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Killer Cell Phones and Complacent Companies: How Apple Fails to Cure Distracted Driving Fatalities

SUMMER GALITZ*

With an astounding 1.6 million car crashes occurring each year due to cell phone use while driving, it is clear that the United States is suffering from a serious epidemic of pervasive cell phone use while driving. Although a majority of Americans clearly understand the hazards and dangers involved in texting while driving, cell phone addiction continues to keep drivers glued to their phones. Apple has a tool at its disposal to ensure that drivers no longer use their cell phones while they are driving, yet it has failed to implement its technology. Apple's Driver Handheld Computing Device Lock-Out patent, granted in April 2014, would disable all distracting functions on a driver's phone through a lock-out mechanism. As one of the world's greatest social influencers, Apple has the power and the responsibility to change the culture behind texting and driving, and implementation of its patent would be a great step toward eliminating deadly distracted driving caused by cell phone use.

Because people are dependent on and addicted to their cell phones, it is irrational to believe that cell phone owners can, or will, take the initiative to stop using their cell phones while driving. And studies have shown that public service announcements and state bans and enforcement efforts largely have not helped. For this reason, the onus should be

* J.D. Candidate 2018, University of Miami School of Law. I wish to thank Professor Cheryl E. Zuckerman for the inspiration behind this Note and for her guidance. For their unwavering love and insights, I thank my wonderful family. And of course, I thank the University of Miami Law Review for selecting this Note for publication, and for the tireless efforts of the editorial team.

placed on the federal government to force Apple and other phone manufacturers to implement life-saving lock-out technology. Both automobile and cell phone manufacturers have the means to change the way we drive for the better, and with the help of the federal government, these new safety requirements that disable drivers' cell phones when in a moving car can finally be realized. While Apple has exacerbated the distracted driving problem by creating the smartphone, the powerful tech giant has also created the solution. It is time Apple puts its solution to use.

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INTRODUCTION

In April 2013, twenty-one-year-old Ashley Kubiak looked down at her Apple iPhone as it buzzed from receiving a text message.¹ Seconds later, her car plowed into another's, as yet another instance of distracted driving turned deadly.² Kubiak's seemingly innocuous decision to look at a text message killed two women, Shari Standard and Sandra Jones, and left a seven-year-old who had survived childhood leukemia, identified as L.M., a paraplegic.³ Kubiak was driving behind the victims' car, and the Texas roadway upon which the two vehicles were traveling was straight and unobscured; yet, due to the high "level of distraction caused by the iPhone," Kubiak could not avoid the fatal collision once she looked up.⁴ Ashley Kubiak is only one of many distracted drivers involved in fatal car accidents as a result of driving while texting or using other features of a cell phone.⁵ Due to the increasing popularity of smartphones, casualties from distracted driving are on the rise: "in 2015, distraction-affected

¹ *Crash Victims Say Apple Patent Could Cure Texting While Driving*, KLTU (Sept. 27, 2016, 6:39 PM), <http://www.kltv.com/story/33264317/crash-victims-say-apple-patent-could-cure-texting-while-driving> [hereinafter *Crash Victims*].

² *Id.*

³ John Suayan, *Woman Checking Messages on iPhone Causes Fatal Collision, Survivors Sue Apple*, SE TEXASRECORD (Aug. 4, 2015, 3:51 PM), <http://setexasrecord.com/stories/510631652-woman-checking-messages-on-iphone-causes-fatal-collision-survivors-sue-apple>.

⁴ *Id.*

⁵ See, e.g., *Minn. Teen Charged in Fatal Texting While Driving Crash*, CBS NEWS (Oct. 20, 2015, 3:44 PM), <http://www.cbsnews.com/news/texting-and-driving-minnesota-teen-kills-father-and-daughter/> (reporting teenager texting on cell phone ran red light, killing a father and his young daughter); Erin Tracy, *She Survived Her First Distracted Driving Accident – but Not Her Second*, CHARLOTTE OBSERVER (Apr. 10, 2016, 10:13 AM), <http://www.charlotteobserver.com/news/nation-world/national/article71022122.html> (reporting that after surviving one serious car accident due to texting while driving, teenager dies after driving off a freeway embankment while texting); Jennifer Stockinger, *Texting While Driving: Story of Teen's Fatal Crash Impacts BHS Seniors*, BRAINERD DISPATCH (Apr. 26, 2015, 11:36 AM), <http://www.brainerddispatch.com/news/3730748-texting-while-driving-story-teens-fatal-crash-impacts-bhs-seniors> (reporting that teenager texting on cell phone was killed on her first day of senior year of high school after rear-ending a stopped school bus).

fatalities rose by 8.8[%] from the previous year.”⁶ And although 90% of surveyed drivers know that texting and driving is dangerous, studies show that people are “too addicted to stop.”⁷ We constantly and compulsively check our phones because each message, whether it be a text message, an e-mail, or a social media notification, produces dopamine in our brains, which makes us feel happy and causes us to grab our phones in pursuit of another dopamine fix.⁸ So if we are addicted to our phones, and if nothing is stopping us from using a cell phone while driving, then how, and when, will we stop distracted driving?

The family of the victims in the 2013 Texas crash places the onus on cell phone manufacturers to curb this deadly behavior.⁹

⁶ Amber Miles, *Urge Apple to Develop Technology to Reduce Cellphone Use While Driving*, JUSTICE (Sept. 27, 2016, 1:34 AM), <http://www.thejustice.org/article/2016/09/urge-apple-to-develop-technology-to-reduce-cellphone-use-while-driving>.

⁷ Peter Gareffa, *Texting While Driving is Addictive Behavior, Study Finds*, EDMUNDS (Nov. 10, 2014), <https://www.edmunds.com/car-news/texting-while-driving-is-addictive-behavior-study-finds.html>. This study was conducted as part of AT&T’s It Can Wait campaign, which aims to spread awareness of and stop the epidemic of texting while driving. *Id.*

⁸ *Id.*; Terry Goodrich, *Cellphone Addiction Is ‘an Increasingly Realistic Possibility,’ Baylor Study of College Students Reveals*, BAYLOR: MEDIA COMMUNICATIONS (Aug. 27, 2014), <http://www.baylor.edu/mediacommunications/news.php?action=story&story=145864> (discussing a university study which revealed that 60% of college students admit they may be addicted to their cell phones, with female college students spending an average of ten hours per day and male college students spending an average of eight hours per day on their cell phones); Matt Richtel, *Phone Makers Could Cut Off Drivers. So Why Don’t They?*, N.Y. TIMES (Sept. 24, 2016), <http://www.nytimes.com/2016/09/25/technology/phone-makers-could-cut-off-drivers-so-why-dont-they.html> (“[U]sing a phone sets off releases of a neurochemical called dopamine that makes it hard to resist the ping. ‘If that desire for a dopamine fix leads us to check our phones while we’re driving, a simple text can turn deadly.’”).

⁹ Richtel, *supra* note 8; *see also*, Cleve R. Wootson Jr., *A Man Using FaceTime Killed a 5-year-old Girl in a Highway Crash. Was Apple to Blame?*, WASH. POST (Jan. 2, 2017), https://www.washingtonpost.com/news/the-intersect/wp/2017/01/02/a-man-using-facetime-killed-a-5-year-old-girl-in-a-highway-crash-was-apple-to-blame/?utm_term=.d2f9ac9cc0dc. The plaintiffs in the Texas lawsuit are not the only people to have sued Apple over a fatal car crash involving driver distraction caused by using an iPhone while driving. *See id.* In 2014, five-year-old Moriah Modisette was traveling in her family’s car when Garret Wilhelm slammed into the Modisettes’ car at full highway speed. *Id.* Wilhelm caused the

Plaintiffs Kimberly Meador, Amos Standard, and Russell Jones sued Apple in a products liability lawsuit, which was filed in the Tyler Division of the Eastern Division of Texas,¹⁰ alleging that “Apple knew its phones would be used for texting and did not prevent Ms. Kubiak from texting dangerously.”¹¹ The federal lawsuit claims that Apple could have, but failed to, design a cell phone that disables texting while driving, which could have prevented the deadly crash.¹² The lawyers who brought this lawsuit uncovered something fascinating: Apple owns a patent that would help stop driver distraction through an automated system that would disable certain smartphone functions when an iPhone user is driving.¹³ The technology would “lock out” a driver’s phone if it were determined that the cell phone user is driving.¹⁴ Considering the fact that 3,477 people were killed in 2015 alone because of distracted driving,¹⁵ Apple’s invention seems like an ingenious and life-saving idea. Although Apple’s lock-out patent was granted in 2014, the tech giant has failed to implement it.¹⁶ To those who have lost loved ones because of texting while driving, the fact that Apple has not yet deployed this technology, despite its ownership of the patent and

crash by using the Apple FaceTime video chat application on his iPhone instead of watching the road. *Id.* The family thinks Wilhelm is not the only one to blame for the crash, but Apple is partially to blame as well. *Id.* The Modisettes believe that “iPhones should detect whether a user is driving a car and disable the attention-consuming video chat app.” *Id.* iPhones have the ability to detect when a phone is in motion and because Apple “failed to configure the iPhone 6 Plus to ‘lock-out’ the ability for a driver to utilize (Apple’s) ‘FaceTime’ application,” Apple should be liable for the unnecessary and tragic death of young Moriah. *Id.*

¹⁰ Plaintiff’s Second Amended Complaint at 1, *Meador v. Apple, Inc.*, No. 6:15-cv-715-MHS-KNM (E.D. Tex. Aug. 20, 2016), ECF No. 59.

¹¹ Richtel, *supra* note 8.

¹² Suayan, *supra* note 3.

¹³ Richtel, *supra* note 8.

¹⁴ Miles, *supra* note 6.

¹⁵ *Distracted Driving*, NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., <https://www.nhtsa.gov/risky-driving/distracted-driving> (last visited Feb. 28, 2018) [hereinafter *Distracted Driving* NHTSA].

¹⁶ Ethan Baron, *Apple Has Technology to Stop Texting-and-driving, but Doesn’t: Report*, MERCURY NEWS: SILICONBEAT (Sept. 26, 2016, 2:07 PM), <http://www.siliconbeat.com/2016/09/26/113833/>.

unique ability to prevent tragic and unnecessary deaths, is painfully aggravating.¹⁷

The Texas lawsuit has raised a serious and pressing question: “Does Apple—or any cellphone maker or wireless company—have a responsibility to prevent devices from being used by drivers in illegal and dangerous ways?”¹⁸ Many would answer yes, absolutely.¹⁹ Instead of implementing the technology, however, phone manufacturers, including Apple, are stressing ways in which drivers can prevent themselves from being distracted, such as turning off their phones, downloading phone applications that stop incoming text messages, and using voice commands for texting or changing music.²⁰ But this approach is not good enough because not only does it let “wireless companies off the hook[,] but [it] also overlooks the compulsive nature of smartphone use.”²¹ Smartphone companies

¹⁷ Richtel, *supra* note 8. David Teater, the father of a young boy killed by a distracted driver, is deeply troubled by Apple’s refusal to implement this technology: “If Apple had deployed this technology 10 years ago, there would be more people alive today, . . . [t]hink about it from a parent’s perspective: How would you feel knowing Apple had the ability to prevent your teen from ever texting and driving, and they chose not to?” *Id.*

¹⁸ *Id.*

¹⁹ See *Smartphone Companies and Carmakers Need to Fight Distracted Driving*, THE GLOBE AND MAIL (Aug. 16, 2013, 7:30 PM), <http://www.theglobeandmail.com/opinion/editorials/smartphone-companies-and-carmakers-need-to-fight-distracted-driving/article13836848/> [hereinafter *Smartphone Companies*] (“Smartphone manufacturers should be obliged to use the device’s built-in accelerometers to actively warn users away from texting from a handset when it is in a moving car, and include, as part of the basic phone software, an optional setting to lock out the texting function”); Richtel, *supra* note 8. (“By not putting the technology in place, Apple has ‘failed in their social responsibility.’ . . . ‘They should’ve done it, and even done it at a market risk.’”); *Car Safety Regulators Want to Lock You Out of Most Phone Apps While Driving*, PORTLAND PRESS HERALD (Nov. 23, 2016), <http://www.pressherald.com/2016/11/23/car-safety-regulators-ask-smartphone-makers-to-lock-most-apps-during-driving/> (“NHTSA [National Highway Traffic Safety Administration] wants phone makers to develop technology that can determine if someone is driving a car and then disable most of the apps.”).

²⁰ See *Our Opinion: Don’t Let Phone Makers Off Hook in Crash Deaths*, CENT. MAINE: EDITORIALS (Sept. 28, 2016), <http://www.centralmaine.com/2016/09/28/our-opinion-dont-let-phone-makers-off-hook-in-crash-deaths/> [hereinafter *Our Opinion*].

²¹ *Id.*

have the unique ability to effectively eradicate the epidemic of distracting cell phone use while driving through their implementation of lock-out mechanisms and technologies, and there is “no justification for not requiring them to use it.”²²

This Note will argue that the onus should be placed on the federal government to force Apple and other phone manufacturers to implement this life-saving lock-out technology. Both automobile and cell phone manufacturers have the means to change the way we drive for the better, and with the help of the federal government, these new safety requirements that disable drivers’ cell phones when in a moving car can finally be realized. Part I of this Note discusses the epidemic of cell phone use while driving, including how widespread the practice is and statistics that demonstrate the dangers of this potentially deadly practice. Part I also discusses various attempts (both unsuccessful and successful) by the government, as well as by organizations, to help combat distracted driving. Part II explores Apple’s Driver Handheld Computing Device Lock-Out patent, analyzes potential reasons for why Apple has failed to implement this life-saving technology, and discusses how Apple’s unique market, cultural, and leadership roles position the company as *the* solution. Part III addresses what the government can do about the issue, what laws already exist, and what laws are greatly needed. Part III also provides a brief overview of government regulation of technology. Finally, Part IV concludes with a return to the deadly Texas car crash and discusses why Apple should shoulder this great responsibility. This Note proposes that government action and regulation of technology will be the most effective, successful, and life-saving method in the long and uphill battle against cell-phone related distracted driving.

²² *Id.*

I. THE EPIDEMIC OF USING A CELL PHONE WHILE DRIVING

A. *Statistics Demonstrating the Dangers*

An astounding 1.6 million car crashes occur each year due to cell phone use while driving, according to the National Safety Council.²³ These crashes represent 64% of all car accidents in the United States annually.²⁴ Of those crashes, around 330,000 result in injuries specifically caused by texting while driving,²⁵ and many end in fatalities. In 2013, over 3,000 people were killed in cell phone distraction-related crashes.²⁶ The Governors Highway Safety Association believes that the true figures might be even higher due to the fact that cell phone use in crashes is underreported because people commonly do not tell the truth about whether they were using a cell phone at the time of the crash.²⁷ The statistics are harrowing: “Just making cellphone calls increases your chances of crashing by four times; sending text messages increases the risk [twenty-three] times.”²⁸ Text messaging while driving is especially dangerous because texting involves a deadly combination of the three main types of driving distractions: visual, manual, and cognitive.²⁹ And the problem is only getting worse, as evidenced by the fact that highway deaths increased by 10.4% in 2016, despite various efforts to educate the public on the dangers of distracted driving.³⁰

²³ *Texting and Driving Accident Statistics*, EDGAR SNYDER & ASSOCS., <https://www.edgarsnyder.com/car-accident/cause-of-accident/cell-phone/cell-phone-statistics.html> (last visited Feb. 28, 2018).

²⁴ Kiernan Hopkins, *25 Shocking Distracted Driving Statistics*, DISTRACTED DRIVING ACCIDENTS (Jan. 23, 2015), <http://distracteddriveraccidents.com/25-shocking-distracted-driving-statistics/>.

²⁵ *Texting and Driving Accident Statistics*, *supra* note 23.

²⁶ *Id.*

²⁷ *The Danger in the Next Lane: State Bans Help Reduce Driver Distraction, Our survey finds*, CONSUMER REPORTS MAGAZINE (June 2013), <https://www.consumerreports.org/cro/magazine/2013/06/the-danger-in-the-next-lane/index.htm> [hereinafter *The Danger in the Next Lane*].

²⁸ David Pogue, *Your Phone is Locked. Just Drive.*, N.Y. TIMES (Apr. 28, 2010), <http://www.nytimes.com/2010/04/29/technology/personaltech/29pogue.html>.

²⁹ Miles, *supra* note 6.

³⁰ See AJ Dellinger, *Driver Mode for Phones: U.S. Government Creates Guidelines to Limit Phone Access While Driving*, INT’L BUS. TIMES (Nov. 23,

These figures are even more alarming when considering the statistics of cell phone use by teenagers. Every day, eleven teenagers die from accidents caused by texting while driving,³¹ making texting while driving the leading cause of death among teenagers.³² Twenty-one percent of teenage drivers who have died in car accidents were distracted by their cell phones.³³ More teens die from car accidents than from cancer, suicide, homicide, and heart disease.³⁴ In fact, more teenagers die from crashes caused by texting while driving than from drunk driving accidents.³⁵ These statistics reveal that the leading cause of teenage mortality is *preventable* because, as this Note demonstrates, there are ways to disable cell phone use while driving.

Teenage cell phone use is especially concerning because “[t]een drivers have a 400% higher chance of being in a car crash when texting while driving than adults.”³⁶ Not only are teens at greater risk than adults, but cell phone use is especially pervasive among teenagers, with statistics showing that 52% of teenagers talk on their cell phone while they are driving and 32% use their cell phone to text while they are driving.³⁷ Furthermore, teenagers who text while

2016, 3:19 PM), <http://www.ibtimes.com/driver-mode-phones-us-government-creates-guidelines-limit-phone-access-while-driving-2450635>.

³¹ *Texting and Driving Accident Statistics*, *supra* note 23.

³² See Delthia Ricks, *Study: Texting While Driving Now Leading Cause of Death for Teen Drivers*, NEWSDAY, <https://www.newsday.com/news/nation/study-texting-while-driving-now-leading-cause-of-death-for-teen-drivers-1.5226036> (last updated May 8, 2013, 10:29 PM).

³³ *Cell Phone Use While Driving Statistics*, *supra* note 23.

³⁴ *Policy Impact: Teen Driver Safety*, CDC, <https://www.cdc.gov/motorvehiclesafety/pdf/policyimpact-teendriversafety-a.pdf> (last visited Apr. 22, 2018). Motor vehicle crashes are the leading cause of death for teens, with thirty-five percent of teenage deaths attributed to motor vehicle accidents. Of these car accidents, in 2014, twenty-six percent involved cell phone use. *Texting and Driving*, DMV, <https://www.dmv.org/distracted-driving/texting-and-driving.php> (last visited Apr. 22, 2018).

³⁵ Fox Van Allen, *Study Shows More Teens Killed Texting While Driving than by Drunk Driving*, TECHLICIOUS (May 13, 2013), <https://www.techlicious.com/blog/study-shows-more-teens-killed-texting-while-driving-than-by-drunk-driving/> (“An estimated 3,000 teenagers die each year due to sending and receiving text messages while driving, as compared to the 2,800 who died due to drunk driving.”).

³⁶ Hopkins, *supra* note 24.

³⁷ *Id.*

driving spend approximately 10% of their driving time driving outside of their lane.³⁸

While many drivers erroneously believe that it is possible to use their phones and still remain adequately focused on the road, the reality is that texting takes the driver's attention away from the road frequently and for considerably lengthy periods of time.³⁹ The average text takes a driver's eyes off the road for around five seconds, which is enough time to cause a serious, and even fatal, accident.⁴⁰ For example, at 55 miles per hour, the average text takes your eyes off the road long enough to cover a football field.⁴¹ So, while some drivers might believe that spending five seconds reading a text is an innocuous, quick glance away from the road, these mere seconds can be deadly. This is because "[w]hen you text while driving, the time that you spend with your eyes off the road increases by about 400%."⁴² Yet, many drivers do not recognize (or perhaps simply ignore) the obvious dangers and steadfastly believe they are good at this risky multitasking, as evidenced by a poll which showed that "77% of adults and 55% of teenage drivers [believe] that they can easily manage texting while driving."⁴³ What many of these drivers do not realize is that while they may feel like they are capable of sending a text and driving safely, sending a text message actually delays reaction times by 37% and speaking on a hand-held phone delays reaction times by 46%.⁴⁴

³⁸ *Texting and Distracted Driving Infographic* [sic], TEXTING AND DRIVING SAFETY: STATISTICS (2012), <http://www.textinganddrivingsafety.com/texting-and-driving-stats> [hereinafter *Texting and Distracted Driving*].

³⁹ See Janie Har, *Can You Drive the Length of a Football Field in the Time it Takes to Check a Text?*, POLITIFACT OR. (Feb. 15, 2012, 5:32 PM), <http://www.politifact.com/oregon/statements/2012/feb/15/greg-walden/can-you-drive-length-football-field-time-it-takes/>.

⁴⁰ See *Texting and Driving Accident Statistics*, *supra* note 23.

⁴¹ *Distracted Driving*, CENTER FOR DISEASE CONTROL AND PREVENTION, https://www.cdc.gov/motorvehiclesafety/distracted_driving/index.html (last visited Feb. 28, 2018).

⁴² Hopkins, *supra* note 24.

⁴³ *Id.*

⁴⁴ Ben Spencer, *Texting While Driving 'Slows Reaction Times More than Drink or Drugs'*, DAILYMAIL (June 8, 2014, 7:56 AM), <http://www.dailymail.co.uk/news/article-2652015/Texting-driving-slows-reaction-times-drink-drugs.html>.

To put this in perspective, driving while under the influence of marijuana delays reaction times by 21% and drinking to the legal limit slows reaction times by 13%.⁴⁵ While driving under the influence of drugs or alcohol would seem to be more dangerous and would be considered more of a moral wrong to many, cell phone use while driving is indeed the ultimate public enemy.⁴⁶ In fact, a driver is six times more likely to get in an accident from texting and driving than from drinking and driving.⁴⁷ This means that it is “safer” to drive drunk than to text and drive. Yet, if a responsible driver would not drive under the influence of drugs or alcohol, why do “responsible” adults and teenagers continue to use their cell phones while driving?

B. *Attempts at Preventing Drivers from Using a Cell Phone While Driving*

1. STATE EFFORTS: BANS AND TICKETING

“There is [] evidence [that] suggest[s] that texting while driving may be addictive,” which would explain why drivers continue to text and drive notwithstanding the fact that they understand the risks and dangers involved.⁴⁸ In a study conducted by AT&T, almost half of adults and 43% of teens admit to texting while driving, even though they acknowledge it is a dangerous activity.⁴⁹ Because people, despite knowing the dangers of texting and driving, continue to use their phones while driving, states have implemented various bans on cell phone use while driving with the goal of minimizing

⁴⁵ *Id.*

⁴⁶ See Jonathan Michaels, *Texting and Driving: Public Enemy No. 1*, MLG ATTORNEYS AT LAW (Dec. 6, 2016), <https://www.mlgautomotivelaw.com/texting-and-driving-public-enemy-no-1/>.

⁴⁷ Hopkins, *supra* note 24.

⁴⁸ Eric Sorenson, *Fear of Death May Curb Youthful Texting and Driving*, WSU NEWS: POSTS (Feb. 26, 2014), <https://news.wsu.edu/2014/02/26/fear-of-death-may-curb-youthful-texting-and-driving/>.

⁴⁹ Larry Copeland, *Texting in Traffic: Adults Worse than Teens*, USA TODAY (Mar. 28, 2013, 12:05 AM), <https://www.usatoday.com/story/news/nation/2013/03/28/adults-worse-than-teens-about-texting-behind-wheel/2026331/>.

driver distraction and preventing accidents.⁵⁰ However, although texting while driving has been banned in thirty-nine states, these bans have not significantly helped reduce the number of crashes.⁵¹ But not all of these bans are created equally; some states “ban all drivers from texting while driving, while others have banned only young drivers from this activity.”⁵² Other differences between states include primary versus secondary enforcement.⁵³ Primary enforcement allows an officer to stop a vehicle solely for texting while driving.⁵⁴ On the other hand, secondary enforcement means that an officer must have another reason to pull over a vehicle, such as speeding, before the officer can cite a driver for texting while driving.⁵⁵

⁵⁰ See *Cellular Phone Use and Texting While Driving Laws*, NAT'L CONFERENCE OF STATE LEGISLATURES (June 23, 2017), <http://www.ncsl.org/research/transportation/cellular-phone-use-and-texting-while-driving-laws.aspx>; Amy Norton, *Texting While Driving: Does Banning It Make a Difference?*, CBS NEWS (Apr. 3, 2015, 11:24 AM), <http://www.cbsnews.com/news/texting-while-driving-does-banning-it-make-a-difference/>.

⁵¹ See Ki Mae Heussner, *Driving While Texting Laws Did Not Reduce Crash Rate, Says Study*, ABC NEWS (Sept. 28, 2010), <http://abcnews.go.com/Technology/texting-driving-bans-make-roads-safer-study/story?id=11744804>. But see *The Danger in the Next Lane*, *supra* note 27. Consumer Reports National Research Center's nationally representative survey of adult drivers purports that laws that “prohibit[] the use of a handheld cell phone or texting while driving” are making an impact in many states. *Id.* The survey, consisting of 1,003 people, found that “71[%] of respondents said they'd stopped or reduced texting, using a handheld phone, or operating a smart phone while driving in the previous year. More than half of that group indicated that they did so because of state laws; that's up from 44[%] in a similar survey we conducted two years ago.” *Id.* Yet, despite this finding, the study recognizes that the number of deaths related to distracted driving is rising. *Id.*

⁵² Mark Huffman, *Do Texting-while-driving Bans Work?: Study Suggests Some Do More than Others*, CONSUMER AFFAIRS (July 29, 2014), <https://www.consumeraffairs.com/news/do-texting-while-driving-bans-work-072914.html>.

⁵³ *Id.*

⁵⁴ See *id.*

⁵⁵ *Id.*; Norton, *supra* note 50; Catherine Chase, *U.S. State and Federal Laws Targeting Distracted Driving*, 58 ANNALS ADVANCES AUTO. MED. 84, 86 (2014). There is a big difference between primary enforcement and secondary enforcement bans. Chase, *supra* at 88. Unfortunately, secondary enforcement bans are significantly inferior to primary enforcement bans: “Secondary enforcement [laws] lack teeth, send a message to the public that the law is not as important as other primary violations, and are not as effective in saving lives.” *Id.*

In Florida, for example, there is secondary enforcement for texting by all drivers, yet there is neither a hand-held ban nor an all-out cell phone ban.⁵⁶ Contrast Florida's relatively lax ban with Connecticut's ban, which imposes primary enforcement for all cell phone offenses, including a hand-held ban, a texting ban for all drivers, and an all-out cell phone ban for learner's permit holders, drivers younger than eighteen, and school bus drivers.⁵⁷

The results of these various state bans have been unexceptional. Primary enforcement texting bans have been responsible for only a 3% decrease in traffic fatalities among all age groups, and "[s]tates with secondarily enforced restrictions did not see any significant reductions in traffic fatalities."⁵⁸ Yet, "states with bans prohibiting the use of cellphones without hands-free technology altogether on all drivers saw significant reductions in fatalities,"⁵⁹ therefore suggesting that the most effective method of prevention is to simply keep cell phones out of the hands of drivers at all times and under any circumstances. While these hands-free states have seen a decrease in traffic-related fatalities, the unfortunate truth is that hands-free voice-activated controls are not safe: "The research by the American Automobile Association Foundation ('AAA') discovered that voice control systems, which allow drivers to control functions within the car like changing the radio station or making phone calls, were just as distracting as making a handheld phone call, which is illegal in the [United Kingdom ('U.K.').]"⁶⁰ It is not only the in-car voice-control systems that are distracting to drivers; the AAA study also

⁵⁶ *Cellular Phone Use and Texting While Driving Laws*, *supra* note 50.

⁵⁷ *Id.*

⁵⁸ Huffman, *supra* note 52; Karen Aho, *Bans on Texting While Driving Cut Teen Deaths 11 Percent*, BLOOMBERG BUSINESSWEEK (July 31, 2014, 2:26 PM), <https://www.bloomberg.com/news/articles/2014-07-30/the-best-way-to-stop-texting-while-driving-make-it-illegal>. While traffic fatalities among all age groups only dropped 3% in states with primary enforcement bans, "[s]tates that focus the prohibition specifically on younger drivers cut traffic deaths among 15- to 21-year-olds by 11[%]." Aho, *supra*.

⁵⁹ Huffman, *supra* note 52.

⁶⁰ Samuel Gibbs, *'Siri, Stop Distracting Me': Controlling Smartphones While Driving Is Dangerous, Study Finds*, GUARDIAN (Oct. 8, 2014, 10:15 AM), <https://www.theguardian.com/technology/2014/oct/08/siri-stop-distracting-me-controlling-smartphones-while-driving-is-dangerous-study-finds>.

showed that Siri, Apple's voice-command system, is even more distracting than a vehicle's set voice-control system.⁶¹ So, while voice commands might appear to prevent driver distraction by keeping a driver's eyes on the road, making a phone call while driving through the use of a vehicle's voice-control system nevertheless remains dangerous.

Ultimately, even if police officers issue more tickets for texting while driving and even if lawmakers increase the penalties, drivers will just become more clever and sly at hiding their cell phone use.⁶² Indeed, when the Insurance Institute for Highway Safety assessed several states with handheld and texting bans, they found that accidents had not declined but had actually increased after they were passed.⁶³ This was due to the fact that drivers did not stop texting, but instead moved their phones to their laps to avoid being seen by police.⁶⁴ By incidentally inducing drivers to hide their prohibited behavior, these bans actually "exacerbate[] the problem because [texting from one's lap] results in a person's eyes being off of the road for a longer time."⁶⁵ In addition to being easy to hide, many drivers are not apprehensive about getting caught in the first place because it is difficult for law enforcement to determine if the driver is using the phone to text or using a permissible function of the phone (such as the phone's map application).⁶⁶ Additionally, texting-while-driving tickets are not "made part of a driver's record and

⁶¹ *Id.* This is true even though the study's participants did not even look at or make physical contact with the iPhone while using Siri. *Id.* Siri is even more distracting than using the vehicle's set voice controls because the concentration needed for natural language interaction is higher than set voice controls. *Id.*

⁶² *Do Anti-Texting Campaigns Really Work?*, SAFETY 1ST DRIVING SCHOOL, <http://safety1stdriversed.com/2013/08/do-anti-texting-campaigns-really-work/> (last visited Feb. 28, 2018).

⁶³ *The Danger in the Next Lane*, *supra* note 27. *But see* Aho, *supra* note 58.

⁶⁴ *The Danger in the Next Lane*, *supra* note 27.

⁶⁵ *Id.*

⁶⁶ *Defense Attorney: Texting While Driving 'Very Difficult to Prove'*, WRAL (July 28, 2014), <http://www.wral.com/defense-attorney-texting-while-driving-very-difficult-to-prove-/13845381/>. Because it is difficult for police to tell if you are either texting or using a permissible function of your cell phone, the only way to show you were using your phone to text or e-mail would be for the police to obtain a search warrant. *Id.* Realistically, police are not going to get a search warrant each time a driver is stopped for using his or her cell phone, therefore the law is difficult to enforce. *Id.*

[are not] reported to insurance companies.”⁶⁷ The legislation’s failure to reduce the problem of texting while driving is due to the fact that it “cannot be stringently enforced by law enforcement personnel” and is therefore “unlikely to be a deterrent.”⁶⁸ The policy of “banning handheld cell phone use while driving, without providing law enforcement with an easy method of detecting such use, is akin to banning drunk driving without using breathalyzers or sobriety tests to detect violators.”⁶⁹

2. PUBLIC SERVICE ANNOUNCEMENTS

Another method that has been implemented in hopes of deterring cell phone use while driving is public service announcements (“PSAs”).⁷⁰ A PSA is “a type of advertising, sponsored by either government agencies or other organizations, to promote causes and activities generally considered socially desirable” through the use of “shocking content and appeals to fear.”⁷¹ The effectiveness of PSAs is widely debated,⁷² with some experts positing that anti-texting and driving campaigns simply do not work at all.⁷³ One study showed that adolescents who viewed fear-based advertisements discouraging distracted driving found “the illustrated behaviors to be ‘more distracting than they initially believed.’”⁷⁴ However, “the subjects also reported a higher level of intent to behave in the ways depicted in the ads.”⁷⁵ In other words, the teenagers had an adverse reaction to viewing the threatening advertisements.⁷⁶ Another example of an

⁶⁷ Walker Orenstein, *State Senate Passes Expanded Limits on Using Phone While Driving*, SEATTLE TIMES: LOCAL POLITICS (Mar. 10, 2015, 12:39 PM), <http://www.seattletimes.com/seattle-news/politics/state-senate-passes-expanded-ban-on-using-phone-while-driving/>.

⁶⁸ Jeffrey H. Coben & Motao Zhu, *Keeping an Eye on Distracted Driving*, 309 JAMA 877, 878 (2013).

⁶⁹ *Id.*

⁷⁰ Sorenson, *supra* note 48.

⁷¹ Valene Bumbara & Jinbong Choi, *Exploring the Effectiveness of Distracted Driving PSA (Public Service Announcement)*, 3 ADVANCES IN JOURNALISM & COMMUN 71, 72 (2015).

⁷² *Id.*

⁷³ *Do Anti-Texting Campaigns Really Work?*, *supra* note 62.

⁷⁴ Bumbara & Choi, *supra* note 71, at 73.

⁷⁵ *Id.*

⁷⁶ *Id.*

unsuccessful anti-texting campaign is AT&T's "It Can Wait" campaign, which has reached hundreds of millions of social media users, yet has produced no tangible results.⁷⁷ In fact, the percentage of people who admitted to texting while driving increased from 68% to 69% in the third year of the campaign.⁷⁸ AT&T's efforts have floundered notwithstanding its celebrity tweets on Twitter, outreach sessions at schools, pervasive social media posts, and sobering anti-texting documentaries.⁷⁹

According to a study conducted by AT&T, "89% of teenagers felt pressured to respond to a text message within *one minute*" and 97% of teenagers know that texting while driving is dangerous.⁸⁰ Therefore, advertisements and PSAs that focus on the dangers of texting while driving are completely ineffective because people *already* know that it is dangerous.⁸¹ The problem is that drivers nonetheless continue to engage in this behavior despite understanding the risks involved.⁸² For example, an AT&T study "surveyed 1,000 drivers and found that 98% of those who text every day and drive frequently say the practice is dangerous," yet 75% of those drivers say they do it anyway.⁸³ "There's a huge discrepancy between attitude and behavior" because the lure of a text message is hard to resist.⁸⁴ Dopamine is released in the brain every time an incoming text message lights up on the screen, and this excitement compels people to engage in texting while driving.⁸⁵

For that reason, the focus needs to be on how to eradicate this behavior—not on educating the public about information it already

⁷⁷ John McDermott, *AT&T's Anti-texting Campaign: Lots of Impressions, Zero Success*, DIGIDAY (Aug. 14, 2014), <http://digiday.com/platforms/att-asks-twitter-whether-anti-texting-driving-campaign-working/>.

⁷⁸ *Id.*

⁷⁹ *See id.*

⁸⁰ *Do Anti-Texting Campaigns Really Work?*, *supra* note 62 (emphasis in original).

⁸¹ *See id.*

⁸² Copeland, *supra* note 49 ("Almost half of all adults admit to texting while driving" even though "[m]ore than 98% of adults—almost all of them—admit they know it's wrong."); *see also* Justin Worland, *Why People Text and Drive Even When They Know It's Dangerous*, TIME (Nov. 6, 2014), <http://time.com/3561413/texting-driving-dangerous/>.

⁸³ Worland, *supra* note 82.

⁸⁴ *Id.*

⁸⁵ *See id.*

knows. Public relations expert Kevin Cate argues that “as long as the anti-texting campaigns repeat the same facts that everyone knows, they will continue to fail.”⁸⁶ PSA objectives are further undermined by the fact that drivers justify their behavior by claiming that they can multi-task⁸⁷ or by arguing that they only text while they are sitting at a red light, or that they only check their phone to see if they received a message, not to actually send a message. These pernicious excuses compel drivers to ignore the messages of the PSAs because they believe that their specific behavior is harmless, rendering the ads futile. Just as cell phone bans and increased ticketing have been inadequate in stopping this epidemic, PSAs are similarly ineffective.⁸⁸

3. CELL PHONE APPLICATIONS

Cell phone applications (“apps”) that block texting while driving⁸⁹ are another method of preventing cell phone use while driving. Some of these apps include Cellcontrol, Drive Safe Mode, and Live2Txt.⁹⁰ Cellcontrol is an example of an app designed for parents, and includes a small transmitter that is placed under the dashboard, blocking the teenager from sending or receiving texts while

⁸⁶ *Do Anti-Texting Campaigns Really Work?*, *supra* note 62.

⁸⁷ *See The Dangerous Psychology of Texting While Driving*, FOX NEWS (Nov. 10, 2014), <http://www.foxnews.com/tech/2014/11/10/dangerous-psychology-texting-while-driving.html>.

⁸⁸ *See* Richtel, *supra* note 8. (“Apple, Verizon, AT&T and other companies caution about the risks of distracted driving—and they acknowledge that laws and public education aimed at curbing the behavior are not working.”); *see also* Yvonne Abraham, *Confessions of a Driver Who Can’t Stop Looking at Her Phone*, BOSTON GLOBE (Oct. 8, 2015), <https://www.bostonglobe.com/metro/2015/10/07/why-can-stop-texting-and-driving/QHD-LUqnzSOMEvHNEVlyHsl/story.html> (“According to the Registry of Motor vehicles, police issued 5,274 citations for texting and other improper device use last year, and we appear almost entirely unaffected.”).

⁸⁹ *See* Amy Burke, *5 Apps to Prevent Texting and Driving*, MASHABLE (Dec. 17, 2012), <http://mashable.com/2012/12/17/texting-driving-apps/#zhVKzbgXJPqG>.

⁹⁰ Evan Shamoan, *Best Apps to Block Texting While Driving*, VERIZON WIRELESS (Jan. 24, 2016), <https://www.verizonwireless.com/archive/mobile-living/home-and-family/apps-to-block-texting-while-driving/>.

driving.⁹¹ The downside of Cellcontrol is that it is expensive because the parent has to buy a \$90 transmitter, the \$25 app, and pay an \$8 monthly fee.⁹² There are also apps that encourage safer driving, such as SafeDrive, Drivemode, and Drivesafe.ly.⁹³ SafeDrive focuses on encouragement by rewarding the driver with points for not texting while driving, which can then be used toward discounts at participating stores.⁹⁴ Drivemode functions differently by reading one's text "messages aloud with the touch of a button."⁹⁵ On the other end of the spectrum, one of the most extreme apps is iZup, which completely locks a phone when it is detected to be in a moving car, and the only way to unlock the blocking is if the parent enters a password.⁹⁶ iZup blocks access to every cell phone feature, and the phone cannot even be used at red lights because iZup does not reactivate until several minutes after the car has stopped.⁹⁷ Yet, regardless of the availability of helpful apps, the same issue still lurks in the background: many people believe that they can safely and effectively text and drive, and therefore do not believe that they need an app to help them curb their behavior. Unfortunately, there is a "perceived lack of a texting and driving problem among young people," which in turn renders anti-texting-while-driving apps that "silence[] incoming calls and messages[] worthless to many."⁹⁸

Whether the app completely blocks texting, reads a text out loud, or rewards one for not texting, there is one glaring and unavoidable pitfall to the use of and reliance on apps: the driver (or the parent) has to voluntarily *choose* to download the app.⁹⁹ If a person wants to continue using his or her phone while driving, then that person

⁹¹ *How It Works*, CELLCONTROL, <https://www.cellcontrol.com/texting-and-distracted-driving-solutions-driver-safety> (last visited Mar. 1, 2018).

⁹² Pogue, *supra* note 28.

⁹³ Shamoon, *supra* note 90.

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ Pogue, *supra* note 28.

⁹⁷ *Id.*

⁹⁸ McDermott, *supra* note 77.

⁹⁹ *See* Richtel, *supra* note 8 ("[T]he companies [Apple, Verizon, AT&T, etc.]—though they offer manual ways to shut down texting on the road—do not deploy technology that takes the decision out of the drivers' hands altogether."). And because texting and other cell phone uses have addictive qualities, it makes it all the less likely that a driver will voluntarily and manually shut down their texting while in a car. *See* Sorenson, *supra* note 48.

simply does not have to download the app, or can delete the app after having downloaded it. Thus, although laudable and certainly beneficial for some, apps that block cell phone use while driving can never truly eliminate the ubiquitous problem of distracted driving plainly because not enough people would want to willingly use these apps and cut off their ability to freely use their cell phones.

The same issue underlies other voluntary methods to help individuals stay off their phones while driving, such as turning the phone on silent, completely turning the cell phone off, putting the cell phone out of reach, or asking the passenger to answer any text messages and phone calls.¹⁰⁰ The voluntary nature of these alternatives is a problem because “if [texting] behavior has addictive qualities, can drivers really be expected to police themselves?”¹⁰¹ A driver cannot be forced to silence his phone or keep it in the trunk of his car without laws demanding these actions. Even with legislation in place, there will still inevitably be people who will ignore the law and continue using their cell phones.¹⁰²

In 2017, Apple introduced a new feature to all iPhones running on iOS 11 software called Do Not Disturb While Driving.¹⁰³ The safe driving mode “prevents owners from receiving messages and calls when driving and lets their contacts know they’re occupied.”¹⁰⁴ While this is a step in the right direction, iOS 11’s new feature does

¹⁰⁰ See *How to Avoid Texting While Driving*, VIRTUAL DRIVE, <https://www.vdriveusa.com/resources/how-to-avoid-texting-while-driving.php> (last visited Mar. 1, 2018).

¹⁰¹ Richtel, *supra* note 8.

¹⁰² See Dan Whitcomb, *U.S. Teens Ignore Laws Against Texting While Driving*, REUTERS (Dec. 11, 2009, 1:03 AM), <http://www.reuters.com/article/us-usa-drivers-texting-idUSTRE5BA0F920091211>. Because cell phones are so central to teenagers’ (and adults’) lives, “young people often ignore laws against using cell phones or texting in the car.” *Id.* Even with text messaging outlawed in many states, teen drivers continue to text while driving notwithstanding the ban. *Id.* Karen Cordova, a seventeen-year-old student, admits that her and her friends invariably continue to text despite knowing that it is illegal for them to do so in their state, Arizona. *Id.* When asked if a nationwide ban would stop her and her friends from texting while driving, Cordova said “No way” and “[n]obody is going to listen.” *Id.*

¹⁰³ *How the iPhone’s Do Not Disturb While Driving Feature Works—and How to Turn It Off*, TELEGRAPH (Sept. 22, 2017, 9:24 AM), <http://www.telegraph.co.uk/technology/0/iphones-do-not-disturb-driving-feature-works-turn/>.

¹⁰⁴ *Id.*

not automatically lock a driver's phone, but instead is an option for the cell phone owner to turn on if desired.¹⁰⁵ Even if a driver does decide to use this feature, drivers can "choose to receive notifications for messages that could be urgent," and "can choose to take calls from certain contacts."¹⁰⁶ Furthermore, all "[c]alls are still able to go through in-car Bluetooth systems if Do Not Disturb While Driving is activated"; so if your car is equipped with Bluetooth technology, you can still talk on the phone with Apple's new safety feature.¹⁰⁷ The iPhone owner can either select to have the safety mode activated automatically when the device detects that the cell phone owner is driving a car or can engage the safety mode manually whenever he desires to turn it on while driving.¹⁰⁸ Ultimately, the iPhone owner has great *control* over whether he chooses to use the safety mode or not, and even if he does decide to use the feature, he can easily turn off the feature when driving by swiping or pressing on the Do Not Disturb notification on the iPhone's home screen.¹⁰⁹

Despite the abovementioned attempts to eliminate or reduce texting while driving, the only effective ways to eradicate cell phone use while driving is to remove the instrument from the vehicle completely or paralyze the method by which drivers are able to accomplish their distracted behavior.¹¹⁰ Either cell phones cannot be brought into a car at all (which is impractical and unrealistic for many reasons, including the fact that people need to transport their cell phones with them to use once they reach their destination) or cell phones must be disabled while the car is in motion. And this cell phone lock-out or disabling cannot be accomplished by relying on drivers to download a lock-out app on their own volition.¹¹¹

¹⁰⁵ See *id.* ("First you have to add the option via Settings > Control Centre > Customise Controls and add Do Not Disturb While Driving, then you can turn it on by swiping up from the bottom of the screen and selecting it.").

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* Siri also works in Do Not Disturb While Driving mode. *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ See *id.*

¹¹⁰ See Coben & Zhu, *supra* note 68, at 878. "Strong and courageous action is needed to effectively deal with the problem of cell phone use while driving. Education, legislation, and voluntary guidelines are insufficient. The federal government should enact stringent new safety standards that require all handheld devices to be rendered inoperable when the motor vehicle is in motion." *Id.*

¹¹¹ See Richtel, *supra* note 8.

Instead, “the best solution to help prevent more deaths is to have vehicle and/or cell-phone manufacturers render a handheld device inoperable whenever it’s in a moving car.”¹¹² Dr. Coben, emergency medicine physician and co-author of *Keeping an Eye on Distracted Driving*, highlights that “[t]he interventions we have tried to implement to this point have been education and legislation, and our history suggests those interventions are not going to be sufficient.”¹¹³ Using air bags as an example, Coben argues that the most effective way to protect people is to create technological innovations or engineering design principles that are built into the car or electronic device so that “people don’t need to do anything in order to be protected.”¹¹⁴ With mounting research showing that there is an addiction to texting, and considering that this addiction is hard to break even when one is driving a vehicle, many experts agree with Dr. Coben’s argument that “it will take some system to help people break that addiction.”¹¹⁵ Apple’s patent could very well be the solution.

II. APPLE’S DRIVER HANDHELD COMPUTING DEVICE LOCK-OUT PATENT

A. *A Description of Apple’s Patent*

Apple is the world’s most valuable technology company with the largest market cap, sales, assets, and profits.¹¹⁶ It is the second largest smartphone brand in the entire world, only after Samsung.¹¹⁷

¹¹² *The Danger in the Next Lane*, *supra* note 27; accord Coben & Zhu, *supra* note 68, at 877.

¹¹³ Coben & Zhu, *supra* note 68, at 877.

¹¹⁴ *The Danger in the Next Lane*, *supra* note 27.

¹¹⁵ Samuel Gibbs, *Apple’s iPhone ‘Lock-out’ Patent Could End Texting While Driving*, GUARDIAN (Apr. 24, 2014, 3:00 PM), <https://www.theguardian.com/technology/2014/apr/24/apples-iphone-lock-out-patent-could-end-texting-while-driving> [hereinafter *Apple’s iPhone ‘Lock-out’ Patent*].

¹¹⁶ Sarmistha Acharya, *World’s Biggest Tech Companies of 2016: Apple Tops List Overtaking Samsung, Microsoft, and Alphabet*, INT’L BUS. TIMES (May 27, 2016, 12:38 BST), <http://www.ibtimes.co.uk/worlds-biggest-tech-companies-2016-apple-tops-list-overtaking-samsung-microsoft-alphabet-1562318>.

¹¹⁷ *5 Biggest Smartphone Makers of the World*, GADGETS NOW (May 23, 2016, 9:15 AM), <http://www.gadgetsnow.com/slideshows/5-biggest-smartphone-makers-of-the-world/No-3-Huawei/photolist/52375161.cms>.

Apple owns thousands of patents,¹¹⁸ one of which is a patent for technology designed to prevent texting while driving.¹¹⁹ The purpose of the patent is to provide “lock-out mechanisms [that] disable the ability of a handheld computing device to perform certain functions, such as texting, while one is driving.”¹²⁰ Apple’s Driver Handheld Computing Device Lock-Out patent was filed in 2008 and was granted on April 22, 2014.¹²¹ As evidenced by its patent, Apple recognizes that texting while driving is a major, pervasive problem, and while “new laws are being written to make texting illegal while driving,” law enforcement has a limited ability to catch offenders “because the texting device can be used out of sight (e.g., on the driver’s lap), thus making texting while driving even more dangerous.”¹²² Due to the widespread nature of this occurrence, Apple acknowledges that “it is doubtful that law enforcement will have any significant effect on stopping the practice.”¹²³

Apple’s invention would disable all distracting functions on a driver’s phone, and the driver would not be able to “mak[e] or receiv[e] [a] phone call[] without a hands-free device.”¹²⁴ In one embodiment of Apple’s patent, the driver’s handheld computing device, or cell phone, would provide its own lock-out mechanism without the implementation of any adaptations or additions to the vehicle.¹²⁵ This embodiment functions with the use of: (a) a cell phone’s motion analyzer, which detects whether the cell phone is moving beyond a certain speed; (b) a scenery analyzer, which determines whether the cell phone holder is a driver or a passenger in the vehicle; and (c) a lock-out mechanism, which can disable a cell phone’s functions based on information received by the motion analyzer and which can enable functions of the cell phone based on information

¹¹⁸ Neil Hughes, *Apple Takes 11th Place in Awarded US Patents in 2015*, APPLEINSIDER (Jan. 13, 2016, 7:08 AM), <http://appleinsider.com/articles/16/01/13/apple-takes-11th-place-in-awarded-us-patents-in-2015>. In 2015 alone, Apple was awarded 1,938 U.S. patents. *Id.*

¹¹⁹ U.S. Patent No. 8,706,143 (filed Dec. 12, 2008) (issued Apr. 22, 2014).

¹²⁰ *Id.* at [57].

¹²¹ *Id.* at [22], [45].

¹²² *Id.* at col. 1 l. 25-9.

¹²³ *Id.* at col. 1 l. 29-32.

¹²⁴ Baron, *supra* note 16.

¹²⁵ ‘143 Patent at col. 1 l. 41-3.

collected by the scenery analyzer (i.e., if the scenery analyzer recognizes that the cell phone holder is a passenger, and not a driver, then the cell phone's functions will be enabled).¹²⁶

In other applications of Apple's patent, the cell phone does not provide its own lock-out mechanism, but instead provides a lock-out mechanism through "modifications or additions to the vehicle."¹²⁷ The following embodiments each would require the involvement of automakers in order to implement the technology.¹²⁸ In one

¹²⁶ *Id.* at col. 1 l. 43-5. The motion analyzer works by utilizing any suitable mechanism to detect whether a cell phone is in motion, including the use of GPS data and/or cell phone signals. *Id.* at col. 3 l. 65-7. In addition, if the cell phone has an accelerometer, then the accelerometer can be used to determine whether the cell phone is in motion. *Id.* at col. 4 l. 2-5. If the cell phone has a light sensor, then changing light conditions can be used to determine whether the cell phone is in motion. *Id.* at col. 4 l. 5-8. In terms of the scenery analyzer, the cell phone can detect whether the cell phone holder is located within a safe operating area of the vehicle (i.e., if the cell phone holder is a passenger and not a driver) through the use of picture or video data, contingent upon the cell phone having a camera. *Id.* at col. 4 l. 9-13. The camera data would be collected by requiring the cell phone holder to "pan the camera around the vehicle (e.g., 360 degrees), so that the camera can take either a series of pictures or a video." *Id.* at col. 4 l. 13-5. To prevent a driver from tilting the camera in deceiving ways to make it appear as if she is not in the driver's seat, "the scenery analysis programming can use accelerometer output to ensure" that the driver's cell phone is ultimately disabled. *Id.* at col. 4 l. 42-8.

¹²⁷ *Id.* at col. 1 l. 55-6.

¹²⁸ Lance Whitney, *Apple Aims to Disable Texting While Driving*, CNET (Apr. 22, 2014, 6:15 AM), <https://www.cnet.com/news/apple-aims-to-disable-texting-while-youre-driving/>; see also Jenny Che, *How Car Companies Are Combatting Texting While Driving*, HUFFINGTON POST: BUSINESS (June 9, 2015, 6:14 PM), http://www.huffingtonpost.com/entry/how-car-companies-are-combatting-texting-while-driving_us_55771263e4b0317a2afd3fdc; Chris Morris, *Texting and Driving? Your Next Car May Come with a Punishment Device*, FORTUNE (Jan. 8, 2015), <http://fortune.com/2015/01/08/texting-and-driving-your-next-car-may-come-with-a-punishment-device/>. Automakers are already working to prevent distracted driving: "Recognizing the unlikelihood that drivers will break the habit of looking down at their phones anytime soon, carmakers are increasingly fitting vehicles with technologies that lie within drivers' field of vision and don't take their focus off the road." Che, *supra*. These anti-distraction technologies include Ford's system, which "sends texts dictated by the driver and reads incoming texts aloud," GM's developing technology, which can detect when a driver glances away at a text by using eye-tracking technology, and BMW's plans for gesture controls, which "will allow drivers to point at the vehicle's navigation screen to take a call." *Id.* These are just some examples of developments by automakers in

of such embodiments, the vehicle and the cell phone together provide a lock-out mechanism through transmission of a signal, which causes the vehicle to subsequently disable the cell phone's functions.¹²⁹ A second embodiment allows a vehicle to "unilaterally provide a lock-out mechanism by transmitting blocking signals to an unsafe operating area of the vehicle."¹³⁰ And in a third embodiment, the cell phone works with the vehicle's key in providing a lock-out mechanism by having the key signal to the cell phone when it becomes engaged with the vehicle.¹³¹ Notably, the embodiments of Apple's invention and its lock-out mechanism do not apply solely to text messaging, but can also be used to disable any function of a cell phone, including placing or receiving phone calls.¹³² Furthermore, this invention can be applied to any vehicle, such as trains and airplanes, and is not exclusive to automobiles.¹³³

Apple notes that in addition to its patent, an opportunity exists for cell phone makers to independently create a lock-out mechanism that disables the sending of, and potentially even the receiving of,

reducing injuries and fatalities caused by driver distraction. *Id.* These various safety implementations by automakers demonstrate that the culture is shifting toward anti-distraction technology—there is now a demand for it. *Id.* The next step in this shift could likely be (and hopefully will be) cell phone lock-out mechanisms. *Smartphone Companies, supra* note 19. Car manufacturers are already required to have seatbelts and airbag systems, so logically the next step would be to require automakers "to install safety measures suited to the era we live in, such as technology that sharply limits access to in-dash communications and navigation systems while a car is in motion." *Id.*

¹²⁹ '143 Patent at col. 1 l. 56-60.

¹³⁰ *Id.* at col. 1 l. 61-2.

¹³¹ *Id.* at col. 1 l. 63-5. The key is determined to be engaged with the vehicle when it is in the keyhole and turned, or, if it is a wireless ignition key, the key will be determined to be engaged with the vehicle when it is in such a proximity to the vehicle that it is able to enable operation of the vehicle. *Id.* at col. 5 l. 22-6. This embodiment is desirable for parents because it allows for a registration system to be implemented that can "allow concerned parents to register such vehicle keys with a particular [cell phone] utilized by their children in order to ensure safe driving habits in the automobiles driven by their children under supervision by the parents." *Id.* at col. 5 l. 28-33.

¹³² *Id.* at col. 2 l. 53-60.

¹³³ *Id.* at col. 2 l. 61-5.

text messages while the user is driving.¹³⁴ Apple highlights that this development and the cooperation of cell phone makers can spawn serious change in the technology industry and in our society, for the creation of a lock-out mechanism “may be a significant selling point in the eyes of concerned parents,” which could then “lead to legislation that would require all handheld computing devices to disable texting while driving.”¹³⁵ Due to Apple’s leading role in technology, and the fact that Fortune Magazine named Apple CEO Tim Cook the “World’s Greatest Leader,”¹³⁶ this patent has the ability to change our culture.¹³⁷ As one of the world’s greatest social influencers, Apple could “have the power to change the conversation—to make it fashionable to choose safety over the rush of an incoming text.”¹³⁸ Apple might be hesitant to implement this technology for fear of losing customers to competitors who do not have a lock-out

¹³⁴ *Id.* at col. 2 l. 45-8; see also Tom Krisher, *Gov’t Wants Phone Makers to Lock Out Most Apps for Drivers*, ASSOCIATED PRESS (Nov. 23, 2016), <http://big-story.ap.org/article/35a6843f676f42dea43d1b063f294348/govt-wants-phone-makers-lock-out-most-apps-drivers>. The National Highway Traffic Safety Administration (“NHTSA”) recently unveiled its updated voluntary guidelines, which it believes would help reduce crashes caused by drivers distracted by their phones. *Id.* The “NHTSA wants phone makers to develop technology that can determine if someone is driving a car and then disable most of the apps.” *Id.* This means that Internet browsing, videos, text messaging, and photos would be locked out, while the ability to make phone calls and use navigation systems would remain available for use. *Id.* Because this technology does not currently exist, the NHTSA suggests that in the meantime phone manufacturers should implement a driver mode that would be activated by the cell phone user. *Id.*

¹³⁵ ‘143 Patent at col. 2 l. 48-52.

¹³⁶ Christian Brazil Bautista, *Fortune Names Apple’s Tim Cook the ‘World’s Greatest Leader’*, DIGITAL TRENDS (Mar. 26, 2015, 10:26 AM), <http://www.digitaltrends.com/mobile/fortune-names-apples-tim-cook-the-worlds-greatest-leader/> (stating that Tim Cook was selected as the “World’s Greatest Leader” over extremely influential and venerable heads of states and religious leaders, such as Pope Francis and Chinese President Xi Jinping); *Apple’s iPhone ‘Lock-out’ Patent*, *supra* note 115. Paul Watters, head of the motoring policy for the Automobile Association highlights that “[a]s a market leader, Apple could have the power to change the culture behind texting and driving.” *Id.* Apple’s implementation of its patent “would be a very good step” towards eliminating deadly distracted driving caused by cell phone use. *Id.*

¹³⁷ *Apple’s iPhone ‘Lock-out’ Patent*, *supra* note 115.

¹³⁸ Richtel, *supra* note 8 (“They’ve made themselves a norm maker,” [Christopher Kutz] said. “With great power comes great responsibility.”).

mechanism.¹³⁹ But, one could argue that Apple also has the great market strength, influence, and capability to be the leader of change and to revolutionize the industry, as well as society, all while saving lives.

B. Considering How Pervasive the Texting and Driving Epidemic is, Why Has Apple Refused to Implement This Potentially Life-Saving Patent?

Sweeping technology under the rug that is designed to prevent drivers from texting while driving is egregious and intolerable; a phone maker's "choice not to implement automated blocking is literally killing us."¹⁴⁰ Even though Apple discourages cell phone use while driving and has created a hands-free technology for use in the car,¹⁴¹ these actions are simply not enough.¹⁴² As mentioned earlier, Apple itself even recognizes the unmistakable importance of its lock-out technology described in its patent.¹⁴³ So, what is holding

¹³⁹ Miles, *supra* note 6 ("[P]rivate consultant David Teater theorized that Apple's hesitance to develop such technology may stem from" its fear that customers might say, "If Apple does it, then my next phone is a Samsung.").

¹⁴⁰ *Our Opinion*, *supra* note 20. Text messaging while driving makes it twenty-three times more likely that you will get into a car accident. *Texting and Distracted Driving*, *supra* note 38. Texting while driving is equivalent to driving after having consumed four beers, so it is no wonder that there are 1.6 million car crashes annually involving cell phone use. *Texting and Driving Statistics*, TEXTING AND DRIVING SAFETY, <http://www.textinganddrivingsafety.com/texting-and-driving-stats> (last visited Feb. 28, 2018); *Texting and Driving Accident Statistics*, *supra* note 23. Of these crashes, there are 330,000 injuries, eleven teenage deaths, and over 3,000 deaths annually. *Texting and Distracted Driving*, *supra* note 38.

¹⁴¹ See Tuan Huynh, *Apple CarPlay: Everything You Need to Know About iOS in the Car*, TECHRADAR (June 5, 2017), <http://www.techradar.com/news/car-tech/apple-carplay-everything-you-need-to-know-about-ios-in-the-car-1230381>. Apple CarPlay is a connectivity solution that swaps out a car's built-in infotainment display system for a display of the iPhone's familiar iOS interface. *Id.* It is a safer way to use an iPhone while driving because it allows one to stay focused on the road due to the familiar and uncomplicated display, and it keeps one's hands off of his Apple device. *Id.*

¹⁴² Miles, *supra* note 6.

¹⁴³ '143 Patent at col. 1 l. 29-32. Apple notes in its patent that because "[t]exting while driving has become so widespread it is doubtful that law enforcement will have any significant effect on stopping the practice." *Id.* Furthermore, Apple

Apple back from being the leader in saving lives and from assuming a superhero role?¹⁴⁴ One theory is that Apple's "reluctance to act may be rooted in competitive realities,"¹⁴⁵ including "corporate greed and the fear of driving away customers by blocking texting while driving first."¹⁴⁶ Considering that one in five drivers of all ages confess to browsing the Internet while driving,¹⁴⁷ 49% of drivers admit to texting while driving,¹⁴⁸ and at any given moment throughout the day around 660,000 drivers are using cell phones while driving,¹⁴⁹ it can be assumed that Apple is apprehensive about upsetting and deterring customers by taking away a consumer's ability to use a cell phone while driving.

Yet, there is evidence that shows that many people agree with, and even desire, strict anti-cell phone distraction laws,¹⁵⁰ leading to the inference that people might not be upset about the compulsory disabling of drivers' cell phones after all. For example, in a Con-

recognizes that although "[t]eens understand that texting while driving is dangerous, . . . this is often not enough motivation to end the practice." *Id.* at col. 1 l. 22-24. With "teens report[ing] that texting is their number one distraction while driving" and with texting "becom[ing] a major concern of parents, law enforcement, and the general public," Apple's patent aims to eradicate America's texting while driving epidemic by "prevent[ing] [the] operation of one or more functions of [cell phones] by drivers when operating vehicles." *Id.* at col. 1 l. 21-22, 14-15, 8-10.

¹⁴⁴ See Baron, *supra* note 16. With Apple's patent being granted in 2014, the tech giant has "cast[] itself in the role of superhero (though, to date, it appears the firm has neglected to don its cape)." *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ Miles, *supra* note 6.

¹⁴⁷ *Texting and Distracted Driving*, *supra* note 38.

¹⁴⁸ *The Danger in the Next Lane*, *supra* note 27.

¹⁴⁹ *Distracted Driving* NHTSA, *supra* note 15.

¹⁵⁰ See *Should Cellphone Use by Drivers Be Illegal?*, N.Y. TIMES: ROOM FOR DEBATE (July 18, 2009, 12:00 PM), http://roomfordebate.blogs.nytimes.com/2009/07/18/should-cellphone-use-by-drivers-be-illegal/?_r=0 (revealing the opinions of experts who wholeheartedly believe that the use of cellphones while driving, whether hand-held or hands-free, should be banned). *But see* Chuck Lindell, *Texas Senate Fights Statewide Ban on Texting While Driving*, GOV'T TECH. (Aug. 22, 2016), <http://www.govtech.com/policy/Texas-Senate-Fights-Statewide-Ban-on-Texting-While-Driving.html> (emphasizing that four states do not have laws banning texting while driving, including Texas, whose Legislature's conservative Republicans "are leery of broadening police powers and see anti-texting laws as furthering an intrusive, 'nanny state' government.").

sumer Reports survey of 1,003 adults, 90% of those surveyed responded that they support laws banning texting while driving, and 60% of the respondents said they support bans on talking on a handheld phone.¹⁵¹ In Florida, during 2013 when the state had no restrictions on texting while driving, 89% of those polled supported the implementation of a ban.¹⁵² Additionally, according to a poll conducted by the *New York Times* and *CBS News*, an almost unanimous 97% of respondents “support the prohibition of texting while driving,” 80% “support a ban on talking on a hand-held cell phone while driving,” and 50% believe that texting while driving should be punished as harshly as drunk driving.¹⁵³ With widespread support across the country for texting-while-driving bans,¹⁵⁴ and the public’s recognition of the profound dangers of cell phone use and driving,¹⁵⁵ it is possible that the public would similarly agree with and accept the implementation of cell phone lock-out mechanisms that are enabled once the device detects that the cell phone user is driving.

Furthermore, while Apple might be apprehensive about losing customers if it is the first cell phone company to implement this technology, this does “not justify failure to develop the technology,” for the benefit of saving lives greatly outweighs any “minimal lost profit for Apple, a company ranked the most profitable in the world.”¹⁵⁶ Consumer surveys found that 94% of people felt loyal to their cell phone brand, and the reason why people select other cell phone brands over Apple is due to the affordability of the other

¹⁵¹ *The Danger in the Next Lane*, *supra* note 27.

¹⁵² Bill Cotterell, *Texting-While-Driving Ban Passes Florida Senate*, HUFFINGTON POST (June 16, 2013), http://www.huffingtonpost.com/2013/04/16/texting-ban-florida_n_3094295.html. As of January 2016, after the passing of a bill, texting while driving is a secondary violation in Florida, meaning a police officer must pull a driver over for something other than texting before the officer is able to give the driver a ticket for texting and driving. Huffman, *supra* note 52; *see* Cotterell, *supra*.

¹⁵³ Marjorie Connelly, *Many in U.S. Want Texting at that Wheel to Be Illegal*, N.Y. TIMES (Nov. 1, 2009), <http://www.nytimes.com/2009/11/02/technology/02textingside.html>; Chase, *supra* note 55, at 89.

¹⁵⁴ Connelly, *supra* note 153; Chase, *supra* note 55, at 89.

¹⁵⁵ Pete Strom, *People Understand Dangers of Texting and Driving, Do It Anyway*, STROM LAW FIRM LLC. (Nov. 7, 2014), <https://stromlaw.com/people-understand-dangers-of-texting-and-driving-do-it-anyway/>.

¹⁵⁶ Miles, *supra* note 6.

brands, not because of a dislike of Apple products.¹⁵⁷ These facts highlight that if Apple deployed a new life-saving safety feature, the new technology “would be unlikely to sway large numbers of its consumers to Android” or other smartphone brands, and Apple’s sales would not decrease significantly.¹⁵⁸ There is even the possibility that this revolutionary lock-out technology might boost Apple’s reputation by strengthening Apple’s highly valuable and coveted emotional connection with its consumers.¹⁵⁹

If this is not sufficient to convince Apple, then perhaps the government can provide some incentive to cell phone manufacturers that would lower the concern that using the lock-out mechanism would chase away consumers.¹⁶⁰ Additionally, if insurance companies lower their rates for drivers who use disabled iPhones while driving, then this incentive will dissuade Apple consumers from switching cell phone brands to avoid the lock-out mechanism.¹⁶¹

Ultimately, Apple stands in the unique position of being a trend-setting market leader with a strong social influence and cultural grip on America.¹⁶² As a company that understands law enforcement’s restricted and inadequate ability to quell cell phone use while driving, has the aptitude to create life-changing technology, and is respected and beloved by hundreds of millions of consumers across

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ See *Research and Development Tax Incentives for the Software & Technology Industry*, ALLIANT GROUP, <https://www.alliantgroup.com/index.php/industries/software/> (last visited Mar. 1, 2018). For example, “the government offers generous research and development (R&D) incentive programs,” including tax incentives, for the software and technology industry.

¹⁶¹ See Kerima Greene, *Insurance Game-changer: Rewards for Private Data*, CNBC (Apr. 8, 2015, 3:08 PM), <https://www.cnbc.com/2015/04/08/insurance-game-changer.html>. “For instance, auto insurance giant Progressive offers customers an [sic] dashboard tracking device called Snapshot, to monitor driving behavior. Those deemed ‘good’ drivers receive discounts on their premiums, while aggressive, ‘bad’ drivers face rate hikes.” *Id.*

¹⁶² See Brian Garner, *Apple Ranks Among Top in Social Media Influence*, APPLEINSIDER (Oct. 17, 2009, 5:45 PM), http://appleinsider.com/articles/09/10/17/apple_ranks_among_top_in_social_media_influence; see also *Apple’s Everlasting Influence on the World*, QUARTSOFT (Apr. 9, 2013), <https://quartsoft.com/blog/201304/apples-influence>; John Martellaro, *How Apple Is Influencing Our Culture*, MAC OBSERVER (Sept. 9, 2010, 2:49 PM), https://www.macobserver.com/tmo/article/how_apple_is_influencing_our_culture.

the world,¹⁶³ Apple bears the responsibility in taking action to once and for all reduce—and eventually eliminate—tragedies caused by cell phone use while driving.¹⁶⁴

III. WHAT CAN THE GOVERNMENT DO ABOUT IT?

A. *More Laws Are Needed*

When phone manufacturers refuse to make the first move, as evidenced by the fact that Apple's patent was granted to the company in early 2014 and the company has still failed to make it a mandatory feature,¹⁶⁵ the onus should be placed on the federal government to force phone manufacturers to begin implementing this life-saving technology. Automobile and cell phone manufacturers "have the engineering capabilities to implement these safeguards," and now it is time for the "federal government [to] enact stringent new safety standards that require all handheld devices to be rendered inoperable when the motor vehicle is in motion."¹⁶⁶

While there are viable engineering approaches to reduce distracted driving, there are currently no federal regulations requiring them.¹⁶⁷ Studies show that "the best and most effective way to minimize the risk would be to disable equipment when vehicles are in operation," yet laws and regulations are still needed to fully realize this development.¹⁶⁸ Currently, there are only a handful of federal laws and regulations designed to prevent drivers from using their phones while driving.¹⁶⁹ For example, the Federal Motor Carrier

¹⁶³ See Nick Statt, *1 Billion Apple Devices Are in Active Use Around the World*, VERGE (Jan. 26, 2016, 5:05 PM), <http://www.theverge.com/2016/1/26/10835748/apple-devices-active-1-billion-iphone-ipad-ios> (reporting that the total number of active Apple devices has surpassed 1 billion); Jodi Gralnick, *Half of U.S. Homes Own Apple Products*, USA TODAY: TECH (Mar. 28, 2012, 1:26 PM), <http://usatoday30.usatoday.com/tech/news/story/2012-03-28/cnbc-survey-apple-products-us-homes/53827254/1> (reporting that half of U.S. households, or more than 55 million homes, own at least one Apple product).

¹⁶⁴ See Miles, *supra* note 6.

¹⁶⁵ See *How the iPhone's Do Not Disturb While Driving Feature Works—and How to Turn it Off*, *supra* note 103.

¹⁶⁶ Coben & Zhu, *supra* note 68, at 878.

¹⁶⁷ Chase, *supra* note 55, at 84.

¹⁶⁸ *Id.* at 85.

¹⁶⁹ See *Texting While Driving*, FINDLAW, <http://traffic.findlaw.com/traffic-tickets/texting-while-driving.html> (last visited Mar. 1, 2018) ("Like other traffic

Safety Administration (“FMCSA”) banned commercial vehicle drivers from texting, including truck and bus drivers.¹⁷⁰ The rule prohibits the driver from holding a cell phone to make a phone call, dialing by pressing more than one button, and reaching for a cell phone in a manner that would cause the driver to no longer be in a proper seated driving position.¹⁷¹ Another federal ban, issued through an Executive Order by former President Barack Obama in 2009, prohibits federal employees from texting while driving on official government business or while using government-supplied equipment.¹⁷² “In February 2011, the Pipeline and Hazardous Materials Safety Administration (PHMSA) banned texting on electronic devices by drivers operating a motor vehicle containing hazardous materials.”¹⁷³ But these few federal laws are only applicable to a small percentage of the United States population, and, lamentably, distracted driving continues to remain a deadly epidemic in this

laws, texting while driving laws come from state and local governments (municipalities and counties). While federal laws have been enacted to ban texting while driving by certain federal employees, for most people the legal implications of texting while driving depend on state and local law.”)

¹⁷⁰ *Mobile Phone Restrictions Fact Sheet*, FED. MOTOR CARRIER SAFETY ADMIN., <https://www.fmcsa.dot.gov/driver-safety/distracted-driving/mobile-phone-restrictions-fact-sheet> (last visited Mar. 1, 2018); *U.S. Transportation Secretary Ray LaHood Announces Federal Ban on Texting for Commercial Truck Drivers*, FED. MOTOR CARRIER SAFETY ADMIN. (Jan. 26, 2010), <https://www.fmcsa.dot.gov/newsroom/us-transportation-secretary-ray-lahood-announces-federal-ban-texting-commercial-truck>.

¹⁷¹ *Mobile Phone Restrictions Fact Sheet*, *supra* note 170. The fines and penalties for using a hand-held cell phone while driving include driver disqualification, fines “up to \$2,750 for drivers[,] and [fines] up to \$11,000 for employers who allow or require drivers to use a hand-held communications device while driving.”

¹⁷² Chase, *supra* note 55, at 85; Executive Order No. 13,513, 74 Fed. Reg. 51,225 (Oct. 1, 2009).

¹⁷³ Chase, *supra* note 55, at 85.

country¹⁷⁴ partly because “there is no national ban on texting or using a [cell] phone while driving.”¹⁷⁵ And while many states have attempted to regulate texting while driving by employing primary and/or secondary enforcement laws,¹⁷⁶ nothing can truly stop the widespread use of cell phones like Apple’s lock-out mechanism can.

In addition to bans, regulations, and laws, agencies and organizations often issue safety recommendations; for example, the National Transportation Safety Board (“NTSB”) recommended that all fifty states ban the use of cell phones and other electronic devices except in cases of emergencies.¹⁷⁷ These recommendations are important because they show an understanding of the dangers of cell phone use while driving, and alert the public that there is in fact a growing, nationwide problem. But these recommendations can never truly achieve what Apple’s invention can because these suggestions are not compulsory or required.¹⁷⁸

¹⁷⁴ See Erin Schumaker, *10 Statistics that Capture the Dangers of Texting and Driving*, HUFFINGTON POST (June 8, 2015, 6:25 PM), http://www.huffingtonpost.com/2015/06/08/dangers-of-texting-and-driving-statistics_n_7537710.html. Nine Americans are killed each day from distracted driving, 25% of car crashes involve a cell phone, 341,000 car crashes in 2013 involved texting, and 33% of “U.S. drivers ages 18 to 64 [] reported reading or writing text messages while driving in the previous month.” *Id.*

¹⁷⁵ *The Dangers of Distracted Driving*, FED. COMM. COMMISSION, <https://www.fcc.gov/consumers/guides/dangers-texting-while-driving> (last updated Sept. 8, 2017).

¹⁷⁶ See Chase, *supra* note 55, at 86. For example, New York was the first state to ban the use of hand-held cell phones while driving, Washington state was the first state to ban all drivers from texting while driving through primary enforcement efforts, and Maine and New Jersey were the first states to ban teen drivers from using cell phones while driving. *Id.* Yet, only thirty-seven states require primary enforcement, and many states only have partial bans. *Id.* at 88. While primary enforcement bans are a step in the right direction, they have been found to only reduce traffic fatalities by 3%, or an average of nineteen prevented deaths annually. Malcolm P. McConnell, III, *Do Texting Bans Work? The Effectiveness of Laws that Target Texting While Driving*, ALLEN & ALLEN (Oct. 20, 2014), <http://www.allenandallen.com/blog/do-texting-bans-work.html>.

¹⁷⁷ Chase, *supra* note 55, at 86.

¹⁷⁸ See Richtel, *supra* note 8. Cell phone companies offer manual ways to shut down texting while driving, but do not offer “technology that takes the decision out of drivers’ hands altogether.” *Id.* When the onus is on the driver to make safe driving decisions, the options available do “not eliminate driver distraction — not even close.” *Id.*

The National Highway Traffic Safety Administration (“NHTSA”) is the federal agency responsible for setting the standards in motor vehicle and highway safety, enforcing vehicle performance standards, and sponsoring effective highway safety programs.¹⁷⁹ The NHTSA is keenly aware of the nation’s texting while driving epidemic and therefore wants phone manufacturers to develop technology that will lock the driver out from being able to use most of the phone’s apps if it is determined that the cell phone user is driving a car.¹⁸⁰ Yet, the NHTSA’s recommendation falls flat because it is only a voluntary, nonbinding guideline, and “[u]nlike a federal government rule [or law], auto and cellphone makers don’t have to obey the guidelines.”¹⁸¹ The NHTSA’s and the NTSB’s recommendations, as well as the abovementioned state and federal actions, are clearly not enough because “instances of distraction-related car collisions continue to rise.”¹⁸²

B. *Government Regulation on Technology*

The government aims to protect the public good, and in many circumstances “technology can benefit tremendously from government involvement.”¹⁸³ Government works at its best when it helps

¹⁷⁹ See NAT’L HIGHWAY TRAFFIC SAFETY ADMINISTRATION, <https://www.nhtsa.gov/about-nhtsa> (last visited Mar. 1, 2018).

¹⁸⁰ Krisher, *supra* note 134. While the *Associated Press* article claims that this technology does not yet exist, Apple does in fact own the patent to various lock-out mechanisms that can be used to prevent driver distraction due to cell phone use. *See id.*

¹⁸¹ *Id.*; see also Dellinger, *supra* note 30 (“Companies won’t be required to follow the guidance placed forward by NHTSA, but the agency is hoping they will comply at least in part in order to cut down on traffic accidents and fatalities.”).

¹⁸² Miles, *supra* note 6. *But see* Liz Klimas, *Feds Now Want Nationwide Ban on All Portable Electronic Devices While Driving*, BLAZE (Dec. 13, 2011, 2:13 PM), <http://www.theblaze.com/news/2011/12/13/fed-now-wants-to-ban-all-cellular-devices-while-driving-even-hands-free/>. The NTSB does not have the authority to impose its recommended restrictions, yet its recommendations are important in subsequently influencing federal regulators and congressional and state lawmakers. *Id.*

¹⁸³ Anthony Falzone, *Regulation and Technology*, 36 HARV. J. LAW & PUB. POL’Y 105, 105 (2012). An example of technology benefitting from government involvement is the Internet. *Id.* The Internet was too risky of an investment for private investors, so without the government’s funding, there may have been no

to develop new technologies that the market could not produce on its own, and thereafter removes itself from further involvement.¹⁸⁴ However, as technology matures, there are circumstances where the market cannot, or will not, provide the right solutions—it is in these situations where government regulation is beneficial and desirable to protect innovation and drive technology forward.¹⁸⁵ Indeed, “appropriate roles for government in deployment of technology include any actions that will assist the private sector in meeting public good objectives that cannot be accomplished, or will not be accomplished, by the private sector alone without government participation or leadership.”¹⁸⁶ Government plays a role throughout the entire innovation pathway, including “market, policy, and technology actions, as well as information, education, and collaboration activities.”¹⁸⁷ For these reasons, it is apparent that the government can—and should—act to accomplish the public good objective of eradicating texting while driving because the objective is currently not being accomplished by the private sector alone.

Technology is subject to regulation and “[l]aws govern, constrain, or otherwise regulate countless aspects of the consumer technology we use every day” as a means of preventing potential harm caused by these technologies.¹⁸⁸ But when government becomes too

Internet. *Id.* Another example of government involvement in facilitating deployment of technology is in the area of wind energy. *See generally* JON PIETRUSZKIEWICZ, NAT’L RENEWABLE ENERGY LABORATORY, WHAT ARE THE APPROPRIATE ROLES FOR GOVERNMENT IN TECHNOLOGY DEPLOYMENT (1999). The U.S. Department of Energy Wind Program has various roles in assisting the development of wind energy including providing information and education, training, technical assistance, technology transfer, business matchmaking, stakeholder facilitation, information exchanges, alliances and partnerships, scientific research, market assessment and analysis, economic development, and more. *Id.* at 8 tbl.1, app. at D.

¹⁸⁴ Falzone, *supra* note 183, at 107.

¹⁸⁵ *Id.* Because the market currently does not provide a solution to the texting-while-driving epidemic, and because Apple’s patent has not yet been implemented in a way that forces drivers to lock their phones, it can be argued that the market is not providing the right solution. Therefore, government regulation would be beneficial in forcing Apple to realize its invention and propel technology toward eradicating deadly distracted driving.

¹⁸⁶ PIETRUSZKIEWICZ, *supra* note 183, at 8.

¹⁸⁷ *Id.* at iii.

¹⁸⁸ Phil Elmore, *The Immorality of Laws Regulating Technology*, WORLD NET DAILY: TECHNOCRACY (June 18, 2009, 12:18 AM), <http://www.wnd.com/>

involved in too many aspects of consumer technology, it can be argued that “these laws represent an unconstitutional infringement of basic human liberty and natural rights.”¹⁸⁹ To live in a free society means that government exists to protect individual rights and does not promulgate regulations at the expense of individual liberty.¹⁹⁰ But not all regulation strips citizens of their individual liberty, and regulation comes in many different forms with many different effects on technology and society, some beneficial and some detrimental.¹⁹¹ A federal regulation requiring Apple to implement its lock-out patent falls within the type of regulation that is beneficial to society.¹⁹²

Secretary of Transportation Raymond LaHood announced that there is technology available that can disable a driver’s cell phone while in a car, and that the U.S. Department of Transportation is looking into this option.¹⁹³ In the U.K., the Department for Transportation is planning on working with auto and cell phone manufacturers to explore new technology that will block cell phone signals for drivers.¹⁹⁴ The software would block any function that uses Internet access or a telephone network, and the only exception would

2009/06/101453/. In regard to cell phone use while driving, the government forcing Apple (and subsequently other cell phone manufacturers) to use its patent can prevent the harm of traffic fatalities and injuries caused by distracted driving due to cell phone use.

¹⁸⁹ *Id.*

¹⁹⁰ *See id.* For example, China censors certain media and websites that the government believes to be “dangerous,” and the U.K. has banned videos on YouTube that show weapons with the aim of intimidation. *See, e.g.,* Beina Xu & Eleanor Albert, *Media Censorship in China*, COUNCIL ON FOREIGN REL., <https://www.cfr.org/backgrounder/media-censorship-china> (last updated Feb. 17, 2017); *YouTube Bans Knife and Gun Videos*, METRO (Sept. 18, 2008, 12:35 PM), <http://metro.co.uk/2008/09/18/youtube-bans-knife-and-gun-videos-505296/>.

¹⁹¹ *See* Jonathan B. Wiener, *The Regulation of Technology, and the Technology of Regulation*, 26 TECH. SOC’Y 483, 484 (2004).

¹⁹² In the author’s opinion, Apple’s lock-out mechanism will not hinder technological innovation, will not silence free speech, and will not invade people’s privacy. Instead, Apple’s patent will save thousands of lives annually, and will finally serve as a solution to the nation’s enormous texting-while-driving problem.

¹⁹³ *Government Evaluating Cell Phones Disablers in Cars: Discovery News*, SEEKER (Feb. 11, 2013, 9:00 AM), <http://www.seeker.com/government-evaluating-cell-phones-disablers-in-cars-discovery-news-1766490816.html>.

¹⁹⁴ Robert Jonathan, *Government Considers Using Software that Will Disable All Phone Capabilities in Moving Cars*, BIG GOV’T NEWS (Dec. 29, 2016),

be calls made to the British equivalent of 911 or cell phone use while the car is in park.¹⁹⁵ While some commentators believe that this regulatory action effectively removes “personal responsibility or privacy rights from the equation while adding a component of Big Brother in the name of public safety,” the reality is that “a majority of U.K. drivers are actually okay with potential regulations that would allow government to impose restrictions on cell phone use in cars.”¹⁹⁶ In fact, two-thirds of drivers believe that the government *should* use technology to disable a driver’s cell phone while in the car.¹⁹⁷ With half of U.K. motorists admitting that they cannot resist looking at their phones while driving, perhaps they believe that the government’s intervention is the only surefire way for them to control and conquer their addictive behavior.¹⁹⁸ People will not stop texting and driving unless their attitude toward the behavior changes—but people *want* to be able to use their cell phones,¹⁹⁹ and it is doubtful that people’s mindsets will change anytime soon.²⁰⁰ Therefore, while some might argue that laws forcing Apple to implement its new technology are undesirable, unconstitutional, or intrusive, government regulation might be the only true way to end this epidemic once and for all.²⁰¹

<http://biggovernment.news/2016-12-29-government-considers-using-software-that-will-disable-all-phone-capabilities-in-moving-cars.html>.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

¹⁹⁹ See *Government Evaluating Cell Phones Disablers in Cars: Discovery News*, *supra* note 193. When people are asked about drunk driving they say that it is unacceptable and offenders should receive harsh penalties. *Id.* In general, people do not have this same opinion toward texting-while-driving offenders, likely because that would mean accepting that their own behaviors are dangerous and problematic, and must be changed. *Id.*

²⁰⁰ See Abraham, *supra* note 88. Because we are addicted to our cell phones, “[w]e need drastic measures: cars that disable cell signals when they’re running, for example. We need a solution that doesn’t just deter us from making bad choices but takes those choices out of our hands entirely.” *Id.*

²⁰¹ See generally *History of Seat Belts in the U.S.*, BISNAR CHASE, <https://www.bestattorney.com/auto-defects/defective-seatbelts/history-of-seatbelts.html> (last visited Mar. 3, 2018). For example, in the 1960’s, Congress ordered that minimum federal standards be adopted for seat belts, thus forcing manufacturers to follow minimum legally acceptable requirements for the manufacturing of vehicular components, including seat belts and seat belt buckles. *Id.* All

While there may be rational arguments against government intervention, there can also be benefits to government provocation and encouragement. Typically, “the mere threat of government intrusion is often enough for industry to make changes.”²⁰² If Apple feels the pressure from government regulators, perhaps it will begin to make moves toward fully implementing its life-saving invention, instead of keeping it largely unused in its back pocket.²⁰³ It is idealistic to place the responsibility on the public to educate themselves on the risks and dangers of using a cell phone while driving and assume that this is enough to eradicate the problem. As discussed earlier, people are dependent on and addicted to their cell phones,²⁰⁴ so it is irrational to believe that cell phone owners can, or will, take the initiative to not only educate themselves, but also consequently change their behavior.²⁰⁵

IV. RETURNING TO THE FATAL TEXAS CAR ACCIDENT

Co-plaintiffs Kimberly Meador, Amos Standard, and Russell Jones believe that Apple failed its customers and the plaintiffs’ loved ones by not incorporating a lock-out mechanism in its iPhones.²⁰⁶ If Apple had incorporated its lock-out invention, then twenty-one-year-old Ashley Kubiak would never have been looking down at a text message on her cell phone and would never have

U.S. automakers are now required to install seat belts in their vehicles. *Id.* Legislation eventually evolved into the federal government requiring shoulder belt systems as well as air bags. *Id.* Because the government required manufacturers to implement these new technologies and developments, an estimated 5,536 lives have been saved, demonstrating that “seat belt legislation unambiguously reduces traffic fatalities.” Alma Cohen and Liran Einav, *The Effects of Mandatory Seat Belt Laws on Driving Behavior and Traffic Fatalities*, 84 REV. ECON. & STAT. 828, 828–29 (2003).

²⁰² Jonathan, *supra* note 194.

²⁰³ See Richtel, *supra* note 8.

²⁰⁴ See *Signs and Symptoms of Cell Phone Addiction*, PSYCH GUIDES, <http://www.psychguides.com/guides/signs-and-symptoms-of-cell-phone-addiction/> (last visited Mar. 1, 2018). One piece of evidence that shows society’s cell phone dependence is the fact that 67% of smartphone owners check their cell phone for calls or messages even when their phone has not vibrated or rang. *Id.*

²⁰⁵ See generally Abraham, *supra* note 88.

²⁰⁶ *Crash Victims*, *supra* note 1; Richtel, *supra* note 8. Legal experts believe that the suit is unlikely to succeed because it is “unlikely that lawyers could prove that the use of the iPhone caused the fatal accident.” *Id.*

killed two women and paralyzed a young boy. The Meador's attorney stressed that by creating the smartphone, Apple in fact created the problem; but not only did Apple create the problem, it also created the solution.²⁰⁷ The co-plaintiffs believe that because Apple has not implemented the solution, the tech giant is accountable for resulting deaths and injuries directly attributable to iPhone use behind the wheel.²⁰⁸ By bringing a product liability lawsuit against Apple, the victims' families hope that it will encourage Apple to finally implement the feature²⁰⁹ and save other families from needless tragedies.

In September 2015, Apple filed a motion to dismiss the claim, arguing that the iPhone did not cause the injury—the driver did.²¹⁰ Apple countered that Kubiak, who is not a named defendant in this case, is “the sole and legal factual cause” of the accident.²¹¹ Apple believed that the responsibility should be placed on the driver because it was her inattention that caused the harm, not the instrument itself.²¹² In fact, several courts around the United States have agreed with Apple's position: “[A]ll have summarily dismissed the claims and placed the responsibility of distracted driving where it belongs, in the hands of the individual driver of the motor vehicle.”²¹³ Apple further contends in its motion that “[d]istracted driving is an issue for the legislature, not the courts.”²¹⁴

²⁰⁷ *Crash Victims*, *supra* note 1.

²⁰⁸ *See id.* (“‘Whoever it is that has created the monster, you have a duty to control the monster,’ said plaintiff attorney Greg Love.”).

²⁰⁹ *Id.*; *see generally* Meador v. Apple, Inc., No. 6:15-CV-715 (E.D. Tex. Aug. 17, 2017).

²¹⁰ *Crash Victims*, *supra* note 1; John Suayan, *Apple Wants Texting While Driving Suit Dismissed, Says Issue Is for the Legislature and Not the Courts*, SE TEXASRECORD (Sept. 22, 2015, 9:04 AM), <https://setexasrecord.com/stories/510639292-apple-wants-texting-while-driving-suit-dismissed-says-issue-is-for-the-legislature-and-not-the-courts> [hereinafter *Apple Wants Texting While Driving Suit Dismissed*]. In its motion, Apple contends that “[t]he iPhone did not malfunction, nor have within it any defect that caused the automobile accident in question.” *Id.*

²¹¹ *Apple Wants Texting While Driving Suit Dismissed*, *supra* note 210.

²¹² *Crash Victims*, *supra* note 1.

²¹³ *Apple Wants Texting While Driving Suit Dismissed*, *supra* note 210.

²¹⁴ *Id.*

The legislature should place a large part of the responsibility on Apple, and other cell phone makers, to prevent cell phones from being used by drivers while behind the wheel. Modifying drivers' behavior through enactment of a law, educating the public about the danger, and strictly enforcing the law²¹⁵ remain considerably important, but more must be done to evolve the narrative and solve the problem. Apple has a tool at its disposal to ensure that drivers no longer use their cell phones while they are driving, and its failure to implement this technology is a *choice*. This choice should be put to rest by government regulations requiring Apple and other cell phone providers, or perhaps even automobile manufacturers, to temporarily lock drivers' phones while they are in the driver's seat. Only then can the texting-while-driving epidemic be cured.

CONCLUSION

It is clear that the United States is suffering from a serious epidemic of pervasive cell phone use while driving, with texting in the forefront of the conversation. Texting while driving is a deadly cocktail of visual, manual, and cognitive driving distractions that claims thousands of lives each year.²¹⁶ Although a majority of Americans clearly understand the hazards involved in sending that one, quick text, most drivers continue to text behind the wheel and make plenty of excuses about why they are good at it, or how it is acceptable because they only text at red lights, or that it is justifiable because they only send short responses. All of these excuses are just that—hollow excuses. Lurking behind each seemingly innocuous

²¹⁵ See Chase, *supra* note 55, at 87. Long-term modifications in driver behavior are achieved through the “three Es” of Enactment (of a law), Education (of the public about a safety hazard), and Enforcement (of the laws).” *Id.* “It takes laws combined with increased education and high-visibility enforcement campaigns to successfully reduce the number of crashes, catastrophic injuries and deaths involving cell phone use while driving.” *Id.* An example of a successful use of the “three Es” is seat belt use. *Id.* After fifteen years of educational programs on the importance of seat belts, only 14% of Americans used seat belts in 1981. *Id.* Yet, after adding enactment of mandatory seat belt laws and strict enforcement on top of the already existing educational programs, seat belt use rocketed to 86% in 2012. *Id.*

²¹⁶ *Distracted Driving*, CENTERS FOR DISEASE CONTROL AND PREVENTION, https://www.cdc.gov/motorvehiclesafety/distracted_driving/index.html (last visited Mar. 1, 2018).

text message, social media post, phone call, or e-mail is the chance of getting into a deadly crash. And while all can agree that the use of cell phones in the car is not worth the potential consequences, cell phone addiction too often forces our eyes to stray from the road and glance at our screens.

Shari Standard and Sandra Jones are only two people among thousands whose lives have been claimed by a simple text message, and L.M. is only one among hundreds of thousands who has suffered life-changing injuries due to distracted driving accidents. Apple and the United States government have the opportunity—and the responsibility—to change this narrative, and it is time that they do.