*, 46 TRANSP. RES. PART E: LOGISTICS & TRANSP. REV. 1140, 1142, 1145 (2010). NHTSA data also suggest that distraction-related crashes are accounting for a greater proportion of traffic accidents and fatalities. *See* NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 16, at 2-4. However, because there is no uniform definition of distracted driving and because local law enforcement officials differ in their criteria for identifying accidents caused by distracted driving, estimates of the number of accidents, injuries, and fatalities caused by distracted driving vary widely. *Id.* at 6 (noting that state reports of the percentage of accidents caused by distracted driving in 2009 ranged from 0 percent to 50 percent); NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., AN EXAMINATION OF DRIVER DISTRACTION AS RECORDED IN NHTSA DATABASES 2 (2009), *available at* http://www-nrd.nhtsa.dot.gov/Pubs/811216.pdf (finding that estimates of the proportion of distraction-related accidents vary from 1 to 70 percent). This span is so broad as to be meaningless.

[18] U.S. motor vehicle fatalities increased at a generally steady rate from 1899 to 1972, with slight dips during the Great Depression and World War II. In 1972 the highest motor vehicle fatality toll—54,589 people killed—was reached. In 2009, an estimated 33,963 people were killed in motor vehicle accidents. ANDERS LONGTHORNE ET AL., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., AN ANALYSIS OF THE SIGNIFICANT DECLINE IN MOTOR VEHICLE TRAFFIC FATALITIES IN 2008 12 (2010), *available at* http://www-nrd.nhtsa.dot.gov/Pubs/811346.pdf. The fatality rate per one hundred million vehicle miles traveled has decreased steadily since it was first recorded in the early 1920s. *Id.* at 4, 12.

[19] HIGHWAY LOSS DATA INST., HIGHWAY LOSS DATA INSTITUTE BULLETIN: TEXTING LAWS AND COLLISION CLAIM FREQUENCIES 8 (2010), *available at* http://www.iihs.org/research/topics/pdf/HLDI_Bulletin_27_11.pdf. The authors of the report speculate that when drivers are aware of the ban on texting that they may try to hide their activity, perhaps holding their cell phones in their laps, and thus spend more time with their eyes away from the road, leading to more accidents. *Id.*

carefully examine the empirical data[20] about the relationship between mobile device use, traffic accidents, and traffic fatalities[21] and thoughtfully review the extensive literature on deterrence in action, including studies exploring how the law can affect motor vehicle drivers. Most importantly, we must recognize that Americans have a love affair with both their cars and their technology.[22] As a result, changing the behavior of drivers to decrease technology-related accidents will require interventions that are both sophisticated and subtle.

A ROAD MAP

Part I of this article explores what we know about the risks of mobile device use while driving, examining a wide range of studies, including simulated driving experiences, close monitoring of drivers in real time over long periods, short-term observational studies, and other psychological evidence. Part II reviews the reactions of government and private actors to distracted driving, both historically and in recent years. This part situates today's problem of distracted driving in the broader context of motor vehicle safety, examining the responses of the auto and insurance industries as well as federal, state, and local lawmakers to the broad array of factors that affect driving risk. This part pays particular attention to teenage drivers, using what we know about youthful brain development and general maturity to suggest successful strategies for dissuading young drivers from talking and texting while driving. Part III compares the legal system's answer to the problem of driving while using a mobile device with the legal response to drunk driving, laws mandating the use of seat belts and child

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[20] Indeed, identifying a causal connection between cell phone use and traffic accidents is particularly difficult because many states use different criteria for collecting information about traffic accidents and crashes. VERMETTE, *supra* note 7, at 8 (noting that "only thirty-four states collect specific information on cell phone use when driving that meet Model Minimum Uniform Crash Criteria"). Many accident reports do not include information on distracting events. HIGHWAY LOSS DATA INST., *supra* note 19, at 9. Further, many drivers may be hesitant to admit that they used a cell phone in close proximity to a crash. THOMAS A. RANNEY, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., DRIVER DISTRACTION: A REVIEW OF THE CURRENT STATE-OF-KNOWLEDGE 4 (2008), *available at* http://www.scribd.com/doc/12073978/Driver-Distraction-A-Review-of-the-Current-StateofKnowledge; *see also* NAT'L TRAFFIC SAFETY ADMIN., *supra* note 18, at 2.

[21] When cell phones first came into wide use they may have actually yielded a safety dividend because motorists could call for help immediately after an accident and ensure that victims received prompt medical attention during the so-called "golden hour," thereby increasing chances of surviving the accident. Fowles et al., *supra* note 18, at 1141, 1145. However, a recent study examining traffic fatality rates in the United States from 1980 to 2004 found that, while cell phone use may initially have had a net life-saving effect, this benefit has been lost due to the overall increased risk of accident attributable to the large number of cell phone users. *Id.* at 1140, 1141-42, 1145-46.

[22] This observation parallels that of H. Laurence Ross, who observed that Americans are highly committed both to the automobile and to drinking alcohol. H. LAURENCE ROSS, CONFRONTING DRUNK DRIVING: SOCIAL POLICY FOR SAVING LIVES 23-35 (1992). Accordingly, without a candid recognition of these dual strong attachments, efforts to change the law to try to reduce the harms caused by driving under the influence of alcohol are unlikely to succeed. *Id.* at 172-73, 181-85.

safety seats, and laws requiring motorcyclists to wear a helmet. This part draws on the extensive literature on deterrence in general and studies of motor vehicle law enforcement issues in particular. In Part IV, the article recommends effective ways to reduce the harm caused by the use of cell phones while driving, including changes in criminal and tort law, tailored law enforcement strategies, and innovations in communication and transportation technology to minimize the dangers of distracted driving.

I. THE RISKS OF MOBILE DEVICE USE WHILE DRIVING

A. Mobile Device Use is Exploding

Over the last twenty-five years, Americans' mobile device use has grown exponentially. While there were only 204,000 cell phone subscribers in 1985, by 2010 there were nearly 293 million subscribers,[23] or almost one cell phone for every American.[24] In the last five years, cell phone usage has expanded dramatically as cell phone providers have competed for subscribers by offering unlimited calling on nights and weekends and other incentives to increase usage. Americans used 1.26 quadrillion (1,260,000 billion) minutes in June 2005; this figure rose to 2.257 quadrillion (2,257,000 billion) minutes in June 2010.[25] In 2005, there were only fifty-seven billion text messages sent; by 2010 the number of text messages rose to 1.8 trillion (1,806 billion).[26] Drivers' use of mobile devices has paralleled the dramatic increase in mobile device use overall.[27] Since 2004 observational studies have found that between five and six percent of drivers are using hand-held devices at any given time, although one percent or less are visibly manipulating the devices.[28] One telephone survey found that forty percent of drivers acknowledged talking on the phone while driving at least a few times a week.[29] Drivers between sixteen and twenty-four are more than twice as likely as other drivers to be visibly manipulating hand-held devices,[30] perhaps because for them, mobile devices have long been accepted as part of normal life. Teen drivers are especially likely to use mobile devices and to text

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[23] CTIA–THE WIRELESS ASS'N, SEMI-ANNUAL WIRELESS INDUSTRY SURVEY 5 (2010), *available at* http://files.ctia.org/pdf/CTIA_Survey_Midyear_2010_Graphics.pdf. There were 203,600 cell phone subscribers in June 1985 and 292,847,098 cell phone subscribers in June 2010. *Id.*

[24] There were 308,745,538 Americans in April 2010, according to data from the 2010 census. *2010 Census Data*, UNITED STATES CENSUS 2010, http://2010.census.gov/2010census/data (last visited July 7, 2012).

[25] CTIA-THE WIRELESS ASS'N, *supra* note 23, at 7.

[26] *Id.*

[27] *See* Fowles et al., *supra* note 17.

[28] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., DRIVER ELECTRONIC DEVICE USE IN 2009 1 (2010), *available at* http://www-nrd.nhtsa.dot.gov/Pubs/811372.pdf.

[29] Keli A. Braitman & Anne T. McCartt, *National Reported Patterns of Driver Cell Phone Use in the United States*, 11 TRAFFIC INJ. PREVENTION 543, 544 (2010).

[30] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 28, at 2.

while driving.[31] A 2009 telephone survey found that forty-three percent of teens acknowledged talking on a mobile device while driving and twenty-six percent of sixteen- and seventeen-year-old drivers admitted to texting while driving.[32] A 2010 study found that sixty-four percent of teen drivers admitted that they had talked on a mobile device while driving, with twenty-six percent stating that they sometimes used these devices to take pictures while driving and fifteen percent admitting that they had changed their Facebook or MySpace profiles while driving.[33]

B. Why Using a Mobile Device Is Distracting

Distracted driving comes in many forms. In addition to using a cell phone to converse, text, or connect to the Internet, drivers are distracted by talking to passengers, attending to pets in the car, rubbernecking, looking at billboards and other road signage, listening to or adjusting a radio or CD player, using a GPS device, eating, drinking, and smoking, as well as applying make-up or shaving.[34] Talking or listening to a cell phone while driving slightly elevates the risk of a crash or "near crash" event, while dialing and answering a phone increases it more.[35] Using a cell phone while driving can lead to visual,

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[31] Braitman & McCartt, *supra* note 29, at 546 (finding that forty-three percent of teens reported some texting while driving, the highest percentage among all age groups).

[32] MARY MADDEN & AMANDA LENHART, PEW RESEARCH CTR., TEENS AND DISTRACTED DRIVING: TEXTING, TALKING AND OTHER USES OF THE CELL PHONE BEHIND THE WHEEL 4 (2009), *available at* http://pewinternet.org/~/media//Files/Reports/2009/PIP_Teens_and_Distracted_Driving.pdf.

[33] Brian Mitchell, *Cell Phones Distracting Teen Drivers,* ECOUSTICS.COM (May 4, 2010), http://forum.ecoustics.com/bbs/messages/34579/631987.html (describing a study conducted by Liberty Mutual Insurance and SADD (Students Against Destructive Decisions)); *see also* Larry Copeland, *Technology Tackles Teen Drivers' Phone Distractions*, USATODAY.COM (Jan. 17, 2012, 1:26 AM), http://www.usatoday.com/tech/wireless/story/2012-01-13/distracted-driving-cell-control-app/52603546/1.

[34] *See* SHEILA G. KLAUER ET AL., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., AN ANALYSIS OF DRIVER INATTENTION USING A CASE-CROSSOVER APPROACH ON 100-CAR DATA: FINAL REPORT vi (2010), *available at* http://www.nhtsa.gov/Research/Human+Factors/ci.Distraction.print; NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 16, at 4-5; RANNEY, *supra* note 20, at 1, 17; HELMUT SCHNEIDER, ANALYSIS OF HAND-HELD VERSUS HANDS-FREE CELL PHONE USE WHILE DRIVING 5 (2010), *available at* http://lahighwaysafety.org/pdf/Report%20on%20cell%20phone%20use%20while%20driving-FINAL.pdf.

[35] A recent study using interior cameras found that in real-life driving drivers of cars and light vehicles talking or listening to a cell phone were 1.3 times as likely to have a crash or near-crash as drivers who were not driving in a distracted manner; the same study found that truck drivers were no more likely to have a crash while talking or listening on a cell phone. *New Data from Virginia Tech Transportation Institute Provides Insight into Cell Phone Use and Driving Distraction*, VA. TECH NEWS (July 29, 2009), http://www.vtnews.vt.edu/articles/2009/07/2009-571.html [hereinafter *New Data from VTTI*]. Reaching for an object, including a cell phone, can increase the risk, although the data here show that the increase for drivers of cars is small (only 1.4 times the risk of non-distracted driving, compared to a 6.7 time risk for truck drivers). *Id.* Dialing a phone increases the risk for drivers of cars to 2.8 times, while for truck drivers the risk was 5.9 times the risk of non-distracted driving. *Id.*

cognitive, auditory, and biomechanical distraction.[36] It appears that visual distraction creates the biggest risks, because it involves drivers taking their eyes off the road.[37] Failing to keep one's eyes on the road can lead to unintended lane changes as well as failing to observe road signs and potential hazards, including nearby vehicles.[38] Texting greatly increases the risk of visual distraction;[39] thus, a 2009 study found that when drivers of commercial vehicles text they are 23.2 times more likely than non-texting drivers to have a crash or "near crash."[40] Cognitive distraction occurs because humans appear to have limited attentional capacity; hence, when the brain is involved in listening it is less able to process visual stimuli.[41] Talking on a mobile device can lead to drivers "look[ing] but . . . not see[ing]"[42]—which is particularly hazardous at intersections—as well as reacting more slowly and failing to maintain a proper distance and appropriate

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[36] *See* RANNEY, *supra* note 20, at 2 (discussing cognitive distraction); Shannon L. Noder, Note, *Talking and Texting While Driving: A Look at Regulating Cell Phone Use Behind the Wheel*, 44 VAL. U. L. REV. 237, 244 (2009). There is an ongoing debate about the extent to which simulated studies of distracting driving can be generalized to driving under real-world conditions, with some researchers arguing that laboratory experiments, no matter how well designed, cannot predict actual driving behavior. *See* RANNEY, *supra* note 20, at 4-8; *New Data from VTTI, supra* note 35, at 2-3. In this view, the experiments are best at measuring the *relative* distraction risk of certain tasks but cannot identify what drivers will actually do in practice. RANNEY, *supra* note 20, at 5. Others who have reached this conclusion reason that because "bad" simulated driving has no actual consequences, the "drivers" may be less careful than if they were on a real road; and second, that in the real world, drivers will choose not to text or use their mobile devices if they face heavy traffic or other hazardous conditions. *See* Anne T. McCartt et al., *Cell Phones and Driving: Review of Research*, 7 TRAFFIC INJ. PREVENTION 89, 92 (2006). Further, simulator research ignores the impact of practice on tasks associated with cell phone use and driving; drivers, particularly young ones, can learn to perform better. *Id.* at 94.

[37] *See* Ashlee Vance & Matt Richtel, *Despite Risks, Internet Creeps Onto Dashboard*, N.Y. TIMES, Jan. 7, 2010, at A1 (discussing trend of auto manufacturers offering more Internet-connected technology as standard issue in new cars, despite the risk of accidents due to driver distraction).

[38] *See* Frank A. Drews et al., *Text Messaging During Simulated Driving*, 51 HUMAN FACTORS: J. HUMAN FACTORS & ERGONOMIC SOC'Y 762, 763-69 (2009), *available at* http://hfs.sagepub.com/content/51/5/762.full.pdf?keytype=ref&siteid=sphfs&ijkey=gRQOLrGlYnBfc (reviewing literature on impact of cell phone use and describing a study of drivers aged nineteen to twenty-three texting while "driving" a simulator).

[39] Jessica S. Hafetz et al., *Adolescent Drivers' Perceptions of the Advantages and Disadvantages of Abstention from In-Vehicle Cell Phone Use*, 42 ACCIDENT ANALYSIS & PREVENTION 1570, 1570 (2010).

[40] JEFFREY S. HICKMAN ET AL., FED. MOTOR CARRIER SAFETY ADMIN., DISTRACTION IN COMMERCIAL TRUCKS AND BUSES: ASSESSING PREVALENCE AND RISK IN CONJUNCTION WITH CRASHES AND NEAR-CRASHES xiv (2010), *available at* http://www.fmcsa.dot.gov/facts-research/research-technology/report/Distraction-in-Commercial-Trucks-and-Buses-report.pdf; *see also* Press Release, U.S. Dep't of Transp., U.S. Transportation Secretary LaHood Announces Final Rule That Bans Hand-Held Cell Phone Use by Drivers of Buses and Large Trucks (Nov. 23, 2011), *available* at http://www.fmcsa.dot.gov/about/news/news-releases/2011/Secretary-LaHood-Announces-Step-towards-Safer-Highways.aspx.

[41] Marcel A. Just et al., *A Decrease in Brain Activation Associated with Driving When Listening to Someone Speak*, 1205 BRAIN RES. 70, 71-72 (2008); McCartt et al., *supra* note 36, at 96.

[42] RANNEY, *supra* note 20, at 11.

speed.[43] In contrast, when drivers are talking to a person in the vehicle—a passenger—they are less likely to be distracted.[44] Empirical data suggest that this may be because passengers, in contrast to distant conversationalists, are more readily able to recognize heavy or hazardous traffic and refrain from talking.[45] This is not the case, however, with teenage drivers, who appear to be more distractible and more likely to engage in risky behavior when they have friends in the car.[46] Due to the cognitive and auditory distraction involved in telephone conversations, hands–free cell phone use has not been shown to be significantly less distracting, and therefore less risky, than using a hand-held cell phone, although dialing and answering the phone are easier with hands-free devices.[47] Hands-free devices are most likely to reduce the risk of biomechanical distraction that arises from attempting to drive with one hand while talking or texting.[48]

The data are mixed about whether driving while using a cell phone is comparable to driving while under the influence of alcohol. Two early studies of simulated driving comparing drivers using cell phones with those with a blood alcohol level just at the legal limit of .08 percent found that those who used cell phones were less attentive, had slower reaction times, and experienced more simulated rear-end collisions.[49] In contrast, a recent naturalistic driving study concluded that talking on a cell phone while driving is much less risky than driving under the influence of alcohol, which elevates the risk of a fatal car crash to seven times the risk of a fatal crash from sober driving.[50] However, several commentators have suggested that simulator studies of phone and alcohol use do not reflect real world risks, since the effects of alcohol impairment last through an entire road trip, compared to the relatively short duration of most cell phone

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[43] *Id.* at 6, 14.

[44] Just et al., *supra* note 41, at 77; Fernando A. Wilson & Jim P. Stimpson, *Trends in Fatalities from Distracted Driving in the United States, 1999 to 2008,* 100 AM. J. PUB. HEALTH 2213, 2217 (2010); Gilbert Cruz & Kristi Oloffson, *Distracted Driving: Should Talking, Texting Be Banned?,* TIME, Aug. 24, 2009, at 45.

[45] Cruz & Oloffson, *supra* note 44, at 45.

[46] Wilson & Stimpson, *supra* note 44, at 2217. This is one reason why graduated license programs, which limit the circumstances under which newly licensed teenage drivers can drive, including the number of teenage passengers they may carry, have proven successful in reducing fatal accidents among teens. Anne T. McCartt et al., *Graduated Licensing Laws and Fatal Crashes of Teenage Drivers: A National Study,* 11 TRAFFIC INJ. PREVENTION 240, 240, 246 (2010) (noting that in 2007 sixty-one percent of teenage passengers who died in motor vehicle accidents were in cars driven by another teen, and finding that in states with graduated license laws that prohibited teens from driving with other teen passengers there were twenty-one percent fewer fatal crashes than in states whose laws did not restrict teen passengers).

[47] HICKMAN ET AL., *supra* note 40, at xiii–xiv; McCartt et al., *supra* note 36, at 92-95; *see also infra* Part II.B.

[48] *See* Erin Barmby, *Chapter 290: California's Message to Hang Up and Pay Attention,* 38 MCGEORGE L. REV. 342, 346-47 (2007).

[49] MCartt et al., *supra* note 36, at 95.

[50] *New Data from VTTI, supra* note 35.

calls, and many impaired drivers are intoxicated at levels well above the legal limit.[51]

C. Accident and Injury Data

Both anecdotal evidence and rigorous studies suggest that cell phone use is related to accidents.[52] Most drivers, with the possible exception of teenagers, recognize that they are less attentive when using their cell phones.[53] At the same time, the data clearly show that the geometric expansion of cell phone use while driving since the 1980s has not been matched by a comparable increase in motor vehicle accidents, deaths, or injuries.[54] Indeed, while cell phone usage has increased steadily since 1999, the number of fatalities associated with distracted driving has fluctuated significantly during that time, although it has increased markedly since 2005,[55] the year when texting really took off.[56] In 2009, the most recent year for which national data is available, there were 30,797 fatal motor vehicle accidents in the United States, which killed 33,808 people.[57] Eleven percent of these crashes involved a distracted driver.[58] However, of these crashes, only eighteen percent involved cell phone use.[59] Thus, less than three percent of all accidental traffic fatalities involved a driver who was using a cell phone. Similarly, of the 2,217,000 people injured in motor vehicle accidents in 2009, an estimated 448,000, or twenty percent, were injured in a crash involving distracted driving; however, only about five percent of these accidents were attributable to cell phone use.[60]

Drivers under age twenty were the age group most likely to have fatal accidents attributed to distracted driving.[61] This is consistent with the higher accident rate of young drivers generally[62] and is, in turn, attributable to both their

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[51] *See* MCartt et al., *supra* note 36, at 101.

[52] *See supra* notes 2-5; *supra* Part II.B; *infra* notes 53-69.

[53] *See supra* notes 31-36. *But see* Alex Stone, *California Drivers Ignore Hands-Free Law*, ABCNEWS (Nov. 2, 2009), http://abcnews.go.com/Technology/AheadoftheCurve/california-drivers-ignore-hands-free-cell-phone-law/story?id=8974821#.T_j9kY4mw04 (recounting California Highway Patrol officer's description of drivers' excuse for violating the law: "They say, 'I've used my cell phone dozens of times, and I've never been involved in a wreck.'").

[54] *See supra* note 17.

[55] Wilson & Stimpson, *supra* note 44, at 2215 fig.1.

[56] *Id.* at 2216; *see also* CTIA-THE WIRELESS ASS'N, *supra* note 23, at 7.

[57] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 16, at 1.

[58] *Id.* at 1-2.

[59] *Id.* at 1.

[60] *Id.* at 1, 3. Additionally, approximately sixteen percent of accidents that resulted only in property damage were found to involve distracted driving, but there was no further breakdown for cell phone use. *Id.* at 3.

[61] *See* VERMETTE, *supra* note 7, at 10, 22.

[62] *Id.* at 22 (noting that "[t]een drivers (between 16 and 19) are involved in fatal crashes at four times the rate of adult drivers (25 to 69), per mile driven.").

youth and lack of experience behind the wheel.[63] While it is difficult to tease out whether it is youth or lack of driving experience that has the greatest influence on accident rates, at least one study's authors speculated that young drivers may not recognize the riskiness of certain driving behaviors,[64] such as looking away from the road, reaching for dropped objects, and speeding and other types of impatient behavior.[65] Yet, among all distracted drivers involved in fatal accidents, those in their thirties were the most likely to have cell phone use as the cause of their distraction.[66] This is perhaps not surprising since people in this age group are the original multi-taskers, and thus likely to be using their cell phone not only for work-related phone calls but also for staying in touch with their children and other family members.

What is not clear is whether the lack of increased crashes and traffic fatalities attributable to cell phone use is evidence that cell phones are not, in fact, that risky, or whether the long-term national trend of decreasing fatalities from traffic accidents[67] is masking the true risks of cell phone use while driving. This long-term trend has been attributed to a variety of other factors, including increased use of seat belts and a lower incidence of driving under the influence of alcohol or other drugs, which in turn are due to stepped-up law enforcement efforts.[68] A recent study of the impact of texting bans, which showed a slight increase in insurance claims for motor vehicle collisions after these laws were adopted, suggests that teasing out the question of causation is complex indeed.[69]

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[63] *See* Anne T. McCartt et al., *Effects of Age and Experience on Young Driver Crashes: Review of Recent Literature,* 10 TRAFFIC INJ. PREVENTION 209, 214 (2009).

[64] *Id.* at 214-15; *see also* VERMETTE, *supra* note 7, at 22.

[65] *See supra* notes 2–5 (discussing driving behaviors leading to fatal car crashes).

[66] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 16, at 2-3.

[67] From 1994 to 2009, the number of fatal motor vehicle crashes declined from 36,254 to 30,797; additionally, traffic fatalities showed a significant decline during this period, whether measured as the number of deaths per 100 million miles driven (1.73 to 1.14), number per 100,000 population (15.64 to 11.01), or the number per 100,000 licensed drivers (23.21 to 16.13). *Fatality Analysis Reporting System (FARS) Encyclopedia*, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., http://www-fars.nhtsa.dot.gov/Main/index.aspx (last visited July 8, 2012). To put this in broader perspective, "[t]he occupant fatality rate (including motorcyclists) per 100,000 population, which declined by 22.7 percent from 1975 to 1992, decreased by 26.8 percent from 1992 to 2009." *Fatality Analysis Reporting System (FARS) Encyclopedia Did You Know Archive*, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., http://www-fars.nhtsa.dot.gov/Main/DidYouKnow.aspx (follow "Trends" hyperlink) (last visited July 8, 2012).

[68] *See* NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., TRAFFIC SAFETY FACTS 2009 DATA: ALCOHOL-IMPAIRED DRIVING 1-2 (2009), *available at* www.nhtsa.gov/staticfiles/ncsa/pdf/2010/811385.pdf ("The alcohol-impaired-driving fatality rate in the past 10 years has declined by 27 percent from 0.49 in 2000 to 0.36 in 2009."); NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., TRAFFIC SAFETY FACTS: SEAT BELT USE IN 2011—OVERALL RESULTS 1 (2011), *available at* http://www-nrd.nhtsa.dot.gov/Pubs/811544.pdf (estimating that seat belt use has increased nationwide from fifty-eight percent in 1994 to eighty-four percent in 2011); Noder, *supra* note 36, at 250; *see also infra* Part III.B-III.C (discussing deterrent effect of drunk driving and seat belt laws).

[69] HIGHWAY LOSS DATA INST., *supra* note 19, at 5-6, 9.

II. GOVERNMENTAL RESPONSES TO DRIVING WHILE TEXTING OR TALKING

A. Responses to Distracted Driving

Complaints about distracted driving are nearly as old as the automobile itself.[70] The introduction of window wipers in the early 1900s was first accompanied by fears that they might induce a hypnotic state in drivers.[71] The first law directed at distracted driving was proposed in 1930 when legislators in Massachusetts sought to prohibit drivers from listening to the car radio.[72] Many states sought to address the problem of distracted driving by including it within the broader prohibition on reckless driving, leaving it to the discretion of an arresting officer (and ultimately a district attorney) as to whether particular conduct should be sanctioned by the payment of a fine or the initiation of criminal charges.[73]

B. Laws Banning Mobile Device Use While Driving

Since cell phone use while driving has become a matter of public concern, a wide range of laws have been enacted to try to reduce their use among drivers.[74] Paralleling the debate about gun control, the political, if not empirical, question is whether a certain technology (firearms or cell phones) is so risky that its use should be prohibited or regulated or whether the problem is created by a relatively small number of individuals who choose to use the technology in a dangerous manner. While no state absolutely bans the use of cell phones by drivers,[75] ten states and the District of Columbia prohibit the use of hand-held cell phones and thirty-nine states and the District of Columbia prohibit texting

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[70] One can speculate that the first efforts to curb distracted driving were a response to the very high automobile fatality and injury rates of the early twentieth century, which were particularly high for young, urban children, who had no place other than the streets to play. *See* VIVIANA A. ZELIZER, PRICING THE PRICELESS CHILD: THE CHANGING SOCIAL VALUE OF CHILDREN 23, 32-43 (1994). In reaction to the large financial losses suffered by life insurance and casualty insurance companies to compensate bereaved parents, a national safety campaign began, which focused primarily on educating children about the dangers of playing in and near the streets, as opposed to educating drivers to engage in safer, less risky driving. *Id.* at 36-52.

[71] VERMETTE, *supra* note 7, at 6.

[72] Paul K. Hentzen, Comment, *The Trouble with Telematics: The Uneasy Marriage of Wireless Technology and Automobiles,* 69 UMKC L. REV. 845, 859-60 (2001).

[73] Today all states have laws prohibiting reckless driving. *See Reckless Driving: State Laws*, FINDLAW, http://public.findlaw.com/traffic-ticket-violation-law/traffic-ticket-a-z/reckless-driving-laws.html (last visited July 6, 2011).

[74] *See generally Cell Phone and Texting Laws*, GOVERNORS HIGHWAY SAFETY ASS'N (July 2012), http://www.ghsa.org/html/stateinfo/laws/cellphone_laws.html.

[75] *See id.*; *see also* Ashley Halsey III, *State Officials Put Aside Total Ban on Drivers' Use of Cellphones*, WASH. POST, Sept. 27, 2010, at A3.

while driving.[76] Federal, state, and local governments[77] have also promulgated bans on texting and/or hand-held cell phone use by certain categories of drivers, particularly teenage drivers or other recently-licensed drivers,[78] school bus drivers,[79] and other commercial motor vehicle drivers.[80]

The cell phone industry is opposed to bans on cell phone use, arguing, for example, that bans on hand-held verses hands-free devices discriminate against people who cannot afford to purchase a new device or that these bans do not get at the real problem of distracted driving.[81] At the same time, cell phone and automobile manufacturers have joined forces to promote a wide array of Internet-connected and otherwise distracting devices either as standard equipment in new automobiles or as add-ons.[82] BMW and other automakers are promoting technology that presents information to drivers in "brief bursts" on "heads-up displays," and General Motors is marketing its Chevy Cruze to young drivers by touting its Facebook-update feature, which is made available via the car's voice-activated Onstar system.[83] One industry analyst speculates that the number of vehicles with "info-tainment systems" could more than triple to sixty million worldwide by 2017.[84] A consortium of automakers, information systems suppliers, and device manufacturers has been formed to work together on expanding the potential for drivers to integrate their portable mobile devices into their driving experience, as they forecast that vehicles will "evolv[e] . . . to be a 'living space.'"[85] Because mobile communications technology is developing

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[76] *Cell Phone and Texting Laws*, *supra* note 74. California, Connecticut, Delaware, Maryland, Nevada, New Jersey, New York, Oregon, Washington, and West Virginia as well as the District of Columbia and the Virgin Islands ban all drivers from using a handheld cell phone while driving. *Id.* Thirty-nine states (Alabama, Alaska, Arkansas, California, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming), the District of Columbia, Guam, and the Virgin Islands prohibit all drivers from text messaging. *Id.*; *see also State Laws,* DISTRACTION.GOV, http://www.distraction.gov/content/get-the-facts/state-laws.html (last visited May 26, 2011).

[77] Some localities have adopted cell phone or texting bans. Sometimes these have been precursors to a state-wide ban, but in other states the law specifically preempts localities from adopting such bans. *Cell Phone and Texting Laws*, *supra* note 74.

[78] Thirty-two states ban novice drivers from any cell phone use while driving, and five states that allow most drivers to text prohibit novice drivers from texting. *Id.*

[79] Nineteen states and the District of Columbia prohibit school bus drivers from using a cell phone when a passenger is present; three states ban school bus drivers from texting. *Id.*

[80] Under U.S. Department of Transportation regulations, all holders of commercial motor vehicle licenses are banned from texting while driving in interstate commerce. 49 C.F.R. § 392.80 (2012).

[81] Barmby, *supra* note 48, at 349-50.

[82] Vance & Richtel, *supra* note 37.

[83] Joseph B. White, *U.S. Presses to Rein in Web Gadgets in New Cars,* WALL ST. J., June 1, 2011, at D1.

[84] *Id.*

[85] *Nokia-New Car Connectivity Consortium Aims to Put In-Vehicle Infotainment into High Gear,* ENP NEWSWIRE, Mar. 17, 2011.

much faster than consumers can upgrade their cars,[86] many device manufacturers are offering new products to surmount this technological hurdle, such as the "GoSmart" clip, which permits drivers to mount their phones directly to the steering wheel.[87]

An increasing number of studies show that there is no safety-based justification for treating hand-held cell phones differently than hands-free devices.[88] Studies of simulated driving as well as "naturalistic" studies of actual driving show that there is no difference in the risk of a crash or near crash in the use of a hand-held or hands-free device.[89] When driving and using a cell phone, the most dangerous actions are the acts of dialing and reaching for a cell phone, headset, or earpiece[90] because they involve extended periods in which drivers take their eyes off the road.[91] At the same time, studies show that during cell phone conversations most drivers focus primarily on the road ahead and do less peripheral- and mirror-checking of their environment, making it more likely that they will be unaware of road hazards.[92] Indeed, a potential unintended consequence of laws that ban the use of hand-held cell phones while permitting hands-free devices is that people will conclude that hands-free devices are safer and therefore use them more frequently and for a longer duration than they would if they were holding a cell phone to their ear.[93]

Several recent studies also raise questions about the efficacy of bans on cell phone use. Although some studies have found that bans on the use of hand-

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[86] *See id.*

[87] *See* Roy Furchgott, *The GoSmart Clip: A Well-Made Bad Idea,* GADGETWISE (Apr. 7, 2011, 2:17 PM), http://gadgetwise.blogs.nytimes.com/2011/04/07/the-gosmart-clip-a-well-made-bad-idea/.

[88] *See* SCHNEIDER, *supra* note 34, at 6.

[89] *See* WILLIAM J. HORREY & CHRISTOPHER D. WICKENS, THE IMPACT OF CELL PHONE CONVERSATIONS ON DRIVING: A META-ANALYTIC APPROACH 1 (Mar. 2004) (prepared under contract for General Motors Company) (describing a meta-analysis of sixteen studies of the impact of cell phone conversation *only* on driver performance, which showed that the act of conversation was distracting and slowed drivers' reaction time); SCHNEIDER, *supra* note 34, at 6 (summarizing data); Hahn & Dudley, *supra* note 15, at 151-67, (summarizing data); *New Data from VTTI, supra* note 35 (naturalistic driving study found that "[h]eadset cell phone use is not substantially safer than hand-held use because the primary risk associated with both tasks is answering, dialing, and other tasks that require your eyes to be off the road.").

[90] HICKMAN ET AL., *supra* note 40, at ix, xii–xv (describing study via videotape of drivers of commercial trucks and buses and comparing it to simulator studies). The data is equivocal about whether hands-free dialing is safer than hand-held dialing. Anne T. McCartt et al., *Long-Term Effects of Handheld Cell Phone Laws on Driver Handheld Cell Phone Use,* 11 TRAFFIC INJ. PREVENTION 133, 134 (2010).

[91] *See* KLAUER ET AL., *supra* note 34, at 57 (finding that study "confirmed the riskiness of looking away from the forward roadway, even for fairly brief periods of time or for repeated brief glances away from the forward roadway . . . . Thus, tasks with intermittent, repeated glances away from the forward roadway (e.g., text messaging or dialing a cell phone) are riskier than those tasks that require less time and fewer eyeglances away from the forward roadway (e.g., inserting a CD, talking on the cell phone).").

[92] *Id.* at 58-59.

[93] *See* Hahn & Dudley, *supra* note 15, at 166-67.

held cell phones lead to lessened use, these decreases appear to depend on high-cost/high-publicity enforcement and have shown a tendency to stabilize over time.[94] However, in states where there has been consistent public attention given to cell phone bans, there has been an overall decrease in cell phone use.[95] However, it is less clear whether decreased cell phone use while driving will

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[94] McCartt et al., *supra* note 90, at 134. The study found that before the District of Columbia adopted a ban on hand-held cell phones in 2004, 6.1 percent of all drivers were observed using their cell phone while driving. *Id.* While that number fell to 3.5 percent immediately after the ban, it rose gradually to 4.2 percent by April 2009. *Id.* However, the post-ban D.C. rates were consistently lower than those of drivers in neighboring Maryland and Virginia, leading the study's authors to speculate that absent the ban the observed rate in D.C. would have been forty-three percent higher. *Id.* at 134, 136-37. Similar but less dramatic results appeared in a study by the same authors of New York state's ban on hand-held cell phones enacted in 2001. Before the ban 2.3 percent of drivers were observed using such phones; this number fell to 1.1 percent immediately after the ban went into effect. *Id.* However, in March 2003 the number of hand-held using drivers rebounded to 2.1 percent, and in April 2009 that number had risen to 3.9 percent, a rate greater than the 2.1 percent observed rate of drivers in neighboring Connecticut, which did not adopt a ban on hand held cell phone use until 2005. *Id.* The authors estimated that had there been no ban, New York drivers' use of hand held phones would have been about 24 percent higher. *Id.* at 134,136-37, 139.

In the United Kingdom, a preliminary study showed that a ban had a short-term effect on cell phone use, but provided no data on the ban's impact on accident rates. Sandeep Johal et al., *Mobile Phones and Driving,* 27 J. PUB. HEALTH 112 (2005), *available at* http://jpubhealth.oxfordjournals.org (showing a reduction from 1.85 percent of drivers using hand-held phones to .97 percent in the first ten weeks after the ban became effective). However, many drivers continued to violate the ban and fatalities and serious injuries attributable to cell phone use increased. *See Mobiles Lead to Rise in Road Casualties,* BUCKS FREE PRESS (U.K.), July 5, 2007. In response, in 2007 Parliament enacted a law that doubled the fine for using a cell phone while driving from £30 to £60, added three points to drivers' licenses for a violation, and made the crime of causing a fatal accident while using a cell phone punishable by up to fourteen years in prison. David Williams, *Despite Risk of Jail, Motorists Flout Ban on Mobiles,* EVENING STANDARD (U.K.), July 16, 2008. A 2010 study of London drivers found that although the rates of cell phone use while driving dipped initially in response to the 2007 law change, by 2009 rates had risen dramatically, more than doubling for every category of driver. S. NARINE ET AL., MOBILE PHONE AND SEAT BELT USAGE RATES IN LONDON 2009 24, 28 (2010).

[95] Recent enhanced and highly publicized law enforcement efforts in Connecticut and New York have achieved at least short-term reductions in hand-held cell phone use in selected cities compared to "control" cities, although the decreases were statistically significant only among drivers twenty-five and older. LINDA COSGROVE ET AL., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., HIGH VISIBILITY ENFORCEMENT DEMONSTRATION PROGRAMS IN CONNECTICUT AND NEW YORK REDUCE HAND-HELD PHONE USE 4-5 (2011) [hereinafter COSGROVE ET AL., HIGH VISIBILITY ENFORCEMENT DEMONSTRATION PROGRAMS], *available at* http://www.distraction.gov/download/research-pdf/High-Visibility-Enforcement-Demo.pdf. In a follow-up study, further waves of highly publicized enforcement of the cell phone ban were shown to decrease cell phone use. LINDA COSGROVE ET AL., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., FOUR HIGH VISIBILITY ENFORCEMENT DEMONSTRATION WAVES IN CONNECTICUT AND NEW YORK REDUCE HAND-HELD PHONE USE 5, 10, 12 (2011) [hereinafter COSGROVE ET AL., FOUR HIGH VISIBILITY ENFORCEMENT DEMONSTRATION WAVES], *available at* http://www.distraction.gov/download/research-pdf/508-research-note-dot-hs-811-845.pdf. Overall cell phone use in the control cities in the two states also declined, although at more modest rates, suggesting that "social norms towards phone use and texting while driving may be shifting, becoming less acceptable behaviors to the public." *Id.* at 10.

necessarily translate into a decreased incidence of traffic accidents and concomitant injuries and death.

There are at least four reasons for this. One is that while the observed percentage of drivers using cell phones appears to have gone down, more and more drivers are using cell phones at least sometimes when they drive.[96] This is particularly so among younger drivers.[97] Second, at the same time, the overall motor vehicle accident rate, including accidents which lead to fatalities, has been steadily decreasing over the last seventeen years, despite the exponential increase in the use of cell phones and texting;[98] it is thus impossible to infer a cause and effect relationship between bans that cause a decrease in observed cell phone use and fewer motor vehicle accidents.[99] Third, legal obstacles to obtaining cell phone records in the United States have so far made it impossible to directly connect individual drivers' cell phone use with their involvement in a motor vehicle accident.[100] Fourth, and perhaps most importantly, when the question tested by the study is not observed cell phone use but actual accidents, the data suggest a counter-intuitive result. Two recent studies appear to show that even when states have enacted bans on drivers' use of hand-held cell phones or texting while driving, there is no greater decrease in the rate of vehicle collisions in states with such bans than in neighboring "control" states that have not enacted a similar ban. A 2009 study employing this methodology found that cell phone bans in California, Connecticut, the District of Columbia, and New York were not associated with a decrease in the numbers of collision claims (and thus

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[96] *See supra* notes 23-33 and accompanying text.

[97] McCartt et al., *supra* note 90, at 138.

[98] Alexander G. Nikolaev et al., *Evaluating the Impact of Legislation Prohibiting Hand-Held Cell Phone Use While Driving,* 44 TRANSP. RES. PART A: POL'Y & PRAC. 182, 190-91 (2010) (summarizing accident rates from 1994-2004); Wilson & Stimpson, *supra* note 44, at 2215-17 (summarizing accident fatalities attributable to distraction from 1999-2008).

[99] Thus, although Nikolaev et al. acknowledged that cell phone use had increased dramatically even as motor vehicle accident rates were slowly declining, they relied on accident data from New York state counties to assert that because accidents had gradually declined after the 2001 ban this showed that the ban on cell phone use was the cause of the decline. Nikolaev et al, *supra* note 98, at 184, 190. This research has been criticized on the ground that it is impossible to separately identify a decrease in accidents attributable to the cell phone ban when there is a continuing downward trend in accidents attributable to other previously existing factors. *See* Breno Sampaio, *On the Identification of the Effect of Prohibiting Hand-Held Cell Phone Use While Driving: Comment,* 44 TRANSP. RES. PART A: POL'Y & PRAC. 766, 767 (2010).

[100] McCartt et al., *supra* note 90, at 133. "Privacy" and "confidentiality" laws vary from state to state. It may be possible to obtain access to a driver's cell phone records in litigation but not under other circumstances. *See, e.g.*, Joseph D. Nohavicka, *Privacy, Discovery Collide over Cell Phone Records in Auto Accident Litigation,* L. TECH. NEWS, Feb. 26, 2010. In *Detraglia v Grant,* 890 N.Y.S. 2d 696, 697-98 (N.Y. App. Div. 2009), the court held that, where there was evidence supporting the plaintiff's contention that the defendant driver had been using his cell phone or other wireless devices while driving, his cell phone records should be produced in discovery for in camera review. Of course, the USA Patriot Act also authorizes the FBI to undertake telephone surveillance and obtain cell phone records under certain circumstances. Charlie Savage, *Deal Reached on Extension of Patriot Act,* N.Y. TIMES, May 20, 2011, at A16.

presumably motor vehicle accidents), despite observed decreases in hand-held cell phone use.[101] It is hypothesized that drivers seeking to evade the ban resort to more surreptitious activity, holding their cell phones not by their ears, where they could be observed, but in their laps, leading to drivers taking their eyes off the road for even longer periods of time.[102] This hypothesis is also supported by a 2010 study examining the impact of texting bans in California, Louisiana, Minnesota, and Washington state. The study found that not only were texting bans *not* associated with a decrease in collision claims, in three out of four states the bans were associated with increased collision rates, particularly for drivers under age twenty-five, who in general are at highest risk of car crashes.[103]

Nonetheless, the momentum for enacting bans on cell phone use, particularly in regard to texting, appears to be gaining strength.[104] Transportation Secretary Ray LaHood has convened two federal summits on the problem of distracted driving,[105] and his efforts have been joined by other traffic safety advocates,[106] particularly those concerned with the special dangers presented by teen driving.[107]

The Obama Administration has taken a number of steps to limit cell phone use in areas where the federal government has authority to act. It has focused on texting as the most serious threat to public safety, citing a 2009 study of commercial motor vehicle drivers using in-vehicle observational technology that found that the risk of a crash or "near crash" was twenty-three times more

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[101] The study examined collision claim data in the jurisdictions with bans, comparing claims incidence before and after the ban and comparing it with collision data in neighboring states. The data in the states with enacted prohibitions essentially paralleled the data in the non-ban states serving as controls. HIGHWAY LOSS DATA INST., HIGHWAY LOSS DATA INSTITUTE BULLETIN: HAND-HELD CELLPHONE LAWS AND COLLISION CLAIM FREQUENCIES 1-3, 5 (2009), *available at* http://www.iihs.org/research/topics/pdf/HLDI_Cellphone_Bulletin_Dec09.pdf.

[102] *See* HIGHWAY LOSS DATA INST., *supra* note 19, at 8.

[103] *Id.* at 3-6.

[104] Larry Copeland, *Driver Phone Bans' Impact Doubted: Push for Texting Laws Continues,* U.S.A. TODAY, Jan. 29, 2010, at A1; *see also Cell Phone and Texting Laws*, *supra* note 74 (documenting increasing number of states and territories with complete or partial bans on hand-held cell phone use and texting while driving).

[105] *See* Press Release, U.S. Dep't. of Transp., *supra* note 10.

[106] The Department of Transportation has worked to establish the victims' advocacy group FocusDriven. *Id.*; *see also* Stephanie Hanes, *Report: Cell Phone Distraction Causes One in Four US Car Crashes*, CHRISTIAN SCIENCE MONITOR, Jan. 12, 2010, www.csmonitor.com/USA/2010/0112/Report-Cell-phone-distraction-causes-one-in-four-US-car-crashes (describing the formation of FocusDriven). Janet Froetscher, the President of the National Safety Council, has also been an active campaigner against the use of cell phones while driving, emphasizing the need of the business community to act to prevent their employees from using cell phones. Press Release, Nat'l Safety Council, National Safety Council President Joins Transportation Secretary LaHood to Address Distracted Driving (July 7, 2010), *available at* http://www.nsc.org/Pages/NSCPresidentJoinsTransportationSecretaryLaHood.aspx.

[107] Larry Copeland, *"Awareness Gap" on Road Texting: Despite the Data, Teens Missing Message on Risks,* U.S.A. TODAY, Sept. 20, 2010, at A3.

likely when drivers were texting than when they were not distracted.[108] President Obama has issued an Executive Order banning federal employees from texting while driving,[109] and the Department of Transportation has promulgated regulations prohibiting texting by commercial motor vehicle operators when they are driving in interstate commerce.[110] The Transportation Department is also currently developing guidelines to address the safety issues raised by the expanding development of built-in vehicle technology.[111] The federal government has recently launched a new website, www.distraction.gov,[112] that brings together both legal information and advocacy resources.

In October 2010 the Occupational Safety and Health Administration (OSHA) announced an initiative to encourage employers to adopt a policy against texting while driving as a means of complying with their duty under the Occupational Safety and Health Act to provide a safe workplace.[113] In a letter to employers, OSHA declared that the leading cause of worker deaths is motor vehicles.[114] It further announced that in order to meet their "responsibility and legal obligation to create and maintain a safe and healthful workplace," employers must adopt workplace policies that not only do not require employees

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[108] *See* Regulatory Guidance Concerning the Applicability of the Federal Motor Carrier Safety Regulations to Texting by Commercial Motor Vehicle Drivers, 75 Fed. Reg. 4305, 4306-07 (Jan. 27, 2010) (citing study by Hickman et al., *supra* note 40); *see also* Press Release, Dep't of Transportation, U.S. Transportation Secretary Ray LaHood Kicks Off National Distracted Driving Summit (Sept. 21, 2010), *available at* http://www.dot.gov/briefing-room/us-transportation-secretary-ray-lahood-kicks-second-national-distracted-driving-summit.

[109] *See* Exec. Order No. 13,513, 3 C.F.R. 246 (2010). Each federal department or agency is responsible for issuing "guidance" to its workers and contractors to implement the Executive Order by prohibiting employees from texting "while driving on official business or using government-supplied equipment" and by "encouraging" government contractors to adopt similar policies for their employees. *See, e.g.*, U.S. DEP'T OF THE INTERIOR, DEPARTMENT OF INTERIOR GUIDANCE RELEASE (DIG) 2010-04 (2010), *available at* http://www.doi.gov/archive/pam/DIG_2010-04[1].pdf.

[110] Limiting the Use of Wireless Communication Devices, 75 Fed. Reg. 59,118 (Sept. 27, 2010) (codified at 49 C.F.R. pts. 383-84, 390-92). These regulations prohibit texting by holders of commercial motor vehicle licenses while driving in interstate commerce and also impose sanctions which prohibit drivers holding these licenses who have violated either the regulation or applicable state law from driving for periods ranging from 60 to 120 days (in effect, suspending their license). *Id.* at 59,134-36.

[111] White, *supra* note 83.

[112] *See About Us*, DISTRACTION.GOV, http://www.distraction.gov (last visited July 19, 2012); *see also* Larry Copeland, *LaHood Seeks Federal Texting-While-Driving Ban*, U.S.A. TODAY, Dec. 8, 2011, http://www.usatoday.com/news/nation/story/2011-12-07/texting-while-driving-ban/51722780/1?loc=interstitialskip; Lorien Crow, *Distracted Driving on the Rise, Researchers Find*, MOBILEDIA (Dec. 12, 2011), http://www.mobiledia.com/news/120122.html.

[113] *See* Letter from David Michaels, Assistant Sec'y, Occupational Safety & Health Admin., to Employers (Oct 4, 2010), *available at* http://www.osha.gov/distracted-driving/index.html. Under the Occupational Safety and Health Act's general duty rule, an employer "shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees . . . ." 29 U.S.C. § 654(a)(1) (2006).

[114] Letter from David Michaels, supra note 113.

to text while driving but that also do not "create incentives that encourage or condone" texting or make texting "a practical necessity for workers to carry out their job."[115] The letter contained a thinly-veiled threat that employers who did not adopt policies that prohibited and discouraged texting while driving by their employees would be subject to inspection and sanctions.[116] So far no action has been taken by OSHA against any employer, but employers and their insurers are well aware of the agency's concerns,[117] as well as the threat of tort suits and workers' compensation claims being brought against an employer whose employee's communications while driving cause death or injury.[118]

Over the last five years, several federal lawmakers have proposed laws to limit drivers' use of cell phones, especially for texting, but none have been enacted.[119] Generally, these laws build on the existing framework of federal transportation safety law, in which the federal government provides funding to states that enact laws effectuating a federal purpose.[120] Thus, the recently-

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[115] *Id.*

[116] *Id.*

[117] *See* Boyd Byers, *Get the Message: OSHA Says Employers Must Ban Texting While Driving,* KAN. EMP'T LAW LETTER, Nov. 2010, *available at* http://www.hrhero.com/hl/articles/2010/12/02/osha-says-employers-must-ban-texting-while-driving/.

[118] *Id.*; *see also infra* Part II.D.

[119] *See, e.g.*, Motorcoach Enhanced Safety Act of 2011, S. 453, 112th Cong., (2011) (introduced by Senator Sherrod Brown, authorizing the Secretary of Transportation to promulgate regulations prohibiting the use of wireless devices by motor coach drivers, apparently expanding the prohibitions on texting by commercial motor vehicle operators driving in interstate commerce contained in regulations promulgated by the Secretary and discussed *supra* notes 11 and 110 and accompanying text); Motorcoach Enhanced Safety Act of 2011, H.R. 873, 112th Cong., (2011) (introduced by Representative John Lewis, tracking S. 453, *supra*); Distracted Driving Prevention Act of 2009, S. 1938, 111th Cong. (2009) (introduced by Senator John D. Rockefeller IV, with provisions generally tracking those of the Distracted Driving Prevention Act of 2011, H.R. 1772, 112th Cong. (2011), discussed *infra* notes 137-139 and accompanying text); S. 1536, 111th Cong. (2009) (introduced by Senator Charles Schumer, proposing that twenty-five percent of states' federal highway funds be withheld if states do not enact laws banning texting while driving); H.R. 4153, 111th Cong. (2009) (introduced by Representative Todd Russell Platts, amending Title 23 of the U.S. Code to withhold federal funds for fiscal years 2012 to 2015 if a state failed to enact or enforce a law prohibiting certain types of wireless communications while driving).

[120] The federal government has long finessed federalism questions by offering states financial incentives to enact laws to promote goals Congress deems worthy, including the Medicaid program, 42 U.S.C. §§ 1396-1396w-5 (2006), and the Child Abuse Prevention and Treatment Act, 42 U.S.C. § 5101 (2006), which changed the substantive requirements and procedures for child abuse reporting. The federal government has been involved in highway safety issues since 1966. *See* Highway Safety Act of 1966, Pub. L. No. 89-564, 80 Stat. 731; National Traffic and Motor Vehicle Safety Act of 1966, Pub. L. No. 89-563, 80 Stat. 718; *see also* Tuncay Durna, MADD, Drunk Driving, and Deterrence: The Impact of State Laws on Individual Attitudes and Behavior 37 (Dec. 2005) (unpublished Ph.D. dissertation, Kent State University) (on file with author). These financial incentives have continued. In 1984, Congress enacted the National Minimum Drinking Age Act of 1984, Pub. L. No. 98-363, 98 Stat. 435 (codified at 23 U.S.C. § 158 (2006)), which reduced federal funding by five percent and ten percent for states that did not enact a minimum drinking age of twenty-one by October 1, 1986 and October 1, 1987, respectively. *See* Anne T. McCartt et al., *The Effects of Minimum Legal Drinking Age 21 Laws on Alcohol-Related Driving in*

proposed Distracted Driving Prevention Act of 2011[121] would provide grants to states that adopt laws that prohibit texting or the use of hand-held phones while driving, implement the prohibition through primary enforcement,[122] offer escalating penalties for repeat violators or those who cause an accident while engaging in prohibited communications, and require state motor vehicle departments to educate and test drivers about distracted driving issues and collect data about motor vehicle accidents that includes information about cell phone use.[123] In addition, the Act would authorize the Administrator of the National Highway Safety Administration to establish an anti-distracted driving education program and a research program on driver behavior and technology relevant to distracted driving.[124] Similarly, the Safe Drivers Act of 2011[125] would incentivize states to ban the use of hand-held cell phones while driving by withholding twenty-five percent of federal highway construction funds from states without such bans and would also authorize the Secretary of Transportation to conduct a comprehensive study of distracted driving.[126] However, Congressional representatives have criticized these and similar measures as inconsistent with federalism principles, and even the proposal in the current federal highway transportation reauthorization bill to provide states with

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the United States, 41 J. SAFETY RES. 173, 176-77 (2010). In addition, Congress has been involved—albeit inconsistently—with motorcycle safety. Congress has twice enacted, and then repealed, laws providing financial incentives for states to adopt mandatory helmet laws. *See* Christopher P. Ogolla & Frederic E. Shaw, *Is the Repeal of Mandatory Motorcycle Helmet Legislation a Contributing Factor to Traumatic Injury as a Public Health Problem? Recommendations for the Future,* 14 MICH. ST. U. J. MED. & L. 163, 189-90 (2010). Two federal transportation programs administered by the National Highway Transportation Safety Administration specifically target state seat belt programs for privately-owned passenger motor vehicles: the Section 405 program (Occupant Protection Incentive Grants), 23 U.S.C. § 405(f) (2006), and Section 406 program (Safety Belt Performance Grants), 23 U.S.C. § 406 (2006). The federal government also actively promotes seat belt use by offering states financial incentives to adopt primary enforcement seatbelt laws. The Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU), Pub. L. No. 109-59, 119 Stat. 1545 (2005), provides financial incentives to states that adopt programs to encourage the use of seat belts, child safety seats, and motorcyclist safety. SAFETEA-LU was enacted in 2005, with a September 2009 expiration date, and President Obama has twice reauthorized the law. *See* VERMETTE, *supra* note 7, at 14.

[121] H.R. 1772, 112th Cong. (2011) (introduced by Representative Elliott Engel of New York). A similar bill was previously introduced by Senator John D. Rockefeller IV. *See* Distracted Driving Prevention Act of 2009, S. 1938, 111th Cong. (2009).

[122] Primary enforcement laws are those that permit police and other law enforcement officers to stop a motorist for an observed violation of that law. They are contrasted with secondary enforcement laws, in which law enforcement officers can only cite a driver for violating that law if the officer has already stopped the driver for another, primary enforcement offense. *See, e.g.*, DIV. OF UNINTENTIONAL INJURY PREVENTION, NAT'L CTR. FOR INJ. PREVENTION & CONTROL, POLICY IMPACT: SEAT BELTS 6 (2011), *available at* http://www.cdc.gov/motorvehiclesafety/seatbeltbrief/.

[123] H.R. 1772 §§ 2, 4.

[124] *Id.* at §§ 3-6.

[125] H.R. 2333, 112th Cong. (2011) (introduced by Representative Carolyn McCarthy).

[126] *Id.* §§ 3-4.

financial incentives to enact bans on texting has proven controversial.[127] To date, Congress has enacted only toothless exhortatory laws, such as resolutions proclaiming April 2010 to be National Distracted Driving Month[128] or November 29, 2009 to be Drive Safer Sunday.[129]

C. Special Concerns about Teen Drivers

As noted earlier, teenagers are much more likely to be involved in motor vehicle accidents, and to die from them, than older drivers.[130] This is consistent with teen behavior in general: due to their still-developing brains and their more limited life experience, they are more impulsive, less able to control their conduct, and frequently poorer at making decisions.[131] The Supreme Court has repeatedly recognized these aspects of adolescence, finding teens to be "less mature and responsible than adults" and less likely to "recognize and avoid choices that could be detrimental to them."[132] Teens are especially likely to engage in risky behavior, reflecting their immature brains, which are hard-wired to seek novelty and excitement as part of the developmental process of learning to be independent from adults.[133] The dangers of teen driving are exacerbated by teens' significant use of cell phones while driving, especially text messaging.[134] These figures are particularly alarming because teen drivers are less likely than adults to use seat belts, particularly when there is another teenager present as a passenger.[135]

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[127] *See supra* notes 12-13 and accompanying text.

[128] S. Res. 510, 111th Cong. (2009) (enacted) (introduced by Senator Amy Klobuchar); H.R. Res. 1186, 111th Cong. (2009) (enacted) (introduced by Representative Betsy Markey).

[129] H.R. Res. 841, 111th Cong. (2009) (enacted) (introduced by Representative Jim Gerluch, encouraging educational institutions, trucking firms, clergy, law enforcement, and the general public to promote motor vehicle driving safety).

[130] VERMETTE, *supra* note 7, at 22 (noting that "[t]een drivers (between 16 and 19) are involved in fatal crashes at four times the rate of adult drivers (25 to 69), per mile driven."). As a result, insurance premiums are much higher for drivers under age 25. *See, e.g.*, Justin Stoltzfus, *Higher Grades Can Mean Lower Premiums for Teen Drivers*, AUTOINSURANCEQUOTES.COM (Jan. 21, 2011), http://www.autoinsurancequotes.com/news/higher-grades-can-mean-lower-premiums-for-teen-drivers/; *Top 3 Reasons for Higher Auto Insurance Quotes for Males Under 25*, AUTOINSURANCEQUOTE.COM (Feb. 23, 2010), http://www.autoinsurancequote.com/articles/top-3-reasons-higher-auto-insurance-quotes-men-25.html.

[131] Anita Slomski, *The Teenage Brain*, PROTO MAGAZINE, Fall 2010, at 26, 27-31, *available at* http://protomag.com/statics/MGH_F10_juvenile_F1.pdf.

[132] J.D.B. v. North Carolina, 131 S. Ct. 2394, 2402-03 (2011) (summarizing the long history of the Court's observations about juvenile actors in the course of determining that a juvenile suspect's age must be taken into account in deciding whether he is in custody for purposes of *Miranda* analysis).

[133] Slomski, *supra* note 131, at 30.

[134] *See supra* notes 30-33.

[135] *See* Anne T. McCartt & Veronika Shabanova Northrup, *Factors Related to Seat Belt Use Among Fatally Injured Teenage Drivers*, 35 J. SAFETY RES. 29, 29 (2004); A.F. Williams, *Young Driver Risk Factors: Successful and Unsuccessful Approaches for Dealing with Them and an Agenda for the Future*, 12 INJ. PREVENTION i4, i4 (Supp. I 2006).

These risks have prompted state legislators, researchers, and policy advocates to consider a broad range of solutions to try to reduce the incidence of motor vehicle accidents, particularly fatal ones, among teenagers. These include the enactment of graduated driver licensing laws (GDL)[136] and an expanded emphasis on the dangers of distracted driving in the learners' permitting process, driver education programs, and the public media generally.[137] Since 1996, nearly all states have enacted laws that have lengthened the process by which teens attain full driving privileges.[138] These graduated licensing laws generally contain several components: an increased age at which the driver is eligible to apply for a learner's permit and full (unrestricted) license, minimum periods (usually six to twelve months) during which the driver must drive under a learner's permit (i.e., with adult supervision), mandatory driver education courses, and limitations on the circumstances in which the novice driver may operate a motor vehicle (e.g., with teenage passengers, after dark, or with a cell phone).[139] States vary in the extent to which they elongate the licensing process, provide for extended periods of supervision, and limit driving under more hazardous circumstances.[140] For example, New Jersey is the only state in which all new drivers under age twenty-one are required to display a decal indicating their novice status.[141]

Stronger GDL laws are associated with greater reductions in the rates of teen driver collisions.[142] The provisions with the greatest impact are those that require more hours of driving practice, most restrict nighttime driving, and limit the number of passengers in the car.[143] As a result, many commentators advocate expanding and enhancing GDL programs to provide a longer, more supervised learning experience.[144] Recently, Senator Kirsten Gillibrand and Representative Timothy Bishop have proposed the Safe Teen and Novice Driver Uniform Protection (STANDUP) Act.[145] This law would follow the familiar pattern of

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[136] *See* ARTHUR GOODWIN ET AL., AAA FOUND. FOR TRAFFIC SAFETY, PARENTS, TEENS, & THE LEARNER STAGE OF GRADUATED DRIVER LICENSING (2010); McCartt et al., *supra* note 46, at 246; McCartt et al., *supra* note 63, at 214.

[137] *See infra* notes 142-59.

[138] *See* GOODWIN ET AL., *supra* note 136, at 1-2; ALLAN F. WILLIAMS ET AL., AAA FOUND. FOR TRAFFIC SAFETY, EVALUATION OF NEW JERSEY'S GRADUATED DRIVER LICENSING PROGRAM 5-7 (2010), *available at* http://www.aaafoundation.org/pdf/NJGDLevalFinalReport.pdf; *Graduated Driver Licensing (GDL) Laws*, GOVERNORS HIGHWAY SAFETY ASS'N (Aug. 2012), http://www.ghsa.org/html/stateinfo/laws/license_laws.html.

[139] Williams, *supra* note 135, at 4-6; *Graduated Driver Licensing (GDL) Laws*, *supra* note 138.

[140] *Summary Table: Young Driver Licensing Systems in the U.S.*, INS. INST. FOR HIGHWAY SAFETY (Aug. 2011), http://www.iihs.org/laws/GraduatedLicenseCompare.aspx.

[141] *Graduated Driver Licensing (GDL) Laws*, *supra* note 138.

[142] *See* REBECCA E. TREMPEL, INS. INST. FOR HIGHWAY SAFETY, GRADUATED LICENSING LAWS AND INSURANCE COLLISION CLAIM FREQUENCIES OF TEENAGE DRIVERS 1, 6 (2009).

[143] *See id.* at 6, 7.

[144] *See id.* at 9; McCartt et al., *supra* note 46, at 246; McCartt, *supra* note 63, at 209-18; Williams, *supra* note 135, at 21-22.

[145] S. 528, 112th Cong. (2011) (introduced by Senator Kirsten Gillibrand); *see also* H.R. 1515, 112th Cong. (2011) (companion bill introduced by Representative Timothy Bishop).

providing a combination of grants and withholdings under the federal highway construction program to encourage states to adopt laws to implement or improve their GDL programs.[146] Key provisions of the STANDUP Act would extend and enhance the quality of the preliminary and intermediate licensing process, prevent full licensure until age eighteen, limit the circumstances under which teens could drive without supervision, and prohibit the use of cell phones while driving for all drivers under eighteen.[147]

Although GDL programs are associated with lower crash and fatality rates for teens, the means by which they reduce the incidence of accidents and fatalities among teen drivers is not clear.[148] For example, is it simply by delaying the age at which one can begin to learn to drive that drivers become safer (presumably because their brains have had a few more months to mature, with concomitant improvements in perception, reflexes, and judgment), or is it the opportunity that graduated licensing gives for more driving experience, as well as supervised practice driving under difficult conditions (e.g., at night, on two lane roads, with potentially distracting passengers) that makes teens safer drivers once they receive their full license?[149] One review of GDL programs found that states with laws prohibiting newly-licensed teen drivers from having any teenage passengers had fatal crash rates that were twenty-one percent lower than states without such prohibitions.[150] An intensive study of the North Carolina GDL program, which used in-car cameras to capture the experience of teens learning to drive with their parents, found that most teen drivers were not given significant opportunity to drive in more hazardous conditions (e.g., curvy country roads, heavy traffic, or inclement weather such as rain or snow).[151] This study also found that parents supervising teens with learners' permits are more likely to educate their children about the mechanics of driving (i.e., accelerating, braking, turning) than about the cognitive skills that are necessary to become a good driver (i.e., anticipating the need to brake by seeing the brake lights of cars ahead, being aware of peripheral objects and hazardous road conditions, and driving defensively).[152] Citing these studies, Anne McCartt, a noted traffic safety

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[146] *See* S. 528 §§ 3-5; *see also STANDUP ACT*, SAFEROADS4TEENS.ORG, http://www.saferoads4teens.org/standup-act (last visited July 8, 2011).

[147] S. 528 § 3.

[148] GOODWIN ET AL., *supra* note 136, at 1-2.

[149] *See* TREMPEL, *supra* note 142, at 9 (finding that lengthening the "holding period" during which a teen must drive with a learner's permit had no independent impact on teen collision rates, apart from the fact that it increased the age at which the driver was ultimately licensed); WILLIAMS ET AL., *supra* note 138, at 6, 21 (documenting uncertainty as to whether increased age or increased experience is responsible for crash rates reduced by GDL); McCartt et al., *supra* note 63, at 209-18 (summarizing numerous studies showing that both increased age and greater driving experience were independently associated with lower auto crash rates).

[150] McCartt et al., *supra* note 46, at 246.

[151] GOODWIN ET AL., *supra* note 136, at vi-xi.

[152] *Id.* at x–xiii.

expert, has concluded that there is no substitute for actual driving experience in a broad array of challenging road conditions.[153]

Despite the success of GDL programs, many commentators have identified a need to give greater attention to the dangers of cell phone use while driving as part of new drivers' education and licensing.[154] States have only recently begun to place an emphasis on the risks of cell use in the standard driver education program, which is where most teens receive their formal driver training.[155] Only thirty-two states and the District of Columbia include materials on distracted driving in their driver's license manuals,[156] and fewer than twenty states require distracted driving to be addressed in driver's education classes or include at least one question on these risks in the tests given to obtain a learner's permit.[157] Less than a third of states take advantage of teenagers' heavy use of social networking by using those sites to promote anti-distracted driving messages.[158] However, a recently-developed advertising campaign, cosponsored by the National Highway Traffic Safety Administration, state attorneys general, and state consumer protection agencies, seeks to change the teenage culture in which mobile device use, even while driving, is the norm.[159]

D. Can Tort Litigation Discourage the Use of Mobile Devices?

Drivers' increasing use of cell phones has been accompanied by a concomitant rise in tort litigation brought by motorists and pedestrians alleging that they were injured in an accident caused by a driver who was distracted by the use of a cell phone. Most of these are garden-variety negligence suits, in which liability depends on whether the driver and injured party were driving with appropriate care (including questions of comparative negligence), whether the driver's alleged cell phone use was the proximate cause of the accident, whether

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[153] McCartt et al., *supra* note 63, at 218.

[154] *See, e.g.*, *Teens and Cell Phone Safety*, CELLPHONESAFETY.ORG, http://www.cellphonesafety.org/safer/teens.htm (last visited Oct. 19, 2012); *Lesson Plans*, N.J. DRIVER'S EDUC., http://www.njdrivereducation.com/lessonplans (last visited Oct. 19, 2012) (including lesson plans discussing dangers of cell phone use and texting while driving); *Tell Us: Should Driver's Ed Deal With Texting While Driving?*, NORTHESCAMBIA.COM (Feb. 14, 2011), http://www.northescambia.com/2011/02/should-drivers-ed-deal-with-texting-while-driving (noting that two California state legislatures have proposed legislation to require this).

[155] Thirty-six states require driver education in order to get a learner's permit or provisional license. VERMETTE, *supra* note 7, at 27 (summarizing current state laws as well as changes in state drivers education laws and materials referring to different kinds of distracted driving between 2003 and 2010).

[156] *Id.* at 29.

[157] *Id.* at 27 (noting that as of June 2010 information on distracted driving is required for drivers' education in eighteen states plus the District of Columbia and that the drivers' license test includes a question on distracted driving in seventeen states plus the District of Columbia).

[158] *Id.* at 32.

[159] Copeland, *supra* note 6.

the injured party could have avoided the accident, and of course whether the driver's negligence caused damages.[160] In most states the driver's violation of a statutory prohibition on certain types of cell phone use is simply evidence relevant to the issue of negligence,[161] but some statutes create a rebuttable presumption of negligence based on the use of a cell phone.[162]

Over the last decade, a handful of lawsuits have been brought against employers for accidents allegedly caused by an employee's use of a cell phone while driving.[163] In the twenty-first century workplace, many employees are expected to be on call virtually 24/7; their bosses expect them to be easily reachable by phone and email throughout the day, if not also the night.[164] This reality makes it ever more likely that employers will be held liable in tort for their employees' dangerous cell phone-related conduct.[165] Employers have been held liable under the theory of respondeat superior when juries found that their employees had used cell phones while driving during business hours to make calls that caused an accident or drove while making business phone calls even after work.[166] A number of other cases have been settled prior to, or after, trial.[167] In addition, some lawsuits have asserted liability based on direct negligence, contending that employers who either permit or encourage employees to conduct business via cell phone without sufficient training about the dangers of driving while using a phone are negligent because they have breached their duty to

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[160] *See* Meghan K. Loftus, *Causes of Action Arising out of Cell Phone Use While Operating a Motor Vehicle*, 35 CAUSES OF ACTION 2d 151 §§ 5-9 (2007 & Supp.); Jay M. Zitter, *Civil Liability Arising from Use of Cell Phone While Driving*, 36 A.L.R. 6th 443 §§ 4-8 (2008).

[161] *See* Loftus, *supra* note 160, at §§ 5-6 (citing Scianni v. Suriano, 2007 WL 506206 (N.J. Super Ct. App. Div. Feb. 20, 2007), and Low v. Stephens, 127 Wash. App. 1051 (Wash. Ct. App. 2005)).

[162] *See id.* § 6.

[163] *See* Jordan Michael, *Liability for Accidents from Use and Abuse of Cell Phones: When Are Employers and Cell Phone Manufacturers Liable?*, 79 N.D. L. REV. 299, 302-06 (2003) (summarizing litigation).

[164] *See, e.g.*, Caroline M.L. Potter, *Tips for Online Shopping on the Job*, SAN JOSE MERCURY NEWS, Dec. 13, 2011 ("I think that today most people expect there to be a merger of personal and professional time, since most of us are basically on call for work 24/7 with our BlackBerrys.").

[165] *Id.* at 305.

[166] *Id.* at 303-05. Cases finding employers liable include: Hunter v. Modern Cont'l Const. Co., Inc., 652 S.E.2d 583 (Ga. Ct. App. 2007), CLO White Co. v. Lattimore, 590 S.E.2d 381 (Ga. Ct. App. 2003); Ellender v. Neff Rental, Inc., 965 So. 2d 898 (La. Ct. App. 2007). At the same time, courts have made it clear that whether the employee was actually using or reaching for the cell phone at the time of the accident, whether the call was related to the employer's business, and whether the cell phone use caused the accident are all questions of fact. *See* McClelland v. Simon-Williamson Clinic, 933 So. 2d 367, 370-71 (Ala. Civ. App. 2005); Easterling v. Man-O-War Auto., Inc., 223 S.W.3d 852, 855-56 (Ky. Ct. App. 2007); Zitter, *supra* note 160 (reviewing other cases using the theory of vicarious liability to hold employers liable for the cell phone-related accidents of their employees or agents).

[167] *See* Dusty Horwitt, Note, *Driving While Distracted: How Should Legislators Regulate Cell Phone Use Behind the Wheel?*, 28 J. LEGIS. 185, 198 (2002); Loftus, *supra* note 160, at § 13 (citing Arthur D. Rutkowski & Barbara Lang Rutkowski, *Are You as an Employer Liable for Employee Who Causes an Accident While Driving and Using a Cell Phone*, 18 NO. 12 EMPL. L. UPDATE 1 (2004)).

minimize a foreseeable risk of harm.[168] The threat of tort liability may be more effective against employers than individuals,[169] particularly larger employers or those with extra-deep pockets. Thus, a rational employer might choose to minimize this risk by developing, and enforcing, policies against employees' use of cell phones while driving.[170]

A novel legal argument, as yet untested, is that since all employers have a general duty to provide a safe workplace under the Occupational Safety and Health Act,[171] any employer who fails to have in place and enforce a policy strictly prohibiting cell phone use while driving has violated a statutory duty and is therefore negligent per se.[172] Most courts have held that a violation of a federal statute should give rise to an inference of negligence under state tort law, although this view has been criticized.[173] The question is further complicated because almost all state statutes that prohibit texting or hand-held cell phone use while driving are silent on the question of whether such conduct is negligence per se.[174]

Additionally, some commentators have suggested that workers' compensation law may provide an attractive, no-fault scheme for compensating employees who are injured in a motor vehicle accident caused, at least in part, by their use of a cell phone while driving, as long as they can establish that they were using the phone in the course of conducting the employer's business.[175]

In contrast to the expanded liability of employers, cell phone manufacturers and carriers have so far been protected from lawsuits. To date, no court has held that mere foreseeability that a cell phone owner could use a cell phone while driving is sufficient to impose liability against the carrier that furnished him with the phone.[176] In the first major decision addressing this

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[168] Michael, *supra* note 163, at 305-06.

[169] *See infra* Parts III.A-B (discussing the limits of deterrence in changing behavior).

[170] Horwitt, *supra* note 166, at 197-99.

[171] 29 U.S.C. § 654(a)(1) (2006).

[172] Although this theory is untested, OSHA has suggested that employers who require, encourage, or condone employees to text while driving will be found to have failed to fulfill their statutory duty to provide a safe workplace. *See supra* notes 113-18 and accompanying text.

[173] *See* Barbara Kritchevsky, *Tort Law Is State Law: Why Courts Should Distinguish State and Federal Law in Negligence-Per-Se Litigation,* 60 AM. U. L. REV. 71, 72-73 (2010) (summarizing case law and arguing that the prevailing approach is inconsistent with the underlying justification for imposing negligence per se).

[174] *See* Loftus, *supra* note 160, at §§ 5-6. *But see, e.g.*, N.C. GEN. STAT. § 20-137.4A(c) (2009) (explicitly declaring that a violation of the prohibition against texting while driving does not constitute negligence per se).

[175] *See* Jon Gelman, *Employers Face Liability for Cell Phone Accidents,* WORKERS' COMPENSATION (July 5, 2011), http://workers-compensation.blogspot.com/2011/07/employers-face-liability-for-cell-phone.html.

[176] *See* Jordan B. Michael, *Automobile Accidents Associated with Cell Phone Use: Can Cell Phone Service Providers and Manufacturers Be Held Liable Under A Theory of Negligence?*, 11 RICH. J.L. & TECH. 5, 48-50 (2005) (discussing possible theories to open up this hitherto closed avenue of litigation).

theory, *Williams v. Cingular Wireless,*[177] the Indiana Court of Appeals held that an injured driver suing the carrier Cingular Wireless failed to state a cause of action for negligence based on allegations that Cingular should have known that the customer to whom it provided a cell phone would use it while driving.[178] The court found that although it was foreseeable that a cell phone would be used by a driver, this was insufficient to impose a duty on the carrier to prevent harm to a third-party driver, unknown to the carrier.[179] The court declined the invitation to create a new common law duty, relying on several factors: the lack of a contractual relationship between the cell phone company and the injured driver,[180] the failure of the injured plaintiff to show that the phone had malfunctioned,[181] and the inability of the cell phone company to control the conduct of the cell phone wielding driver.[182] The court reasoned that if it imposed a duty on cell phone carriers to protect people from injuries caused by drivers who use their cell phones in a dangerous manner, this would "effectively require [cell phone companies] . . . to stop selling cellular phones entirely."[183] Instead, the court deferred to the legislature to adopt appropriate measures to protect the public from the dangers of cell phone use while driving.[184] The *Cingular* case has been relied on by courts around the country to reach similar conclusions.[185] Additionally, strict liability theories, such as manufacturing defect, design defect, or failure to warn of the danger of foreseeable unsafe uses, might be used to impose liability on a cell phone carrier, phone manufacturer, or automobile manufacturer.[186]

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[177] 809 N.E.2d 473 (Ind. Ct. App. 2004).
[178] *Id.* at 475-77.
[179] *Id.*
[180] *Id.* at 477.
[181] *Id.* at 478.
[182] *Id.* at 479.
[183] *Id.*
[184] *Id.*
[185] *See, e.g.*, Bailey v. Estate of Jett, No. 1:10cv144, 2011 U.S. Dist. LEXIS 9284, at *10-11 (W.D.N.C. Jan. 31, 2011) (holding, in a diversity suit against the manufacturer of a texting system sold to a trucking firm, that even if the truck's driver was proven to have engaged in negligent driving related to that texting system, the manufacturer had no duty to unknown motorists); Estate of Doyle v. Sprint/Nextel Corp., 248 P.3d 947, 951-52 (Okla. Civ. App. 2011) (holding that the seller and manufacturer of a cell phone had no duty to a driver killed by a driver using a cell phone furnished by the defendants).
[186] *See* Michael, *supra* note 163, at 307-09 (summarizing applicable legal theories).

III. LESSONS OF DETERRENCE

A. General Deterrence Principles

Deterrence is a fundamental principle of American jurisprudence.[187] As all first year law students know, its central tenet is that the fear of being caught, convicted, and punished encourages potential offenders to obey the law.[188] As explained by Jeremy Bentham, one of deterrence's early theorists, human beings are rational actors—"economic m[e]n"—who, when deciding whether or not to commit a crime, will calculate the crime's potential benefits and then compare them to the risks of being apprehended, convicted, and punished.[189] Bentham hypothesized that three factors are key to the deterrent impact of a particular criminal sanction: the certainty, severity, and celerity (swiftness) of punishment.[190]

Other scholars emphasize that achieving deterrence is more complicated than simply encouraging citizens to engage in individual cost-benefit analyses. Deterrence depends in part on two long-term processes—moral education and habit formation—to change behavior; the criminalization of certain acts makes them less likely to be committed.[191] This phenomenon was recognized in the nineteenth century by sociologist Emile Durkheim, who asserted that a criminal conviction had the effect of boundary definition, marking off what is and is not

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[187] *See* Johannes Andenaes, *Deterrence*, *in* ENCYCLOPEDIA OF CRIME & PUNISHMENT 507, 508 (David Levinson ed., 2002); Paul H. Robinson & John M. Darley, *The Role of Deterrence in the Formulation of Criminal Law Rules: At Its Worst When Doing Its Best*, 91 GEO. L.J. 949, 950 (2003).

[188] Robinson & Darley, *supra* note 187, at 950, 955. Deterrence has two aspects: so-called "specific deterrence," which operates on persons who have offended and, because of their familiarity with the sanction imposed, are less likely to commit the offense again; and "general deterrence," or the ability of a criminal prohibition or enforcement policy to prevent crime from being committed in the first place. *See* SANFORD H. KADISH ET AL., CRIMINAL LAW AND ITS PROCESSES: CASES AND MATERIALS 92-97 (8th ed. 2007). This article will focus on general deterrence. Scholars also discuss the moral educational effect of the criminal sanction (i.e., the ability of criminal punishment to influence societal beliefs in the wrongfulness of the underlying conduct). *See* ANDREW VON HIRSCH ET AL., CRIMINAL DETERRENCE AND SENTENCE SEVERITY: AN ANALYSIS OF RECENT RESEARCH 3 (1999); Andenaes, *supra* note 187, at 508.

[189] Robert J. MacCoun, *Drugs and the Law: A Psychological Analysis of Drug Prohibition*, 113 PSYCHOL. BULL. 497, 498 (1993) (citing JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS LEGISLATION (1789)). Cesare Beccaria, a contemporary of Bentham, adopted a similar position on the logic of deterrence. *See* Greg Pogarsky, *Identifying "Deterrable" Offenders, Implications for Research on Deterrence*, 19 JUST. Q. 431, 431 (2002) (citing CESARE BECCARIA, ON CRIMES AND PUNISHMENTS (1764)).

[190] MacCoun, *supra* note 188, at 498; *see also* Tom R. Tyler & John M. Darley, *Building a Law-Abiding Society: Taking Public Views About Morality and the Legitimacy of Legal Authorities into Account When Formulating Substantive Law*, 28 HOFSTRA L. REV. 707, 711-13 (2000) (describing the social control model of deterrence).

[191] Durna, *supra* note 120, at 20-25.

socially acceptable.[192] In the mid-twentieth century, Scandinavian criminologists like Johannes Andenaes also emphasized the general preventative impact of deterrence, focusing on the moral educational force of the criminal law as well as the positive effects of habitually performing actions that are shaped by knowledge of the law.[193] More recently, social psychologists like Tom Tyler have affirmed the importance of the law's moral force in finding that people's values (including their views of lawmaking legitimacy as well as the morality of specific behavior) can affect the deterrent impact of a particular criminal law.[194]

All scholars agree that deterrence works in the most general sense. The simple existence of a system of investigation, prosecution, conviction, and punishment for crimes serves to decrease the overall amount of crime committed.[195] Yet most criminal justice policy decisions involve questions of marginal, rather than absolute, deterrence and thus require an assessment of the difference that a particular change in sentence severity or law enforcement policy will have on crime rates. In order to understand how the costs and benefits of a specific criminal justice policy (be it creating a new crime, changing the sanction associated with an existing crime, or altering the law enforcement strategy and resources devoted to a particular crime) will affect individual behavior, one must consider the relative importance of deterrence's underlying pillars: certainty, severity, and celerity of punishment.

Deterrence research has shown that deterrence is perceptual: potential offenders cannot be deterred without first perceiving that their violations of the law carry a significant risk of apprehension and conviction.[196] Unless potential offenders are aware that the sanction for a particular crime has been increased or that law enforcement efforts have been expanded, such changes in criminal justice policy will do little to affect citizens' behavior.[197] There are five important factors that influence the likelihood that offenders will change their behavior in response to a change in the risk of sanction:

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[192] *See* KADISH ET AL., *supra* note 187, at 90-91 (citing EMILE DURKHEIM, THE DIVISION OF LABOUR IN SOCIETY 62-63 (W.D. Halls trans., 1984).

[193] *See* Andenaes, *supra* note 187, at 508; *see also* Durna, *supra* note 120, at 11-12.

[194] *See* Tyler & Darley, *supra* note 190, at 714; *see also* MacCoun, *supra* note 189, at 503 (asserting that the perceived morality of an act affects the deterrent powers of particular punishments).

[195] *See* VON HIRSCH ET AL., *supra* note 188, at 1.

[196] *Id.* at 6-9. In part, this may be due to individual variations in the extent to which people consider events in the future to be relevant to them. Studies have found that those "who discount the future more heavily are less likely to be deterred by a given punishment." Shawn Bushway & Peter Reuter, *Economists' Contribution to the Study of Crime and the Criminal Justice System*, 37 CRIME & JUST. 389, 405 (2008).

[197] *See* Kirk R. Williams & Jack P. Gibbs, *Deterrence and Knowledge of Statutory Penalties*, 22 SOC. Q. 591, 591 (1981); *see also* ROSS, *supra* note 22, at 46-47 (emphasizing the need for changes in penal policy—whether in enforcement or severity of sanctions—to be communicated to the public, usually through mass media publicity); Daniel S. Nagin et al., *Imprisonment and Reoffending*, 38 CRIME & JUST. 115, 166 (2009) (describing the need for visibility as a requirement that sanctions be "in your face").

> 1) A potential offender must realise that the probability of conviction or the severity of punishment has changed. . . .
> 2) A potential offender must take these altered risks into account when deciding whether to offend. If offenders act impulsively, or under the influence of drugs or alcohol, their beliefs about punishment risks may have less impact on their behavior. . . .
> 3) A potential offender must believe that there is a non-negligible risk of being caught. . . . This means that sanctions for prohibitions thought to be poorly enforced are likely to have only a small deterrent impact.
> 4) A potential offender must believe that the altered penalty will be applied to him if he is caught. . . . There may however, be numerous intervening contingencies between being apprehended and actually receiving the heightened penalty . . . . This can give offenders, if they are "optimists," hope of escaping the increased penalty. . . .
> 5) A potential offender must be willing to alter his or her choices regarding offending in the light of the perceived change in certainty or severity of punishment. . . . If the criminal activity is of sufficient importance in the potential offender's life because of the resources or life-style it provides or the needs it fulfills, then enhanced certainty or severity of punishment may not make him desist. This has been the problem, for example, in applying drug prohibitions to active drug users.[198]

Although most politicians emphasize sentence severity as the key to cutting crime,[199] scholars of deterrence have concluded overwhelmingly that punishment that is certain has a much greater deterrent impact than a severe punishment that is unlikely to be imposed.[200] Thus, for example, for years scholars have urged policymakers to increase the certainty that offenders will be apprehended and convicted (i.e., by spending more on police road blocks for drunk driving or increasing border patrols to prevent violation of immigration

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[198] VON HIRSCH ET AL., *supra* note 188, at 7 (emphasis omitted; Arabic numerals substituted for Roman numerals).

[199] *See* MICHAEL TONRY, MALIGN NEGLECT—RACE, CRIME, AND PUNISHMENT IN AMERICA 19 (1995); *see also* Robinson & Darley, *supra* note 187, at 964-65.

[200] *See* VON HIRSCH ET AL., *supra* note 188, at 5-6, 14 (defining certainty as "the likelihood of being arrested and convicted" and "severity" as referring both to whether the defendant will be imprisoned if convicted and if so, for how long); Anthony N. Doob & Cheryl Marie Webster, *Sentence Severity and Crime: Accepting the Null Hypothesis*, 30 CRIME & JUST. 143, 187-89 (2003); Williams & Gibbs, *supra* note 197, at 593; *see also* ROSS, *supra* note 22, at 58-59 (summarizing research on "driving under the influence" in the United States and in Europe, which finds that severe sentences may sometimes result in lower rates of conviction and imprisonment, due to the exercise of discretion by arresting officers, judges, and juries). That certainty is more important than severity to potential criminals might be predicted from the nature of the American criminal justice system, which involves many steps, from the initial criminal behavior to the eventual imposition of sanction, including arrest, formal charging, trial, and conviction, all of which can occasion the use and abuse of discretion by key actors. *Cf.* Daniel S. Nagin, *Criminal Deterrence Research at the Outset of the Twenty-First Century*, 23 CRIME & JUST. 1, 34 (1998).

laws) rather than increasing the sentence in a never-ending spiral of getting tough on crime.[201]

Finally, returning to the broad conception of deterrence noted earlier,[202] potential offenders are less likely to respond to changes in the severity or certainty of sanctions if they do not share the community's value system; that is, they do not believe the conduct is morally wrong or do not have "'high [] stakes in conventionality.'"[203] The threat of a criminal sanction is most likely to be effective for those who wish to be seen by others as law-abiding, as well as those who have the most to lose from being convicted and sentenced to prison.[204] Thus, changes in law enforcement practices (e.g., arresting the offending party in a domestic violence case, rather than separating the parties or dispensing advice) have also been shown to be most effective where the offenders had strong social relationships within the community and worked "least well where they had little or nothing to lose."[205]

B. Deterrence and Drunk Driving

Efforts to minimize the harms caused by "drunk driving"[206] demonstrate the strengths and limits of using a criminal justice strategy to address a complex social issue. Since the early 1980s there has been a nationwide campaign to

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[201] ROSS, *supra* note 22, at 2-14; VON HIRSCH ET AL., *supra* note 188, at 5-77.

[202] *See supra* notes 191-94 and accompanying text.

[203] VON HIRSCH ET AL., *supra* note 188, at 35 (quoting Daniel S. Nagin, *General Deterrence: Criminal Deterrence Research at the Outset of the Twenty-First Century*, *in* 23 CRIME AND JUSTICE: A REVIEW OF RESEARCH 51, 70 (1998)).

[204] *Id.* at 36. For example, studies of income tax evasion show that although many people say they are willing to fudge the numbers somewhat on their tax returns when the penalties are only civil and cannot be made public by the Internal Revenue Service, they are much less likely to cheat when the result would be a criminal conviction. *See, e.g.*, STUART P. GREEN, LYING, CHEATING, AND STEALING: A MORAL THEORY OF WHITE-COLLAR CRIME 246-248 (2006); Daniel S. Nagin et al., *Imprisonment and Reoffending*, 38 CRIME & JUST. 115, 166 (2009). Of course, income tax evasion is a criminal act that has only monetary goals, as opposed to other crimes—like rape and murder—which frequently have more complex emotional goals as well.

[205] *Id.* at 36-37 (citing L.W. SHERMAN ET AL., POLICING DOMESTIC VIOLENCE: EXPERIMENTS AND DILEMMAS (1992)).

[206] I use this common term to describe all prosecutions for "impaired" or "under the influence" driving. Current state and federal laws do not require an individual to be drunk or heavily intoxicated by alcohol or other drugs in order to be convicted. Instead, all states have followed the federal government in setting a .08 blood alcohol level as the minimum required for conviction of "driving under the influence" or "driving while impaired." *See* 23 U.S.C. § 163 (2006) (establishing federal blood alcohol limit of .08, which states must follow if they are to receive federal highway safety funds); *DUI/DWI Laws*, INS. INST. FOR HIGHWAY SAFETY (Aug. 2012), www.iihs.org/laws/dui.aspx (noting that all states comply with the federally mandated standard). These laws recognize that consumption of very small drug amounts can impair judgment, perception, and motor control, all of which raise the risk of motor vehicle accidents. *See* ROSS *supra* note 22, at 6, 19-21.

address the deaths and injuries caused by drunk driving.[207] This campaign has been led by Mothers Against Drunk Driving (MADD)[208] and other advocacy groups who have reframed the act of driving under the influence of alcohol, transforming it from a relatively minor traffic offense to a serious moral transgression.[209] MADD has constructed the problem of drunk driving as one of moral failure, focusing on the "sins" of "deviant" actors, who are declared to be "killer drunks" rather than persons with a chronic health problem or occasional over-imbibers.[210] By placing responsibility for the consequences of drunk driving "'in the person rather than the bottle,'"[211] MADD and other victim advocacy groups have ignored the facts showing that drunk driving reflects the interaction of a number of biological, social, and environmental factors.[212] The phenomenon of drunk driving encompasses not only individuals who chronically abuse alcohol but also the larger reality that America embraces social drinking without providing accessible, affordable public transportation in many parts of the country.[213] This reframing of the situation, or "the [now] dominant paradigm," as described by H. Laurence Ross, has meant that solutions to drunk driving are sought in the criminal justice system rather than in broader social policies about alcohol consumption and transportation.[214]

As a result of MADD's efforts and the willingness of state and federal legislators to seize upon a high-gain, low-risk solution to a complex problem, a raft of laws have been enacted to make it easier to convict and sanction those who drive under the influence of alcohol.[215] By the end of the twentieth century, primarily as a result of federal financial incentives, all states had adopted a *per se* model of impaired driving, which made driving with a specified blood alcohol level a serious crime rather than presumptive evidence of impaired driving.[216] All states have reduced the permissible blood alcohol level for drivers from .10 to

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[207] *See MADD Milestones: 25 Years of Making a Difference*, MOTHERS AGAINST DRUNK DRIVING (Fall 2005), http://www.madd.org/about-us/history/madd-milestones.pdf.

[208] MADD was founded in 1980 by Candy Lightner, whose daughter was killed by a drunk driver with multiple convictions. *History of MADD*, MOTHERS AGAINST DRUNK DRIVING, http://www.madd.org/about-us/history/ (last visited Aug. 29, 2012).

[209] *See* ROSS, *supra* note 22, at 176-77.

[210] *Id.* at 21-22; *see also* Durna, *supra* note 120, at 40-50, 57-59. This is similar to the approach taken by the Reagan and Bush Administrations in their War on Drugs, although it is not clear that the motivations of MADD are the same. *See* TONRY, *supra* note 199, at 121-23.

[211] Durna, *supra* note 120, at 58 (quoting Craig Reinarman, *The Social Construction of an Alcohol Problem: The Case of Mothers Against Drunk Driving and Social Control in the 1980s*, 17 THEORY & SOC'Y 91, 110 (1988)).

[212] ROSS, *supra* note 22, at 28-34.

[213] Durna, *supra* note 120, at 58.

[214] ROSS, *supra* note 22, at 1.

[215] *See* Durna, *supra* note 120, at 44-49.

[216] *See* 23 U.S.C. § 163 (2006); *DUI/DWI Laws*, *supra* note 205. As noted earlier, the federal government has been providing incentives for states to promote a variety of safe driving practices since the 1960s. *See supra* note 120.

.08 percent[217] and adopted zero-tolerance laws for drivers under twenty-one, the legal drinking age.[218] Most states have authorized administrative sanctions, such as automatic license suspension, for failing or refusing to take a Breathalyzer® test.[219]

The current approach, which focuses on increasing sentence severity as well as the certainty of being sanctioned, has been accompanied by substantial reductions in the fatalities and injuries attributable to impaired driving.[220] Apparently as a result of redefining drunk driving offenses, enhancing law enforcement, implementing administrative sanctions, increasing media attention on the dangers of drunk driving, and auto safety improvements, alcohol-related fatality rates declined substantially between 1982 and 1994.[221] This result is consistent with Andenaes' theory that criminalizing certain conduct has a "moral educative" as well as a "habit formation" effect.[222]

However, since 1994 drunk driving fatality rates have stabilized,[223] despite a number of law changes designed to make it easier and more certain to detain, arrest, and convict drunk drivers.[224] In 1982, fifty-one percent of all driver fatalities involved a driver who consumed more than the legal alcohol limit; between 1994 and 2008 that number ranged from thirty-two to thirty-five percent.[225] The number of arrests for driving under the influence has remained steady from 2000 to 2008,[226] meaning that the chance of being arrested has actually declined in light of increases in population and the number of licensed

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[217] *See, e.g.*, Department of Transportation and Related Agencies Appropriations Act of 2001, Pub. L. No. 106-346, 114 Stat. 1356A-34.

[218] These so-called "zero-tolerance" laws governing drivers under twenty-one make excessive blood alcohol levels a per se violation. *See* Anne T. McCartt et al., *Attitudes Toward In-Vehicle Advanced Alcohol Detection Technology*, 11 TRAFFIC INJ. PREVENTION 156, 156 (2010) [hereinafter McCartt et al., *Attitudes*]; Anne T. McCartt et al., *Effects of a College Community Campaign on Drinking and Driving with a Strong Enforcement Component*, 10 TRAFFIC INJ. PREVENTION 141, 141 (2009) [hereinafter McCartt et al., *Effects*]. These laws typically set a limit of no more than .02 percent blood alcohol level. Anne T. McCartt et al., *Implementation of Washington State's Zero Tolerance Law: Patterns of Arrests, Dispositions, and Recidivism*, 8 TRAFFIC INJ. PREVENTION 339, 339 (2007) [hereinafter McCartt et al., *Implementation*].

[219] Durna, *supra* note 120, at 19-20, 90.

[220] Most studies focus on the decrease in fatal accidents in which alcohol consumption by the driver is implicated; the underlying assumption appears to be that non-fatal accidents reflect the same factors, although this may be complicated by other, non-alcohol related factors, such as seat belt use, better-designed cars, and speedier and more successful medical interventions.

[221] Durna, *supra* note 120, at 3-4.

[222] *See* Anthony M. Bertelli & Lilliard E. Richardson, Jr., *The Behavioral Impact of Drinking and Driving Laws*, 36 POL'Y STUDIES J. 545, 562 (2008); *see generally supra* notes 190-93 and accompanying text (discussing habit formation and Scandinavian theorists).

[223] McCartt et al, *Attitudes*, *supra* note 218, at 156.

[224] *See* Durna, *supra* note 120, at 37-39 (summarizing law changes from 1966 to the early 2000s).

[225] MCCARTT ET AL., *supra* note 218, at 156.

[226] *Id.*

drivers.[227] The slight chance of being arrested for drunk driving has been confirmed by studies: the estimated 1.5 million arrests for drunk driving each year only account for 0.15 percent of the estimated one billion drives taken within two hours of drinking,[228] and a study published in 2000 found that the probability of being arrested while driving with a blood alcohol level higher than .10 is about one in 200 (or about .5 percent).[229]

Given that the rate of traffic fatalities attributable to drunk driving has remained steady for nearly twenty years, despite significant efforts to increase the severity and certainty of drunk driving sanctions, it is apparent that deterrence offers an incomplete solution to the problem of drunk driving.[230] Empirical studies show that increasing the severity of sanctions, such as by enacting mandatory minimum sentences for first-time offenders, fails to achieve either specific or general deterrence.[231] One study examining the impact of sentence length on specific deterrence (that is, on persons already convicted of an offense) suggests that the most effective sentence in reducing recidivism is five to six months; sentences that were either longer or shorter were less effective at changing drivers' behavior.[232] There is also evidence that administrative sanctions are more effective than increasing statutory penalties for drunk driving.[233] Research also shows that certainty—the second prong of deterrence theory—plays a limited role in shaping driver behavior. Some early studies found that law enforcement actions that increase the certainty of apprehension, such as well-publicized road blocks and routine breathalyzer testing, do have a general deterrent impact.[234] However, a recent study found no relationship

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[227] According to recent census data, the U.S. population grew from 281,421,906 in 2000 to 308,745,538 in 2010. *2010 Census Data*, *supra* note 24.

[228] Bertelli & Richardson, *supra* note 222, at 559.

[229] Durna, *supra* note 120, at 87 (citing George A. Beitel et al., *Probability of Arrest While Driving Under the Influence of Alcohol*, 6 Inj. Prevention 158 (2000)).

[230] *See* Bertelli & Richardson, *supra* note 222, at 545-50, 560-62.

[231] *See* ROSS, *supra* note 22, at 59-60 (reviewing many studies and noting that only one study—which suffered from many methodological problems—found a specific deterrent effect on offenders in response to a judicially-initiated policy of mandatory two-day jail sentences for all first-time offenders, and that one study had many methodological problems); *see* Rodney F. Kingsnorth et al., *Specific Deterrence and the DUI Offender: The Impact of a Decade of Reform*, 10 JUST. Q. 265, 279 (1993) (finding that increasingly severe sentences imposed by California law for repeat drunk driving offenses did not reduce reconviction rates).

[232] Michael Weinrath & John Gartrell, *Specific Deterrence and Sentence Length: The Case of Drunk Drivers*, 17 J. CONTEMP CRIM. JUST. 105, 117-18 (2001).

[233] *See* Anne T. McCartt & Veronika Shabanova Northrup, *Effects of Enhanced Sanctions for High-BAC DWI Offenders on Case Dispositions and Rates of Recidivism*, 5 TRAFFIC INJ. PREVENTION 270, 276-77 (2004) (finding that administrative sanctions for high-BAC offenders reduced recidivism rates).

[234] *See* ROSS, *supra* note 22, at 67-73. The Supreme Court has upheld the constitutionality of road blocks and "sobriety checkpoints" to permit police to check drivers for symptoms of intoxication, despite a lack of probable cause to believe that the driver was driving while impaired. Mich. Dep't of State Police v. Sitz, 496 U.S. 444, 447 (1990). However, many state courts have found that such interventions violate their state constitutions. *See, e.g.*, R. Marc Kantrowitz et al., *Validity of*

between the extent of law enforcement activity directed at drunk driving (measured by arrest rates) and the incidence of crashes caused by drunk driving.[235]

A key to understanding the limited deterrent impact of strengthening law enforcement efforts is the principle that the threat of arrest and conviction works only with those offenders who are neither so opposed to drinking and driving that they would never consider doing it, nor so "impulsive and pathologically present oriented" that they would fail to take future costs into account in their decision-making.[236] Many researchers now postulate a U-shaped curve of deterrence, with only those drinkers in the middle—the "occasional sinners"—being likely to respond to the marginal deterrence created by changes in sanctions or enforcement policy.[237] These commentators assert that deterrence researchers may overemphasize the role of certainty as a factor in shaping behavior by failing to separate out those offenders who are in fact "deterrable" by changes in criminal sanction from those who are not, thus erring when they include those who are either "acutely conformist" or "incorrigible."[238] It is therefore not surprising that "problem drinkers" with significant alcohol dependence are likely to reoffend, despite the known risk of incarceration, either because they have a diminished ability to rationally assess the risk of punishment[239] or because their alcohol dependency causes them to seek immediate gratification (i.e., getting drunk).[240]

The "sinner" model propounded by MADD and enacted by most state legislatures has been strikingly ineffective with young drivers. Young adult

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Police Roadblocks or Checkpoints for Purpose of Discovery of Alcoholic Intoxication—Post-Sitz Cases, 74 A.L.R. 5th 319 (2004).

[235] Chris S. Dula et al., *Policing the Drunk Driver: Measuring Law Enforcement Involvement in Reducing Alcohol-Impaired Driving*, 38 J. SAFETY RES. 267, 269 (2007) (examining law enforcement efforts in Tennessee).

[236] Bertelli & Richardson, *supra* note 222, at 546. Thus, the fact that frequent drinkers (including heavy drinkers) are likely to be well-informed about the drunk driving laws in their states, Durna, *supra* note 120, at 35-36, tells us nothing about deterrence unless there are reasons that these frequent drinkers will respond to the possibility of being stopped for drunk driving.

[237] *See* Bertelli & Richardson, *supra* note 222, at 561; Pogarsky, *supra* note 189, at 435, 440-41, 444-46.

[238] Pogarsky, *supra* note 189, at 435, 440-41, 444-46. Nonetheless, one study found that the experience of seeing a sobriety checkpoint in the last year (equated with awareness of law enforcement efforts, and by implication, the certainty of punishment) is positively correlated with choosing not to drive while intoxicated but not with a decision whether to drive within two hours of having had a drink. Durna, *supra* note 120, at 101, 116. Further, the same study found that intoxicated drivers who had seen a sobriety checkpoint in the last year were also more likely to be a passenger with an intoxicated driver. *Id.* at 105 (demonstrating the limitations of drawing a conclusion about deterrence from only one measure).

[239] Jiang Yu, *Punishment and Alcohol Problems: Recidivism Among Drinking-Driving Offenders*, 28 J. CRIM. JUST. 261, 262-67 (2000) (evaluating problem drinking by drivers' score on a standard assessment of alcoholic impairment, the Michigan Alcoholism Screening Test).

[240] *See* GENE HEYMAN, ADDICTION: A DISORDER OF CHOICE 56-64, 82-86, 105-08, 117-22, 130 (2009) (suggesting a theory of "local" versus "global" choice making as a way to explain addiction).

drivers (between the ages of twenty-one and twenty-nine) are most likely to drink and drive,[241] and teenage drivers are the most likely to crash.[242] Despite the nationwide enactment of "zero tolerance" laws, which prohibit drivers under twenty-one from having any measurable alcohol in their systems,[243] more than one-third of all fatally-injured teen drivers in 2006 had a blood alcohol level that exceeded .08 percent, the legal limit for adult drivers.[244] Highly-publicized programs that target teenage and college student drivers who drink, through stepped-up enforcement of the prohibitions against driving under the influence (DUI) and under-age liquor purchasing, have been shown to be successful in reducing the incidence of DUI, both by teenage and older drivers.[245] However, underage drivers with relatively low blood alcohol levels (less than .10 percent) continue to have a high rate of recidivism, suggesting that current legislation (or its enforcement) is insufficient to fully address the problem of alcohol-impaired driving.[246]

As an alternative, it is important to consider other government and private sector strategies to make it less likely that people will drink, drive, and get into accidents.[247] In order to continue to reduce the harms caused by drunk driving, a three-pronged strategy is necessary: decreasing alcohol availability, improving the safety of private transportation, and increasing access to public transportation.[248] Options for reducing alcohol consumption include increasing alcohol taxes, which would make it more expensive for consumers to consume alcohol,[249] and providing greater penalties to those who sell or give alcohol to people likely to drive, such as by expanding dram shop[250] and social host liability in tort[251] or by using strict liability in criminal law to dispense with the

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[241] Bertelli & Richardson, *supra* note 222, at 557.
[242] McCartt & Northrup, *supra* note 135, at 29.
[243] *See supra* notes 217-18 and accompanying text.
[244] McCartt et al., *Effects*, *supra* note 218, at 545.
[245] *Id.* at 143-46; McCartt et al., *Implementation*, *supra* note 218, at 344-45.
[246] McCartt et al., *Implementation*, *supra* note 218, at 345.
[247] *See* Joseph Gusfeld, *Foreword* to H. LAURENCE ROSS, CONFRONTING DRUNK DRIVING: SOCIAL POLICY FOR SAVING LIVES ix, xi-xii (1992).
[248] *See* ROSS, *supra* note 22, at 3-4, 8-12, 52.
[249] *See id.* at 90-96; William N. Evans et al., *General Deterrence of Drunk Driving: Evaluation of Recent American Policies*, 11 RISK ANALYSIS 279, 285 (1991) (finding that increases in the price of alcohol may affect the rate of alcohol-related fatalities).
[250] *See* ROSS, *supra* note 22. at 107-08. Dram shop liability, which holds those who sell liquor to obviously intoxicated persons liable for the harms caused if they subsequently drive while intoxicated, has been shown to reduce collisions and fatalities attributable to drunk driving. MOTHERS AGAINST DRUNK DRIVING, DRAM SHOP AND SOCIAL HOST LIABILITY 1 (2011), *available at* http://www.madd.org/laws/law-overview/Dram_Shop_Overview.pdf. Today, more than 40 states have such laws. *Id.*
[251] *See* Angela K. Dills, *Social Host Liability for Minors and Underage Drunk-Driving Accidents*, 29 J. HEALTH ECON. 241, 247 (2010). Laws that impose civil liability on those who furnish liquor to minors knowing that they are likely to drive thereafter have been found to reduce drunk driving fatalities among underage drinkers by five to nine percent. *Id.* This is a significant accomplishment, compared to the ten percent reduction achieved by raising the minimum drinking

requirement of mens rea.[252] To achieve the goal of making private transportation safer, cars must be designed to be more crash-resistant, emergency services must be improved and expanded, law enforcement must emphasize primary, rather than secondary enforcement of seat belt and other restraint laws, and roads must be made safer.[253] Another effective means of making private transportation safer is to require alcohol-impaired drivers to install breath alcohol ignition interlocks in their cars as a condition of driving while their licenses are suspended or as a condition of license restoration;[254] however, only fifteen states currently require this for all offenders.[255] Finally, public transportation must be made both more affordable and more available, for example, by increasing bus and taxi service linking areas with heavy concentrations of bars to densely populated residential areas, as is currently done on many college campuses.[256]

C. Seat Belt Laws

Mandatory seat belt laws have been a major factor in reducing injuries and fatalities related to motor vehicle accidents. Since 1968, when the Congressional mandate that all new cars sold in the United States be equipped with seat belts went into effect,[257] injuries and fatalities have fallen significantly.[258] It is estimated that wearing a seat belt reduces the chance of

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age to twenty-one and the three percent reduction accomplished by reducing the maximum permissible blood alcohol level to .08. Currently, twenty-seven states have such laws. *Underage Drinking: Prohibitions Against Hosting Underage Drinking Parties*, ALCOHOL POLICY INFORMATION SYSTEM, http://www.alcoholpolicy.niaaa.nih.gov/prohibitions_against_hosting_underage_drinking_parties.html?tab=maps (last visited Aug. 30, 2012). Nineteen states impose such liability as part of a broader social host liability law, and eight states have laws specifically directed at serving liquor to minors. *Id.*

[252] *See* Richard Singer, *Strict Criminal Liability: Alabama State Courts Lead the Way into the Twenty-First Century*, 46 ALA. L. REV. 47, 56-58 (1994) (discussing court cases applying strict liability to the sale of alcohol to minors).

[253] *See* ROSS, *supra* note 22, at 140-66.

[254] MOTHERS AGAINST DRUNK DRIVING, IGNITION INTERLOCKS: EVERY STATE, FOR EVERY CONVICTED DRIVER 1 (2012), *available at* http://www.madd.org/laws/law-overview/Draft-Ignition_Interlocks_Overview.pdf.

[255] *Id.* at 1-2; *see also* Daniel Wise, *Drunken Drivers Must Install Devices to Monitor Alcohol Use*, N.Y. L.J., Jul 23, 2010; *DUI/DWI Laws*, *supra* note 206; *State Ignition Interlock Laws*, NAT'L CONF. ST. LEGISLATORS, http://ncsl.org/default.aspx?tabid=13558 (last updated May 2012).

[256] *See* ROSS, *supra* note 22, at 119-26. Allegheny College provides a free bus service to its students. *See The Loop*, CRAWFORD AREA TRANSPORTATION AUTHORITY (CATA), http://catabus.org/wp/bus-schedules-and-maps/the-loop/ (last visited Aug. 30, 2012).

[257] This mandate was accomplished by the National Traffic and Motor Vehicle Safety Act of 1966, Pub. L. No. 89-563, 80 Stat. 718 (repealed 1994), and the Highway Safety Act of 1966, Pub. L. No. 89–564, 80 Stat. 731 (codified as amended at 23 U.S.C. §§ 401-412).

[258] *See* NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., TRAFFIC SAFETY FACTS: EARLY ESTIMATE OF MOTOR VEHICLE TRAFFIC FATALITIES IN 2008 1 (2009) (demonstrating that the national fatality rate per 100 million vehicle miles traveled (100 M VMT) has fallen from its peak of over five fatalities per 100 M VMT in the 1960s to approximately 1.28 in 2008, an over 400 percent decrease); *see also* LONGTHORNE ET AL., *supra* note 18, at 1-2 (summarizing the trend in the total number of annual fatalities from 1990 to 2008, which has been generally downward with an occasional

death by forty-five percent and the risk of serious injury by fifty percent for drivers and front seat passengers in a car.[259] All fifty states and the District of Columbia currently require children to use seat belts; forty-nine states plus the District of Columbia require adult drivers and passengers to do so, at least if they are in the front seat.[260] However, nineteen states have just secondary enforcement laws, which permit law enforcement officers to cite drivers for a seat belt violation only if they stop the driver for another motor vehicle offense.[261] In states where there is primary enforcement of seat belt laws, observed compliance with the laws is more than ten percent higher[262] because it is easier for an arresting officer to identify the offending conduct, thus increasing the certainty of apprehension.[263] Fatality rates are also significantly lower in states with primary rather than secondary enforcement of seat belt laws,[264] a phenomenon that is notable because it holds true whether the state initially adopted a primary enforcement statute or subsequently upgraded from a secondary to a primary enforcement law.[265] A recent study found that states that increased the fines for violating seat belt laws had significantly higher rates of seat belt use than states that did not increase their fines.[266] Current fines are very low, averaging between $25 and $30 across the nation.[267] Canadian research suggests that compliance with mandatory seat belt laws increases when provinces impose license penalty points on drivers who violate the law because of concern that their insurance costs will increase as a consequence.[268] Sixteen states have

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upward bump). It is estimated that in 2008 wearing a seatbelt saved the lives of 13,250 people over age five. LONGTHORNE ET AL., *supra* note 18, at 1-2. Interestingly, fatality numbers also fell in times of economic downturn, perhaps because people were less likely to drive when they did not have enough money. *Id.*

[259] NAT'L CTR. FOR INJ. PREVENTION & CONTROL, *supra* note 122, at 4. Drivers and passengers in SUVs, pick-up trucks, and vans have a sixty percent survival rate if they are wearing a seat belt, presumably because these vehicles are generally larger and heavier. *See* McCartt & Northrup, *supra* note 135, at 36.

[260] *Safety Belt and Child Restraint Laws*, INS. INST. FOR HIGHWAY SAFETY (Sept. 2012), http://www.iihs.org/laws/SafetyBeltUse.aspx. New Hampshire is the only state with no mandatory seat belt law for adults. *Id.*

[261] NAT'L CTR. FOR INJ. PREVENTION & CONTROL, *supra* note 122, at 6.

[262] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., TRAFFIC SAFETY FACTS: SEATBELT USE IN 2010—OVERALL RESULTS 1 (2010), *available at* http://www-nrd.nhtsa.dot.gov/Pubs/811378.pdf.

[263] David J. Houston & Lilliard E. Richardson, Jr., *Reducing Traffic Fatalities in the American States by Upgrading Seat Belt Use Laws to Primary Enforcement*, 25 J. POL'Y ANALYSIS & MGMT. 645, 656 (2006).

[264] CEJUN LIU ET AL., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., TRAFFIC SAFETY FACTS: STATES WITH PRIMARY ENFORCEMENT LAWS HAVE LOWER FATALITY RATES 1 (2006) (finding that from 2000 to 2004 states with primary enforcement seat belt laws had a fatality rate of 1.03 fatalities per 100 million vehicle miles traveled (100 M VMT) while states with secondary enforcement laws had a fatality rate of 1.21 per 100 M VMT).

[265] *See* Houston & Richardson, *supra* note 263, at 651-656.

[266] JAMES L. NICHOLS ET AL., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., STRATEGIES TO INCREASE SEAT BELT USE: AN ANALYSIS OF LEVELS OF FINES AND THE TYPE OF LAW 36-37 (2010), *available at* www.nhtsa.gov/staticfiles/nti/occupant_protection/pdf/811413.pdf.

[267] *Id.* at 10.

[268] *See id.* at 12.

created tort consequences for violation of their seat belt laws by enacting the so-called "safety belt defense," which means that those who are injured in a motor vehicle accident may collect reduced damages for injuries they would not have suffered if they were wearing a seat belt.[269]

Seat belt and child safety seat laws are particularly important for children and adolescents. Motor vehicle accidents are the leading cause of death among Americans ages two to thirty-four.[270] Teenagers, who have the highest motor vehicle accident and fatality rate of all drivers,[271] also have the lowest rate of seat belt use, particularly when there are other teenagers in the car.[272] This is consistent with their general propensity toward risk-taking and their sensitivity to peer pressure.[273] Younger children are much more likely to survive a crash and have less serious injuries if they are in an age-appropriate infant or child booster seat,[274] but many states' laws require children to be restrained only if they are in the front seat.[275]

In rare cases prosecutors have brought criminal charges against parents who failed to secure their child in a seat belt or other appropriate restraint. In 1991 an immigrant father in Florida was charged with vehicular manslaughter after he and his wife failed to put their three-year-old child in a safety seat and the child was killed in a collision.[276] The previous year, a California man was charged in similar circumstances, although the charges against him were ultimately dropped.[277] In both cases prosecutors announced that they wanted to

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[269] *Safety Belt and Child Restraint Laws*, *supra* note 260.

[270] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., 2006 MOTOR VEHICLE OCCUPANT PROTECTION FACTS: CHILDREN, YOUTH, AND YOUNG ADULTS 2 (2008), *available at* http://www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/810654.pdf.

[271] VERMETTE, *supra* note 7, at 10, 22.

[272] A.F. Williams et al., *Seatbelt Use by High School Students*, 9 INJ. PREVENTION 25, 26-28 (2003). The high accident and fatality rates and the low rate of seat belt use converge, with teenage drivers involved in fatal accidents being particularly unlikely to have been wearing their seat belts. *See* NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 270, at 14 (showing that from 1997 to 2006, sixty percent or more of drivers sixteen to twenty years old who were killed in accidents were not wearing seat belts; seventy-seven percent of the teenage drivers involved in fatalities who had been drinking were not wearing a seat belt); McCartt & Northrup, *supra* note 135, at 29, 31-32 (finding a seat belt use rate of thirty percent for male teenagers involved in fatal accidents and forty-nine percent for female teens).

[273] *See supra* notes 130-35 and accompanying text.

[274] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 270, at 6-8.

[275] *Safety Belt and Child Restraint Laws*, *supra* note 260.

[276] Rick Bragg & Susan Benesch, *A Question of Guilt*, ST. PETERSBURG TIMES (Florida), Apr. 28, 1991, at A1; *see also* Jill Ross, *Prosecution is Dilemma in Child-Restraint Violations*, ST. PETERSBURG TIMES (Florida), March 4, 1991, at B1 (citing multiple cases in which the driver was charged only with a moving violation and paid a fine of less than $100.00). Another Florida man was also charged with driving under the influence of alcohol manslaughter for failing to appropriately restrain a child. Ross, *supra*.

[277] Bragg & Benesch, *supra* note 276; Editorial, *Endangering Kids*, S.F. CHRON., Jan. 2, 1991, at A18.

send a message that child restraint rules were important laws that must be obeyed.[278] Media coverage of the Florida case suggested that some felt that the parents charged were being scapegoated because they were poor immigrants or that criminal proceedings were unnecessary because the parents had already suffered enough from the loss of their child.[279] In the Florida case, the judge ruled after a bench trial that the prosecution had failed to prove the elements of its case, hinting at prosecutorial overreaching.[280] On the other hand, as a result of the prosecution, the Florida legislature increased the penalty for failing to use a child safety seat from $37 to $150, a hefty sum in 1991, and the State's Attorney for Dade County, Janet Reno, announced that she would establish a school to educate all parents cited for violating the law, both efforts to increase the law's deterrent impact.[281]

D. Laws Mandating Motor Cycle Helmets

Riding a motorcycle is so dangerous that one analyst provocatively titled his article, *Why ER's Call Them Donor-Cycles.*[282] Wearing a safety helmet dramatically reduces the likelihood of death and serious injury for motorcycle riders who crash.[283] Yet while the federal and state governments have generally embraced laws requiring the use of seat belts and other safety restraints, particularly for children, only nineteen states and the District of Columbia currently require all motorcycle drivers and passengers to wear a helmet.[284] Twenty-eight states have enacted "partial helmet laws," which require certain categories of motorcycle riders to wear a helmet, and three states have no helmet requirements at all.[285] Anything less than a universal helmet law is difficult to

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[278] *See* Bragg & Benesch, *supra* note 276; Ross, *supra* note 276 (quoting prosecutors who state that criminal charges are necessary "to send a message that drivers should be held responsible for the safety of children in their care").

[279] Bragg & Benesch, *supra* note 276.

[280] Tim Golden, *Father Cleared in Child's Death in Car Seat Case,* N.Y. TIMES, May 4, 1991, at 1.

[281] *Id.*

[282] Dennis McCarty, *Why ER's Call Them Donor-Cycles*, THE REPUBLIC (Columbus, Ind.), May 7, 2006.

[283] *See* LONGTHORNE ET AL., *supra* note 18, at 2 (noting the estimate by the NHTSA that in 2008 1829 lives were saved by the use of motorcycle helmets); NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., TRAFFIC SAFETY FACTS: MOTORCYCLES 6 (2009), *available at* http://www-nrd.nhtsa.dot.gov/pubs/811159.pdf (noting that helmets are thirty-seven percent effective in preventing fatal injuries to motorcycle riders and forty-one percent effective in preventing fatal injuries to motorcycle passengers); NAT'L CTR. FOR INJ. PREVENTION & CONTROL, MOTORCYCLE SAFETY: HOW TO SAVE LIVES AND SAVE MONEY 9 (2012), *available at* http://www.cdc.gov/motorvehiclesafety/pdf/mc2012/MotorcycleSafetyBook.pdf (noting that motorcycle riders without helmets are twice as likely as helmet-wearers to suffer a traumatic brain injury).

[284] *Motorcycle Crash-Related Data*, CENTERS FOR DISEASE CONTROL AND PREVENTION, http://www.cdc.gov/Features/dsMotorcycleSafety/ (last visited Aug. 30, 2012).

[285] *Id.*; *see also* NAT'L CTR. FOR INJ. PREVENTION & CONTROL, *supra* note 283, at 15 (noting that the categories covered by partial helmet laws include drivers under a certain age (17-20), novice

enforce because police officers cannot tell at a glance whether the non-helmeted rider is within an exempt category, and thus citations for helmet violations are generally given only in conjunction with another traffic violation.[286] States that have mandatory helmet laws have much higher helmet use rates (generally over eighty percent) than states that do not, and, as a result, much lower motorcycle death and injury rates.[287]

In contrast to Congress' consistent efforts to improve highway safety through the provision of incentives and penalties for states to enact mandatory seat belt and child restraint laws and numerous measures to combat drunk driving,[288] Congress has vacillated in its concern over motorcycle helmet safety. Congress has twice offered states financial incentives to enact strong mandatory helmet laws and twice backed off from its support.[289] While states have generally responded strongly to those incentives, when Congressional support for motorcycle helmet laws waned, many states caved in to pressure from motorcycle rider groups asserting libertarian arguments.[290] When Congress enacted the Highway Safety Act of 1966, it authorized the Secretary of Transportation to set uniform standards for state highway safety programs, including mandatory helmet laws.[291] As a result, by 1975 nearly all states had adopted mandatory helmet laws.[292] In 1975, just when the Secretary of

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drivers, those who are passengers of riders who must be helmeted, and drivers without health insurance coverage).

[286] NAT'L CTR. FOR INJ. PREVENTION & CONTROL, *supra* note 283, at 15.

[287] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., TRAFFIC SAFETY FACTS: MOTORCYCLE HELMET USE IN 2009—OVERALL RESULTS 1-2 (2009), *available at* http://www-nrd.nhtsa.dot.gov/Pubs/811254.PDF. Numerous studies have found that when states enact mandatory helmet laws many more riders use helmets than when such use is optional; conversely, when states have repealed their mandatory helmet laws, there have been dramatic declines in the rate of helmet use. *See* NAT'L CTR. FOR INJ. PREVENTION & CONTROL, *supra* note 283, at 13; U.S. GEN. ACCT. OFF., HIGHWAY SAFETY: MOTORCYCLE HELMET LAWS SAVE LIVES AND REDUCE COSTS TO SOCIETY 4 (1991), *available at* http://www.gao.gov/assets/160/150870.pdf.

[288] *See supra* notes 120 and 258 and accompanying text; LONGTHORNE ET AL., *supra* note 18, at 14 (presenting chart summarizing federally encouraged highway safety milestones).

[289] *See infra* notes 291-95 and accompanying text.

[290] *See* Marian Moser Jones & Ron Bayer, *Paternalism and Its Discontents: Motorcycle Helmet Laws, Libertarian Values, and Public Health*, 97 AM. J. PUB. HEALTH 208, 210-13 (2007). A number of motorcyclist advocacy groups were formed to fight mandatory helmet laws. *Id.* Constitutional challenges to mandatory helmet laws have been rejected by nearly all courts, which have upheld the states' police power argument that the states' concern with protecting the lives of motorcycle passengers and other motorists, as well as in minimizing state funds to pay for the high health care costs of uninsured motorcyclists, trumps any autonomy interest an individual driver might have in not wearing a helmet. *Id.* However, two state appellate courts have upheld such challenges, finding that individual liberty and privacy interests trumped the state's interest in public safety and injury reduction. *Id.* at 210-11 & nn.17-25. The two cases in which the court held the statutes to be unconstitutional were *People v. Fries*, 250 N.E.2d 249 (Ill. 1969) and *Am. Motorcycle Ass'n v Dep't of State Police*, 158 N.W.2d 72 (Mich. App. 1968).

[291] Highway Safety Act of 1966, Pub. L. No. 89-564, 80 Stat. 731.

[292] HOPE GILBERT ET AL., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., EVALUATION OF THE REINSTATEMENT OF THE HELMET LAW IN LOUISIANA 3 (2008), *available at* http://www.google.com/search?client=safari&rls=en&q=evaluation+of+the+reinstatement+of+the+

Transportation was about to withhold highway construction funds from California, Illinois, and Utah for failing to enact helmet laws, Congress amended the Highway Safety Act to eliminate this as a requirement for receiving federal funds.[293] As a result, many states repealed their laws.[294] In 1991 Congress again offered financial incentives to states to enact laws to promote highway safety, providing incentive grants to states that enacted both mandatory helmet laws and mandatory seat belt laws; states responded positively to those incentives.[295] However, in 1995 the newly-elected Newt Gingrich Congress removed any financial incentives for states to require all motorcyclists to wear helmets, and several states eliminated their mandatory helmet laws, a trend which has continued to the present.[296]

E. The Impact of Tort Litigation in Changing Driver Behavior

In the early twentieth century, with the advent of the automobile and "horseless trolleys," an "epidemic" of motor vehicle fatalities claimed the lives of thousands of American children.[297] Although initially these victims were primarily poor, urban tenement dwellers, whose parents were often blamed for failing to supervise their children, public and media attitudes shifted when middle and upper class children began to be killed.[298] As pro-plaintiff jury verdicts became larger and more common,[299] liability insurers for motorists and transportation companies became actively involved in improving transportation safety, primarily by promoting the establishment of public playgrounds and by supporting the formation of school safety patrols.[300]

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helmet+law+in+louisiana&ie=UTF-8&oe=UTF-8; ROBERT G. ULMER & VERONIKA SHABANOVA NORTHRUP, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., EVALUATION OF THE REPEAL OF THE ALL-RIDER MOTORCYCLE HELMET LAW IN FLORIDA 1 (2005), *available at* http://www.nhtsa.gov/people/injury/pedbimot/motorcycle/flamcreport/images/FloridaMCReportscr1.pdf.

[293] GILBERT ET AL., *supra* note 292, at 3.

[294] *Id.* at 5; *see also* ULMER & NORTHRUP, *supra* note 292, at 2; Ogolla & Shaw, *supra* note 120, at 13.

[295] *See* Intermodal Surface Transportation Act of 1991, Pub. L. No. 102-241, 105 Stat. 1914; GILBERT ET AL., *supra* note 292, at 4.

[296] GILBERT, *supra* note 292, at 5; NAT'L CTR. FOR INJ. PREVENTION & CONTROL, *supra* note 283, at 13; ULMER & NORTHRUP, *supra* note 292, at 2.

[297] ZELIZER, *supra* note 70, at 32-33.

[298] *Id.* at 46-47.

[299] *Id.* at 44-45.

[300] *Id.* at 51-52.

F. Implications of Deterrence Research for Changing Drivers' Use of Cell Phones

1. General Deterrence Principles

As noted earlier, the essence of deterrence is that it is perceptual.[301] In order for a law to affect people's behavior, they must be aware of it.[302] This general rule has five specific corollaries.[303] The first relates to the marginal deterrent effect of a new law or policy: "[a] potential offender must realise that the probability of conviction or the severity of punishment has changed."[304] When applied to motorists who might consider using their cell phone while driving, this means first that they must be made aware of the change in the law or enforcement policy. Cell phone bans or restrictions can affect behavior only if people believe that it is more likely that they will be apprehended (increased certainty of punishment) or that they will suffer a more severe consequence if they *are* apprehended (increased severity of punishment), such as an increased fine, driver's license points or suspension, or possibly heftier insurance premiums.

As a threshold matter, data suggest not only that Americans fail to take into account the possibility of punishment for violating cell phone bans, but also that many do not actually believe the conduct is risky—at least not for them. Even though most Americans are aware of laws banning the use of hand-held cell phones while driving, many disregard them.[305] At any moment, five to six percent of motorists are using a cell phone while driving,[306] and in a recent survey, forty percent of drivers acknowledged using a cell phone several times a week, with the rates for teens even higher.[307] Drivers appear to have a cognitive split about cell phone use while driving: at the same time as they express concern about others who engage in this behavior, they discount their own risk of accident, claiming that they have "used [their] cell phone dozens of times and

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[301] *See* VON HIRSCH ET AL., *supra* note 188, at 1.
[302] *See supra* notes 196-97 and accompanying text.
[303] *See* VON HIRSCH ET AL., *supra* note 188, at 7.
[304] *Id.* (emphasis omitted).
[305] *Cf.* COSGROVE ET AL., FOUR HIGH VISIBILITY ENFORCEMENT WAVES, *supra* note 95, at 7-10 (finding that nine out of ten drivers in Connecticut and New York state knew about their states' handheld cell phone ban, but three out of ten expected to be cited for violating it); Braitman & McCartt, *supra* note 29, at 545-46 (finding that "[f]requency of driver phone use of any type was higher in states with all-driver bans," with twenty-two percent of drivers in non-ban states reporting daily phone use while driving compared to thirteen percent of drivers in states with an all-driver handheld cell phone ban; however, the same study found that "[t]here was no significant relationship between state law and frequency of texting while driving among all drivers or among any of the age groups.").
[306] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 28, at 1.
[307] Braitman & McCartt, *supra* note 29, at 544-46.

[they have] never been in a wreck."[308] A recent study of drivers in New York and Connecticut—states that have long-standing bans on using hand-held cell phones while driving—found that although almost ninety percent of drivers surveyed supported the enforcement of these laws, seven to nine percent admitted that they themselves had used a cell phone while driving, and no more than a third thought it was likely that they would receive a ticket for violating the law.[309]

At the same time, this study also showed that an intensive and highly-visible local law enforcement program had some impact on the observed incidence of hand-held phone use on New York and Connecticut roads.[310] Because the statutory penalties did not change, only the likelihood of apprehension, this finding is consistent with with the general principle of deterrence that certainty of apprehension and conviction has a greater impact than the severity of sanction imposed.[311] This is also consistent with the third corollary of the principle of deterrence, that "[a] potential offender must believe that there is a non-negligible likelihood of being caught . . . . [S]anctions for prohibitions thought to be poorly enforced are likely to have only a small deterrent impact."[312]

However, other stepped-up enforcement efforts have not been effective with drivers under age twenty-five,[313] which is the group most likely both to have car crashes[314] and to engage in risky behavior,[315] including driving while texting.[316] This is consistent with the second deterrence corollary, that for a law or law enforcement policy to have a deterrent effect, "[a] potential offender must take these altered risks into account when deciding whether to offend . . . [and not] act impulsively, or under the influence of drugs or alcohol . . . ."[317] It is the essence of adolescence to be highly impulsive, easily influenced by peer pressure, and inclined to disregard the future consequences of their actions;[318]

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[308] Stone, *supra* note 53 (recounting California Highway Patrol officer's description of drivers' excuse for violating the law: "They say, 'I've used my cell phone dozens of times, and I've never been involved in a wreck.'").

[309] COSGROVE ET AL., FOUR HIGH VISIBILITY ENFORCEMENT DEMONSTRATION WAVES, *supra* note 95, at 7-8, 10.

[310] *Id.* at 7-9; *see also supra* note 94 (discussing similar findings in studies of drivers in the United Kingdom).

[311] *See supra* note 200 and accompanying text.

[312] VON HIRSCH ET AL., *supra* note 188, at 7.

[313] *See* COSGROVE ET AL., HIGH VISIBILITY ENFORCEMENT DEMONSTRATION PROGRAMS, *supra* note 95, at 4-5 (finding that reductions in observed hand-held cell phone use in New York and Connecticut attributed to those states' high visibility enforcement programs were significant only among drivers twenty-five to fifty-nine); *see also* McCartt & Northrup, *supra* note 233, at 275 (finding that enhanced sanctions for high-BAC DWI offenders were least effective at reducing recidivism rates among offenders under twenty-five).

[314] *See supra* note 130 and accompanying text.

[315] *See* Slomski, *supra* note 131, at 3.

[316] *See supra* notes 30-33 and accompanying text.

[317] VON HIRSCH ET AL., *supra* note 201, at 7 (internal citation omitted).

[318] *See* J.D.B. v. North Carolina, 131 S. Ct. 2394, 2402-05 (2011); Slomski, *supra* note 131, at 3.

therefore, one would not expect teens and younger adults to respond as readily as older drivers to the deterrent influence of a ban on cell phone use.[319] This is borne out by numerous studies of teen driving, which show that teens are both more likely to text than other drivers[320] and more likely to crash when there are other teens in the car.[321]

Other research raises doubts about the efficacy of laws attempting to regulate cell phone use. A 2009 study that examined collision claims in California, Connecticut, the District of Columbia, and New York, all of which ban hand-held cell phone use while driving, found that even though the rate of observed cell phone use fell in those states, there was no corresponding decline in collision claim rates.[322] This suggests either that researchers did not observe all cell phone use, as drivers became adept at hiding their cell phone-related behavior, or that the use of hands-free cell phones was not as safe as legislators had anticipated. A 2010 study produced similar but even more striking results. The study found that not only did recently-enacted bans on texting while driving in California, Louisiana, Minnesota, and Washington state not reduce collision rates in those states, but they were in fact associated with increased collision rates, particularly among drivers under age twenty-five.[323] The study's authors hypothesized that drivers were more likely to hide their activities from law enforcement as a result of the texting ban, and this meant spending more time looking away from the road, thereby increasing the odds of having an accident.[324] This finding accords with the fifth deterrence corollary, that

> [a] potential offender must be willing to alter his or her choices regarding offending in the light of the perceived change in certainty . . . of punishment. . . . If the criminal activity is of sufficient importance in the potential offender's life because of the resources or life-style it provides or the needs it fulfills, then enhanced certainty or severity of punishment may not make him desist.[325]

A strong argument can be made that talking and texting on cell phones is such a lifestyle choice. For teenagers and many adults, being connected is essential, whether it is the instant connectedness of MySpace or Facebook or the slightly more distant phone or Blackberry connection that employees have with their

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[319] *See* Bushway & Reuter, *supra* note 196, at 405 (finding that those "who discount the future more heavily are less likely to be deterred by a given punishment.").
[320] *See supra* notes 30-33 and accompanying text.
[321] *See* McCartt et al., *supra* note 46, at 246 (noting that teen drivers are more likely to be involved in fatal accidents when they are carrying teen passengers).
[322] HIGHWAY LOSS DATA INST., *supra* note 101, at 5.
[323] *Id.* at 8.
[324] *See id.* at 8.
[325] VON HIRSCH ET AL., *supra* note 188, at 7.

employers and that parents have with their children.[326] This means that, for many people, the need they feel to be immediately available to anyone who might want to contact them[327] will trump the very slight possibility that they could be cited for a minor motor vehicle offense and fined no more than $100 for a first offense.[328]

2. Deterrence in the Motor Vehicle Context

Lessons from other aspects of motor vehicle regulation illuminate the potential and limitations of using law to change behavior in a way that actually affects human safety. Federal involvement in highway safety has been effective in two ways: (1) directly mandating new safety equipment;[329] and (2) incentivizing states to make the use of safety equipment mandatory or to change the law to make it easier to apprehend and prosecute drivers engaged in dangerous behavior.[330] For example, federal law has consistently encouraged states to enact laws mandating seat belt use; today every state except New Hampshire has enacted a mandatory seat belt law for all front seat passengers.[331] In contrast, Congress has been highly inconsistent in its support of mandatory motorcycle helmet laws, and as a result only twenty states and the District of Columbia currently mandate that all motorcycle riders wear helmets.[332]

Seat belt and motorcycle helmet laws also demonstrate the importance of making the desired behavior the object of primary enforcement, so that any law enforcement officer who observes the prohibited behavior can immediately detain and cite the driver. Compliance with seat belt laws is higher in states with primary enforcement than in states with secondary enforcement; in addition, states that have primary enforcement of these laws have substantially lower fatality rates.[333] In contrast, motorcycle helmet use is dramatically lower—and

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[326] *See* Erich Schwartzel, *Staying Connected a Status (Update) Symbol,* PITTSBURGH POST-GAZETTE, Jan. 6, 2010, at A1.

[327] Although few people are truly "addicted" to their communications technology, many Americans display a significant dependence on it. *See* Anick Jesdanum, *Study: Americans More Dependent on Cell Phones,* U.S.A. TODAY, Mar. 5, 2008, http://www.usatoday.com/tech/wireless/phones/2008-03-05-cellphone-study_N.htm (citing new study by Pew Internet and American Life Project finding, among other things, that thirty-six percent of Americans surveyed said they would have difficulty giving up access to email via their cell phone).

[328] *See Drivers Ed: Cell Phones and Driving—A Dangerous Combination,* COMPARISONMARKET, http://www.comparisonmarket.com/learningcenter/articledetail.aspx/index/458 (last visited Aug. 30, 2012) (stating the fines for New York, Connecticut, and Washington, D.C., which impose fines beginning at $100 and rise significantly for second and third offenses).

[329] *See supra* notes 258 and accompanying text (discussing improvements in driver safety following the Congressional mandate that all new cars be equipped with seat belts).

[330] *See supra* notes 120, 215-19 (discussing federal incentives to create a national minimum drinking age and set the blood alcohol limit at .08).

[331] *See supra* Part III.C.

[332] *See supra* Part III.D.

[333] *See supra* notes 262-65 and accompanying text.

fatality rates are significantly higher—in states that do not have mandatory helmet laws for all riders.[334]

Federal support of state laws to reduce the incidence of drunk driving has been remarkably successful. Beginning in 1984, Congress has provided significant and consistent financial incentives for states to raise the minimum drinking age to twenty-one, change the definition of drunk driving to make driving with a blood alcohol level of .08 per se a crime, and enact zero tolerance laws for drivers under age twenty-one.[335] Of course, the federal government's campaign against drunk driving coincided with private advocacy; together they achieved intensive and persistent media coverage of this issue, which over time led to a shift in widely-held social norms.[336] This is consistent with the core principle of deterrence that people will be more likely to refrain from certain behavior if they perceive that it has negative consequences, not only as a Benthamite act of rational calculation, but also in response to the criminal law's ability to define social boundaries and change community norms.[337] Researchers have suggested that such a normative shift is a major reason why drunk driving fatalities have stayed relatively low after the initial period of dramatic decline in the early 1980s to the mid 1990s, as many more people either drink less when they go out, choose a designated driver, or arrange for alternative transportation.[338] Simultaneously, though, the apparent inability of either legal or normative pressures to further reduce the death toll from drunk driving demonstrates the limits of deterrence. If, as posited by Pogarsky and other social scientists, deterrence follows a U-shaped curve, then there may be some drivers who fall outside the law's coercive (or persuasive) power to change behavior.[339]

IV. RECOMMENDATIONS: HOW TO RESPOND TO DISTRACTED DRIVING IN AN AGE OF CONNECTION

In order to achieve meaningful change in the use of cell phones while driving, it is important to use a multi-pronged strategy, using criminal and civil laws, education, and financial incentives to change behavior. In designing that strategy, it is paramount to keep in mind the long-term goal of changing drivers' cell phone behavior: decreasing the number of accidents attributable to cell phone use and the fatalities and injuries that accompany them. All proposals for legal and other change must be evaluated through this lens.

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[334] NAT'L CTR. FOR INJ. PREVENTION & CONTROL, *supra* note 283, at 13, 17. After Florida repealed its motorcycle helmet law in 2000, motorcycle fatalities increased by seventy-one percent, compared to a thirty-seven percent increase on a national level (reflecting national trends toward more motorcycle registrations). ULMER & NORTHRUP, *supra* note 292, at iii, vii, 9.

[335] *See supra* notes 215-19 and accompanying text.

[336] *See supra* text accompanying notes 207-14.

[337] *See supra* notes 188-94 and accompanying text.

[338] Durna, *supra* note 120, at 114-18.

[339] *See* Pogarsky, *supra* note 189, at 440-41, 444-46; *see also supra* notes 252-56.

The first step in changing Americans' use of cell phones while driving is to modify their attitudes about the risks of that use. Americans, along with government policymakers, must be educated about the real and imagined risks of cell phone use. All cell phone conversations while driving modestly increase the risk of motor vehicle accidents due to the driver's cognitive and auditory distraction.[340] Conversing in and of itself carries only a minor risk, but physically manipulating a mobile device—by dialing, answering, or texting—adds biomechanical and visual distraction and increases the risk of accident.[341] Texting dramatically elevates the odds of having a crash or "near-crash" event.[342] According to one widely-cited study, texting while driving is more than twenty-three times riskier than driving without any distractions.[343] Thus, it probably makes sense to prohibit texting while driving, despite the results of a recent study that found an increase in collision rates in states that had enacted texting bans, suggesting that drivers who tried to avoid detection of their texting spent more time looking away from the road than they would have if the activity was not illegal.[344]

In contrast, banning all use of hand-held devices is not likely to yield any real improvement in highway safety, particularly if the law simultaneously permits the use of hands-free devices. This is because the largest portion of the time using a mobile device is spent talking, rather than answering or dialing, and talking is equally distracting whether one uses a hands-free or hand-held device.[345] While data from naturalistic studies as well as simulators show a slightly elevated risk of accidents while talking on a mobile device,[346] many people participate in such conversations without incident. This is likely because most people (but not teens) avoid using mobile devices when they are driving on dangerous or congested highways, etc., just as people turn off the radio or stop drinking or eating when facing challenging road conditions.[347] Laws that prohibit the use of hand-held devices (while permitting the use of hands-free devices) may have the unintended effect of encouraging more frequent and lengthier use of the latter devices, potentially increasing the risk of accidents due to driver distraction.[348]

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[340] *See New Data from VTTI*, *supra* note 35.
[341] *See supra* notes 34-48 and accompanying text.
[342] *See* HICKMAN ET AL., *supra* note 40, at xiv.
[343] *Id.* (examining the behavior of commercial motor vehicle drivers).
[344] HIGHWAY LOSS DATA INST., *supra* note 19, at 8.
[345] *See supra* notes 88-96 and accompanying text.
[346] *See supra* note 89 and accompanying text.
[347] *Cf.* Slomski, *supra* note 131, at 26-31 (noting that teenagers are less able to recognize the riskiness of particular behaviors and difficult driving situations).
[348] Hahn & Dudley, *supra* note 15, at 166-67 (arguing that "[b]y banning only hand-held units, lawmakers may send consumers the wrong message; people may believe that hands-free devices are safe and use them more often, or with less caution. This would increase risk associated with hands-free units and may offset or even eclipse gains in safety from banning hand-held phones.")

If, however, legislators decide that it is appropriate to ban all mobile device use, the chance of apprehension needs to be high in order for such a ban to be effective. As shown with other motor safety interventions, compliance with the law increases and fatality rates decrease when there is primary enforcement of the law, permitting law enforcement officers to intervene immediately when they see a violation rather than waiting for another motor vehicle law to be broken.[349] Increasing the sanction's severity is less effective than enhancing the certainty of apprehension.[350] However, studies of drunk drivers and seat belt use both suggest that a mid-range sanction is more effective than either a high or low penalty in reducing recidivism.[351] Survey data about seat belt use suggest that Americans would be open to a moderate increase in the penalties for violation.[352]

Deterrence research has shown that the law is most effective in achieving behavioral change when it both promotes, and reflects, a larger normative shift.[353] Thus, in order to make it more likely that Americans will give up their cherished cell phones, at least while driving, it is important to align legal and financial incentives and couple them with educational efforts to achieve a long-term change in community values, such as the recently developed ad campaign directed at "chang[ing] the culture" of mobile device use.[354] At a minimum, criminal law, motor vehicle safety law, and tort law should be made congruent. Federal law should provide carrots and sticks in the form of financial incentives and penalties connected with the receipt of federal highway money to encourage states to enact bans on cell phone use that are supported by scientific data rather than moralistic rhetoric or media hype.

When state laws are changed to ban mobile device use and/or texting, they should also explicitly state that the behavior is negligence per se. This would give both individual drivers and employers greater financial incentives to comply with the ban in a way that the relatively minor fines of current motor vehicle laws do not. As happened with traffic safety in the early twentieth century, when insurance companies begin to feel the sting of large jury verdicts in the case of driver negligence, they will put more effort into addressing the problem.[355] This could mean that insurers would revise their premium structure

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[349] *See supra* notes 262-65, 287 and accompanying text (discussing the effect of primary and secondary enforcement of laws governing seat belts and motorcycle helmets). Currently eight states and the District of Columbia have primary enforcement of their bans on hand-held cell phones while driving, and thirty-five states and the District of Columbia have primary enforcement of their bans on texting. *See Cell Phone and Texting Laws*, *supra* note 74.

[350] *See supra* notes 199-201 and accompanying text.

[351] *See* NICHOLS ET AL. *supra* note 266, at 37 (studying seat belt fines); Weinrath & Gartrell, *supra* note 232, at 117-18 (examining DWI penalties).

[352] *See* NICHOLS ET AL., *supra* note 266, at 12-13.

[353] *See supra* notes 187-94 and accompanying text.

[354] Copeland, *supra* note 6 (discussing recent ad campaign mounted by the National Highway Traffic Safety Administration, several states' attorneys general, and the Ad Council).

[355] *See* Zelizer, *supra* note 70, at 38-42, 44-45, 49-52. Here it is important to remember that insurers did not apparently focus on changing the behavior of motorists but instead worked to

to reward employers who develop and enforce company-wide policies against the use of mobile devices while driving, which would reduce employers' liability and health care costs. Similarly, insurers might reward individual drivers who take "safe driving" courses that address the dangers of mobile device use. Insurers might also provide premium incentives to drivers who install equipment that would disable their device while driving, just as they now reward drivers who install "Lojack" devices to make it easier to find stolen cars.[356] In addition, insurers, with or without government support, should work to change drivers' mobile device habits by lobbying for highways to be redesigned with frequent pull-offs where drivers can call and text.

Any strategy to reduce mobile use while driving must begin with teenagers, for two reasons. The first is obvious: teens have the highest risk for dangerous driving in general (and are thus responsible for a disproportionately large share of auto accidents, fatalities, and injuries),[357] and are also more susceptible to peer pressure.[358] If the norms of their peer group can be changed through education and incentives, it is likely that mobile device-related fatalities and injuries will begin to decrease.[359] Second, teens will quickly age into young adults, and then older adults, providing a unique opportunity for the moral educative function of criminal and tort law to begin to take hold. A similar development has occurred with drunk driving; it is now normative for those anticipating an evening of social drinking to choose a designated driver or to plan alternative transportation home.[360]

A variety of strategies to change mobile device behavior are possible. They include educating teens and their parents about the dangers of using cell phones while driving (both individually and through community-wide education and law enforcement programs), restricting teens from driving with teen passengers, improving graduated licensing programs to give teens more supervised experience driving under challenging road conditions, and providing financial incentives (through insurance premium differentials) to teens who can show safe (and cell-phone free) driving records.[361] Mandating an expansion of

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educate accident victims—urban children—to be more attentive to traffic risks. Insurers did, however, spend money to remove potential victims from the zone of harm by promoting the development of urban playgrounds. *Id.*

[356] *See* Ian Ayres & Steven D. Levitt, *Measuring Positive Externalities from Unobservable Victim Precaution: An Empirical Analysis of Lojack*, 113 Q. J. ECON. 43, 48 (1998).

[357] VERMETTE, *supra* note 7, at 22.

[358] *See supra* notes 130-35 and accompanying text.

[359] Indeed, neuroscience research suggests that while teens generally have difficulty learning from experience due to the incomplete development of certain reward centers in the brain, providing small financial incentives (e.g., a $25 gift card) makes it possible for them to learn from mistakes to the same degree as adults. Slomski, *supra* note 131, at 3.

[360] *See* Durna, *supra* note 120, at 114-18.

[361] *See* McCartt et al., *supra* note 46, at 246 (finding that graduated driver licensing laws that impose restrictions on driving with passengers and delay the age at which teens become eligible to drive successfully reduce teenage driving fatalities); McCartt et al., *supra* note 63, at 217-18 (summarizing studies finding reductions in teenage accident and fatality rates as a result of GDL laws delaying the age at which teens begin driving and/or requiring more driving experience before

teen education programs could be accomplished with the same type of federal financial incentives currently aimed at reducing drunk driving accidents and increasing seat belt use, and any state could implement such changes on its own.

Of course, perhaps the most effective way to alter drivers' use of mobile devices would be through a law mandating that safety features be built into mobile devices and motor vehicles that would automatically disable the device if the car were moving. In the current political climate, federal legislation or regulation to accomplish that appears almost impossible.[362] However, the same result is likely to be achieved if courts change their current position on tort liability and hold that mobile device manufactures and carriers, as well as automobile manufacturers, owe a duty to the potential and highly foreseeable victims of motor vehicle accidents caused by drivers' mobile device use to prevent that harm.[363] Just as strict product liability law revolutionized the behavior of product manufacturers[364] and dram shop and social host liability statutes cut down on the behavior of furnishing alcohol to presently or potentially inebriated drivers,[365] so too a judicial decision extending liability to the manufacturers and sellers of mobile devices would undoubtedly lead to the rapid development and deployment of new technology to minimize or eliminate the use of mobile devices while driving. Already such technology is available, although it is still in relatively infancy.[366]

Until that time, it is important to recognize the limits of the law. There is no point in enacting draconian laws to "send a message" proclaiming that mobile device–wielding drivers are villains if that does not lead to fewer deaths and injuries; nor does it make sense to enact regulatory bans which lack any real enforcement teeth.

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teens receive full licenses); McCartt et al, *Effects*, *supra* note 217, at 146 (finding that a highly-publicized program of enhanced enforcement of minimum drinking age and DUI laws resulted in a significant decrease in underage drinking and drunk driving among drivers 16-24); McCartt & Northrup, *supra* note 135, at 36 (suggesting that imposing higher penalties on teens for seat belt violations might improve seat belt use rates); Williams, *supra* note 135, at i5-i7 (discussing the potential of graduated licensing programs and enhanced driver education as a tool to mitigate young driver risk factors). Some of these proposals are part of the Safe Teen and Novice Driver Uniform Protection (STANDUP) Act, S. 528, 112th Cong. (2011).

[362] *See supra* notes 12-13 and accompanying text.

[363] *See supra* notes 176-86 and accompanying text (discussing courts' current refusal to extend liability mobile device manufacturers and vendors liable in such circumstances).

[364] *See generally* John A. Siliciano, *Corporate Behavior and the Social Efficiency of Tort Law*, 85 MICH. L. REV. 1820, 1820 n. 3 (1987).

[365] *See supra* note 250.

[366] These technologies include software that disables texting and web-browsing in a phone that is traveling above a certain speed, dashboard buttons that drivers can push to prevent incoming calls and texts, and key fobs paired with cell phones that disable the phone when the key is inserted into a car ignition. *See* Larry Copeland, *Software Aims to Block Texting While Driving*, U.S.A. TODAY, July 22, 2010, at A1; *New Technology to Block Car Phone Use Far From Perfect*, NAT'L SAFETY COMM., (Jan. 27, 2009), http://alerts.nationalsafetycommision.com/2009/01/new-technology-to-block-car-hone-use.php.