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## Virtual Reality as Punishment

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## COMMENT

### Virtual Reality as Punishment

Jose A. Moncada

#### INTRODUCTION

For thousands of years, human beings have imagined themselves outside the bounds of their own spatiotemporal physical reality.<sup>1</sup> Therefore, virtual reality is not a new concept. In fact, since the invention of the stereoscope in 1838,<sup>2</sup> scientists have continued to evolve the concept of virtual reality. Presently, virtual reality is no longer only a thought of science fiction. It is evolving at a rapid pace,<sup>3</sup> and the effects of virtual reality on the human condition are tangible.<sup>4</sup> In fact, virtual reality is currently being used in many fields, including criminal justice.<sup>5</sup> But what if virtual reality was used to punish?

Since the beginning of civilization, punishment has been inextricably linked with the views of what society has condoned as appropriate punishment.<sup>6</sup> What was once a socially acceptable form of punishment is now considered grotesque and unacceptable.<sup>7</sup> Punishment has continually conformed to societal views, so what will be the next socially acceptable form of punishment? Perhaps society's interconnectedness with technology and the rapidly evolving advances in virtual reality provide insight into the future. As society continues to "mature" and accept virtual reality as a part of daily life, society should contemplate the consequences of virtual reality as a new form of punishment. If and when society decides, through its legislative processes, that virtual reality is an acceptable and legal method of punishment, serious thought must be given to the scope and allowance of different

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<sup>1</sup> See, e.g., Gilad Yadin, *Virtual Reality Surveillance*, 35 CARDOZO ARTS & ENT. L.J. 707, 721–22 (2017) ("Virtual reality is not merely a new technology; it is a technological application of an old theoretical idea—the idea of a human being within an artificial reality, a synthetic dream.").

<sup>2</sup> Clive Thompson, *Stereographs Were the Original Virtual Reality*, SMITHSONIAN MAG. (Oct. 2017), <https://www.smithsonianmag.com/innovation/sterographs-original-virtual-reality-180964771/>.

<sup>3</sup> See *infra* Section I.C.

<sup>4</sup> See *infra* Section III.A.

<sup>5</sup> See *infra* note 82.

<sup>6</sup> E.g., HERBERT A. JOHNSON, HISTORY OF CRIMINAL JUSTICE 17 (Kelly Humble ed., 1988) ("All aspects of criminal justice are influenced by the views societies take of man and his behavior."); see also A. Warren Stearns, *The Evolution of Punishment*, 27 AM. INST. CRIM. L. & CRIMINOLOGY 219, 219 (1936) ("[Punishment] appears to be a well-developed social institution in the most primitive societies and at the dawn of known history."); Hon. Richard Lowell Nygaard, *On The Philosophy of Sentencing: Or, Why Punish?*, 5 WIDENER J. PUB. L. 237, 249–52 (1996).

<sup>7</sup> See JOHN D. BESSLER, CRUEL & UNUSUAL: THE AMERICAN DEATH PENALTY AND THE FOUNDERS' EIGHTH AMENDMENT 172 (2012) ("In England, where the Eighth Amendment language originates, convicted criminals were traditionally punished in horrific ways . . . . [For example,] [w]omen committing treason . . . received a judgment 'to be burned alive' . . . ."); JOHNSON, *supra* note 6, at 48 ("The ordeal of hot water required the accused thrust a hand, or an arm up to the elbow, into a kettle of boiling water. When the hand was withdrawn . . . [the verdict was determined by whether the individual emerged unscathed."); HEINRICH OPPENHEIMER, THE RATIONALE OF PUNISHMENT 92 (Patterson Smith ed., 1975) ("In the literature of primitive criminal jurisprudence clubbing, hammering, flogging, beating with sticks and with chains, putting to shame, and various fines payable in cattle . . . are enumerated among public punishments.").

virtual environments society uses to punish. Moreover, once these virtual environments are used to punish, the Supreme Court should ultimately decide which virtual environments will survive under the Punishments Clause of the Eighth Amendment.

Part I of this Comment discusses virtual reality. After a brief history of virtual reality, this Comment explains the components that make up the modern version of virtual reality. It then discusses the current state of virtual reality technology. Part II discusses the purposes of punishment. It then discusses how virtual reality can satisfy many of the theories of punishment. Next, it discusses how the Supreme Court has interpreted the Punishments Clause of the Eighth Amendment and how the Court could analyze incorporating virtual reality as punishment under the Punishments Clause. Part III discuss virtual reality as punishment. It does so in three parts. First, it discusses the implications of replicating already socially accepted forms of punishment in virtual environments. Next, it discusses the implications of committing the crime the perpetrator committed back against them in a virtual environment. Finally, it discusses the implications of punishing criminals through virtual environments that exceed punishments that society currently accepts. This Comment concludes with the thought that society should be prepared to decide what it deems acceptable in terms of using virtual reality to punish.

## I. VIRTUAL REALITY

### A. *A Brief History of Virtual Reality*

Virtual reality (VR) is not a new concept.<sup>8</sup> In the nineteenth century, the development of the stereoscope allowed people to view images with an enhanced sense of depth perception.<sup>9</sup> In the twentieth century, further advancements led to actual simulators that could mimic flight<sup>10</sup> and machines that could stimulate the senses of an individual in an attempt to fully immerse them in the technology.<sup>11</sup> But it was not until the 1960s that the first mounted display headsets were invented.<sup>12</sup> In the latter half of the twentieth century, many more variations of mounted

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<sup>8</sup> See Thompson, *supra* note 2.

<sup>9</sup> See *id.*

<sup>10</sup> For example, the Link Trainer. Christopher McFadden, *The World's First Commercially Built Flight Simulator: The Link Trainer Blue Box*, INTERESTING ENGINEERING (Aug. 21, 2018), <https://interestingengineering.com/the-worlds-first-commercially-built-flight-simulator-the-link-trainer-blue-box>.

<sup>11</sup> Holly Brockwell, *Forgotten Genius: The Man Who Made a Working VR Machine in 1957*, TECHRADAR (Apr. 3, 2015), <https://www.techradar.com/news/wearables/forgotten-genius-the-man-who-made-a-working-vr-machine-in-1957-1318253>.

<sup>12</sup> *Id.*; see also Roya Bagheri, *Virtual Reality: The Real Life Consequences*, 17 U.C. DAVIS BUS. L.J. 101, 105 (2016); Luke Dormehl, *8 Virtual Reality Milestones That Took It From Sci-fi to Your Living Room*, DIGITAL TRENDS (Nov. 13, 2017), <https://www.digitaltrends.com/cool-tech/history-of-virtual-reality/>.

display headsets were invented in an attempt to provide a fully immersive experience to the user.<sup>13</sup>

The concept of VR, as we know it today, was popularized in the late 1980s.<sup>14</sup> Since then, companies have tried to develop different, though not always successful or realistic, forms of VR.<sup>15</sup> But it was not until Facebook bought Oculus VR for \$2.3 billion in 2014<sup>16</sup> that VR started to boom rapidly to its current state.<sup>17</sup> By one estimate, the VR market will be worth \$5.4 billion by 2025.<sup>18</sup>

Currently, many of the major technology companies have started to develop their own forms of VR.<sup>19</sup> VR has also become accessible to the general public, with many companies developing head-mounted displays that are cost-effective.<sup>20</sup> Google has even developed Google Cardboard, a headset available to practically everyone.<sup>21</sup> While the concept of VR, or seeing ourselves in an alternate reality, dates back as far as one can imagine, the current state of VR has exponentially developed in the last decade—far beyond what most people could have imagined.<sup>22</sup>

### B. What is Virtual Reality?

VR is defined as “a medium composed of interactive computer simulations that sense the participant’s position and actions and replace or augment the feedback to one or more senses, giving the feeling of being mentally immersed or present in the simulation (a virtual world).”<sup>23</sup> Therefore, VR immerses<sup>24</sup> the user in

<sup>13</sup> See generally *History of Virtual Reality*, VIRTUAL REALITY SOC’Y, <https://www.vrs.org.uk/virtual-reality/history.html>.

<sup>14</sup> Jonathan Steuer, *Defining Virtual Reality: Dimensions Determining Telepresence*, 42 J. COMM. 73, 73 (1992) (“[T]he term virtual reality (VR) was coined in 1989 by Jaron Lanier . . .”).

<sup>15</sup> Bagheri, *supra* note 12, at 105–06 (2016). For an in-depth history of virtual reality see WILLIAM R. SHERMAN & ALAN B. CRAIG, UNDERSTANDING VIRTUAL REALITY: INTERFACE, APPLICATION, AND DESIGN 24–37 (2003).

<sup>16</sup> Joel Stein, *Why Virtual Reality Is About To Change The World*, N.Y. TIMES (Aug. 6, 2015), <http://time.com/3987022/why-virtual-reality-is-about-to-change-the-world/>; Max Chafkin, *Why Facebook’s \$2 Billion Bet on Oculus Rift Might One Day Connect Everyone on Earth*, VANITY FAIR (Sep. 8, 2015), <https://www.vanityfair.com/news/2015/09/oculus-rift-mark-zuckerberg-cover-story-palmer-luckey>.

<sup>17</sup> Bagheri, *supra* note 12, at 106–07 (“The major differences between the present virtual reality age and its predecessors of the 90’s are the current technological advancements and subsequent resources. This time around, major technology giants have been funding the progress and dedicating resources necessary to drive innovation.”).

<sup>18</sup> Lorne Manly, *A Virtual Reality Revolution, Coming to a Headset Near You*, N.Y. TIMES (Nov. 19, 2015), <https://www.nytimes.com/2015/11/22/arts/a-virtual-reality-revolution-coming-to-a-headset-near-you.html>.

<sup>19</sup> See *id.*; see also Gilad Yadin, *Virtual Reality Intrusion*, 53 WILLAMETTE L. REV. 63, 66 (2016) (“Now, virtual reality technology is migrating to the Internet and the home environment in what has been termed a ‘virtual reality renaissance.’ Technology industry giants—Facebook, Google, Sony, and others—are pouring billions into virtual reality research and development . . .”).

<sup>20</sup> See Yadin, *supra* note 19, at 81–82.

<sup>21</sup> GOOGLE CARDBOARD, <https://vr.google.com/cardboard/>.

<sup>22</sup> See generally Stein, *supra* note 16.

<sup>23</sup> SHERMAN & CRAIG, *supra* note 15, at 13.

<sup>24</sup> “[I]mmersion is accomplished by presenting a virtual world to users based on their location and orientation and providing synthetic stimuli to . . . their senses. . . . The VR system presents perspective-dependent images to each eye, synchronized audio to the ears, and haptic information to the body.” *Id.* at 382.

a virtual environment.<sup>25</sup> This is generally done by the user donning a head-worn display.<sup>26</sup> “This system usually includes a computer capable of real-time animation, controlled by a set of wired gloves and a position tracker, and using a head-mounted stereoscopic display for visual output.”<sup>27</sup> The point of full immersion is to “make the user forget his real surroundings . . . .”<sup>28</sup> The immersive aspect of VR derives from the user being able to look in all directions as the VR headset tracks their movements.<sup>29</sup>

The goal of VR is to put the user in a virtual environment<sup>30</sup> where the human experience becomes intertwined with the virtual environment—indistinguishable from reality.<sup>31</sup> When this goal is met, “the virtual world can replace the sense of presence in the physical world . . . .”<sup>32</sup> Hence, the user achieves “presence” in the virtual environment.<sup>33</sup> As Gilad Yadin explains:

It is the ability to create presence, the feeling of being present elsewhere using technology, that makes virtual reality psychologically unique. Other experiences, such as browsing a website, watching a movie, or reading this Article, can be engaging—bringing about focus and concentration—but they do not create the psychological state of being present in a different place. Virtual reality environments strive

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<sup>25</sup> See generally Jesse Fox, Dylan Arena & Jeremy N. Bailenson, *Virtual Reality: A Survival Guide for the Social Scientist*, 21 J. MEDIA PSYCHOL. 95, 95 (2009) (“A Virtual environment (VE) is a digital space in which a user’s movements are tracked and his or her surroundings rendered, or digitally composed and displayed to the senses, in accordance with those movements.”).

<sup>26</sup> Also known as head-mounted displays (HMDs), head-worn displays are the type of equipment that most people associated with VR. “Head-based VR visual displays are primarily suited for first person point of view. They display the world directly through the viewpoint of the user’s eyes.” SHERMAN & CRAIG, *supra* note 15, at 153.

<sup>27</sup> Steuer, *supra* note 14, at 74.

<sup>28</sup> Jonathan Strickland, *The Virtual Reality Environment*, HOWSTUFFWORKS (2018), <https://electronics.howstuffworks.com/gadgets/other-gadgets/virtual-reality2.htm>.

<sup>29</sup> Tom Metcalfe, *What Is VR? The Devices and Apps That Turn The Real World Virtual*, NBC NEWS (Mar. 15, 2018), <https://www.nbcnews.com/mach/science/what-vr-devices-apps-turn-real-world-virtual-ncna857001>.

<sup>30</sup> See SHERMAN & CRAIG, *supra* note 15, at 406 (“The *substance* of the world is made up of the objects, characters, and locations of the experience . . . [and] [m]uch like the physical world, objects in the virtual world have properties . . . [that] are apparent to specific senses.”); see also Fox, *supra* note 25, at 97 (“VEs are usually characterized by the same basic elements we observe in our physical environment: ground, sky, and other components of external landscapes; the floors, ceilings, and walls of internal spaces; and both realistic and fantastic objects.”).

<sup>31</sup> See Steuer, *supra* note 14, at 75. This deals with the concepts of presence and telepresence. That is, “[p]resence is defined as the sense of being in an environment . . . [and] [t]elepresence is defined as the experience of presence in an environment by means of communication medium.” *Id.* at 75–76. So, “[w]e move from a sense of presence in the physical world, through a mediated sense of presence in virtually, to the mediated sense of being in the physical-virtual world in another body than our own.” John A. Waterworth & Eva L. Waterworth, *Distributed Embodiment: Real Presence in Virtual Bodies*, in THE OXFORD HANDBOOK OF VIRTUALITY 589 (Mark Grimshaw ed., 2014).

<sup>32</sup> Waterworth & Waterworth, *supra* note 31, at 598; see also Orin S. Kerr, *Criminal Law in Virtual Worlds*, 2008 U. CHI. LEGAL F. 415, 424 (2008) (“Imagine a virtual reality of virtual worlds that appear quite real—worlds that look, feel, and sound pretty much like the real thing.”).

<sup>33</sup> Yadin, *supra* note 1, at 727 (“Presence is therefore the key psychotechnological element of virtual reality.”).

to be as close as possible to physical environments; for the subjective mind of users present in a simulated environment, virtual reality is in that moment their only reality.<sup>34</sup>

When presence in the virtual environment is achieved, the user's senses are immersed in the VR. Generally, VR devices immerse the user's sense of sight and sound in the virtual environment.<sup>35</sup> With evolving technology,<sup>36</sup> VR technology also possesses the ability to immerse the user's sense of touch<sup>37</sup> and smell<sup>38</sup> in the virtual environment.

### C. The Current State of the Technology

The VR market is rapidly evolving.<sup>39</sup> Since the release of the Oculus Rift,<sup>40</sup> a number of companies have developed their own types of VR devices.<sup>41</sup> Currently, most of the widely used VR devices have three components in order to make the technology work. Generally, the devices must be tethered to a computing source.<sup>42</sup> This is what provides for the realistic experience that the user becomes immersed in. The better the computing power, the better the experience. The device itself, referred to as the head-mounted display,<sup>43</sup> is what the user dons. The head-mounted displays cover the entire view of the individual and often comes with an audio component, so that the user has two senses immersed in the virtual environment.<sup>44</sup> An input device is the last of the three components. Input devices can come in many forms and their purpose is to assist with fully immersing the user in virtual reality.<sup>45</sup> This is done through the users' haptic sense.<sup>46</sup> There are different forms of

<sup>34</sup> Gilad Yadin, *Virtual Reality Exceptionalism*, 20 VAND. J. ENT. & TECH. L. 839, 865 (2018).

<sup>35</sup> See *id.*

<sup>36</sup> See *infra* Section I.C.

<sup>37</sup> Ben Lang, *Hands-on: HaptX's VR Glove Is The Closest I've Come to Touching the Virtual World*, ROADTOVR (Oct. 26, 2018), <https://www.roadtovr.com/haptx-vr-force-feedback-glove-touching-the-virtual-world/>.

<sup>38</sup> See, e.g., Kim Renfro, *Why Disney World's New 3D 'Avatar' Attraction Is The Greatest Ride I've Ever Been On*, INSIDER (June 9, 2017, 1:59 PM), <https://www.thisisinsider.com/disney-world-avatar-flight-of-passage-review-2017-6>.

<sup>39</sup> See generally Thomas Ffiske, *The State of Immersive Reality in 2018*, VR FOCUS (July 4, 2018), <https://www.vrfocus.com/2018/01/the-state-of-immersive-reality-in-2018/>.

<sup>40</sup> The Oculus Rift was the first modern VR product that consumers could purchase. Brian X. Chen, *Oculus Rift Review: A Clunky Portal to a Promising Virtual Reality*, N.Y. TIMES (Mar. 28, 2016), <https://www.nytimes.com/2016/03/31/technology/personaltech/oculus-rift-virtual-reality-review.html>.

<sup>41</sup> E.g., Yadin, *supra* note 1, at 725–26; Katie Benner & Nick Wingfield, *Apple Set Its Sights on Virtual Reality*, N.Y. TIMES (Jan. 29, 2016), <https://www.nytimes.com/2016/01/30/technology/apple-sets-its-sights-on-virtual-reality.html> (“Facebook, Google and Microsoft have all delved into virtual and augmented reality technology. Now Apple is dipping a toe in to the space too.”).

<sup>42</sup> See Fox, *supra* note 25, at 97 (“The most rudimentary VEs are those available on desktop computers, mobile devices, . . . and traditional videogame consoles.”).

<sup>43</sup> SHERMAN & CRAIG, *supra* note 15, at 151–52.

<sup>44</sup> *Id.*

<sup>45</sup> *Id.* at 177–82.

<sup>46</sup> *Id.* at 178 (“Some VR applications augment the benefits of haptic feedback by *transference of object permanence*. By making one object in the virtual world seem very real (using haptics), the rest of the world seems more real as well.”).

haptic displays,<sup>47</sup> but their main purpose is to further immerse the user's senses in the virtual environment, because "coming into physical contact with an object [verifies] its existence . . ."<sup>48</sup>

Historically, technological limitations have affected the users' full-immersion experience. For example, in the past, head-mounted displays have had to be tethered to a computing source to work.<sup>49</sup> Even recently, devices like the Oculus Rift<sup>50</sup> or HTC Vive<sup>51</sup> require that the user plant his or her smartphone device into the display or tether the device to a computer. That was the case until early 2018, when the Oculus Go was released.<sup>52</sup> The Oculus Go is the first commercially sold VR headset with a built-in computing device, so that the user does not have to be tethered to a computer or dock his or her smartphone into the device.<sup>53</sup>

Though technology is evolving in a way that allows the user to move away from his or her computing source, an additional limitation of VR presents itself; users are constrained by their real-world environments when they don head-mounted displays. That is, even if one is immersed in the virtual environment, walking around a room could present the danger that the user could bump into a wall or trip over a rug. This immediately informs the user that she is in fact not really in a "real" world, breaking the full immersion experience. This problem is being solved with technology that has recently been developed. Companies have started to develop omni-directional treadmills in order to combat the problems that arise when a user, who is immersed in a virtual environment, is constrained by her real-world physical environment.<sup>54</sup> Though many of these omni-directional treadmills are in their infancy, it may soon be possible for users to walk freely in a virtual environment in a way that would have not been possible in the past.

Another limitation that has plagued VR's ability to portray a fully immersive experience revolves around the user's haptic sense. Traditionally, users have had to

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<sup>47</sup> *Id.* at 182.

<sup>48</sup> *Id.* at 177.

<sup>49</sup> Ryan Bushey, *Advancements in Virtual Reality Device Development*, R & D MAG. (Sept. 11, 2017), <https://www.rdworltonline.com/advancements-in-virtual-reality-device-development-2/>.

<sup>50</sup> OCULUS RIFT, <https://www.oculus.com/rift/> (last visited Mar. 13, 2020).

<sup>51</sup> VIVE, <https://www.vive.com/eu/product/> (last visited Mar. 12, 2020).

<sup>52</sup> Nat Levy, *Facebook-Owned Oculus' \$199 Standalone Oculus Go Virtual Reality Headset Is Here*, GEEKWIRE (May 1, 2018, 8:25 AM), <https://www.geekwire.com/2018/199-oculus-go-virtual-reality-headset-is-here/>.

<sup>53</sup> See Scott Stein, *Oculus Go Review: Portable VR, No Strings Attached*, CNET (May 1, 2018, 12:46 PM), <https://www.cnet.com/reviews/oculus-go-review/>; see also OCULUS GO, <https://www.oculus.com/go/> (last visited Mar. 13, 2020).

<sup>54</sup> See Dominic Brennan, *Strider VR Is An Intriguing New Omnidirectional Treadmill Solution*, ROADTOVR (Aug. 14, 2017), <https://www.roadtovr.com/strider-vr-intriguing-new-omnidirectional-treadmill-solution/>; Juanita Leatham, *VR Omnidirectional Treadmills Making Gains Toward Full Immersion And Cardio*, VR FITNESS INSIDER (Apr. 5, 2018), <https://www.vrfitnessinsider.com/vr-omnidirectional-treadmills-making-gains-towards-full-immersion-and-cardio/>; Carol Pinchefskey, *Omni Gaming Treadmill: Kill Some Monsters, Burn Some Calories*, FORBES (June 4, 2013, 3:12 PM), <https://www.forbes.com/sites/carolpinchefskey/2013/06/04/omni-gaming-treadmill-kill-some-monsters-burn-some-calories/#65036280521e>; see also INFINADECK, <https://www.infinadeck.com/> (last visited Mar. 12, 2020).

hold different input devices. For example, by holding a controller, the user still has a sense that he or she is not fully immersed in the environment. However, new developments have begun to solve this problem.<sup>55</sup> Recent developments in new haptic gloves can simulate pain, heat, and cold.<sup>56</sup> The most modern haptic gloves<sup>57</sup> give the user the ultra-realistic feeling of touching an object, feeling rain drops, or feeling something crawl across the users hand.<sup>58</sup> There are also developments for haptic suits that can give users a realistic experience and further help immerse them in the virtual environment.<sup>59</sup> With these new emerging technologies aimed at users haptic sense, VR is currently able to immerse the users senses of sight, hearing, and touch.

Currently, additional technology exists that can also shed light on the future of virtual environments. For instance, Avatar Flight of Passage is an amusement park ride at Walt Disney World's Animal Kingdom Theme Park<sup>60</sup> that provides an ultra-realistic and immersive experience.<sup>61</sup> Though this ride does not use VR technology in the sense of the user donning a head-mounted display, it utilizes three dimensional technology to place the user in a virtual environment.<sup>62</sup> The ride simulates the feeling of riding on the back of a banshee (a mythical bird) and is able to realistically simulate the illusion of flight as the banshee goes up, down,

<sup>55</sup> See Lang, *supra* note 37; Arif Bacchus, *These Gloves Will Make Virtual Reality Feel Even More Immersive*, DIGITAL TRENDS (Oct. 16, 2018), <https://www.digitaltrends.com/computing/thin-light-vr-gloves-haptic-feedback/>; Charlie Fink, *HaptX Gloves Dev Kit Now Available*, FORBES (Oct. 3, 2018, 11:05 AM), <https://www.forbes.com/sites/charliefink/2018/10/03/haptx-gloves-dev-kit-now-available/#4c4e117512d9>; Scott Hayden, *Plexus is a VR Glove With Finger Haptics & Multiple Tracking Standards, \$250 Dev Kits Coming Soon*, ROADTOVR (July 3, 2018), <https://www.roadtovr.com/plexus-vr-glove-finger-haptics-multiple-tracking-standards-250-dev-kit-pre-orders-now-available/>.

<sup>56</sup> Zara Stone, *Haptic Controllers Bring Real Pain to VR Games*, WIRED MAG. (Jan. 4, 2018, 11:00 AM), <https://www.wired.com/story/haptic-controllers-for-vr-bring-real-pain-to-games/>.

<sup>57</sup> For example, one company called Haptx has developed a state-of-the-art haptic glove that provides for an extremely realistic and immersive experience. HAPTIX, <https://haptx.com/> (last visited Mar. 13, 2020).

<sup>58</sup> Dean Takahashi, *Haptx Unveils Haptic Gloves So You Can Feel Things In VR*, VENTURE BEAT (Oct. 3, 2018, 12:00 AM) ("I could touch the grains of wheat and feel how each rubbed against my fingers. I touched the clouds and felt rain droplets hit my open hand. It was creepy when a spider crawled across my hand and I felt it."), <https://venturebeat.com/2018/10/03/haptx-unveils-haptic-gloves-so-you-can-feel-things-in-vr/>.

<sup>59</sup> See Susan Fourtané, *Teslasuit Brings Virtual Reality To A New Level: Not Just For Gaming*, INTERESTING ENGINEERING (Aug. 28, 2018), <https://interestingengineering.com/teslasuit-brings-virtual-reality-to-a-new-level-not-just-for-gaming>; Jeremy Horwitz, *HoloSuit Promises Full-Body VR Tracking And Haptics By November 2018*, VENTURE BEAT (July 2, 2018, 2:01 PM), <https://venturebeat.com/2018/07/02/holosuit-promises-full-body-vr-tracking-and-haptics-by-november-2018/>; Richard Lai, *bHaptics' TactSuit Is VR Haptic Feedback Done Right*, ENGADGET (July 2, 2017), <https://www.engadget.com/2017/07/02/bhaptics-tactsuit-vr-haptic-feedback-htc-vive-x-demo-day/>; Seth Porges, *This 'Synesthesia Suit' Allows VR Users To Physically Feel Virtual Worlds*, FORBES (Oct. 27, 2018, 3:31 PM), <https://www.forbes.com/sites/sethporges/2016/10/27/this-synesthesia-suit-allows-vr-users-to-physically-feel-virtual-worlds/#593d2de271db>.

<sup>60</sup> *Avatar Flight of Passage*, WALT DISNEY WORD, <https://disneyworld.disney.go.com/attractions/animal-kingdom/avatar-flight-of-passage/> (last visited Mar. 12, 2020).

<sup>61</sup> Bryan Bishop, *Flight of Passage Is An Incredible Immersive Ride Through The World of Avatar*, THE VERGE (May 27, 2017, 4:00 PM), <https://www.theverge.com/2017/5/27/15702590/pandora-world-of-avatar-flight-of-passage-ride-review>.

<sup>62</sup> *Id.*

forward, and backward.<sup>63</sup> Additionally, the simulated ride enables users to experience smells in the virtual environment.<sup>64</sup> This ride is a significant step forward in providing a completely immersive experience.<sup>65</sup> By providing additional technology to immerse the user's sense of touch (or feel) and immersing the user's sense of smell, this ride, and the current technologies previously mentioned, show that companies are able to immerse a person's senses of sight, hearing, touch, and smell.

With many companies developing state-of-the-art technology to solve some of the limitations of VR, the future is bright for providing the user with a completely immersive experience, indistinguishable from reality.

## II. THE PURPOSE OF PUNISHMENT

### A. Types of Punishment

Punishment is deeply connected with society.<sup>66</sup> After all, punishments throughout the course of modern history have been determined by society.<sup>67</sup> Traditionally, there have been two schools of thought surrounding punishment: retributivism and utilitarianism.<sup>68</sup>

Retributivism is perhaps the oldest theory of punishment.<sup>69</sup> Put simply, the concept of Retributivism is that the actor who commits the crime deserves punishment for committing the offense.<sup>70</sup> That is, the actor deserves punishment through retribution.<sup>71</sup> Retributivism is linked with the views of what punishments

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<sup>63</sup> *Id.*

<sup>64</sup> Renfro, *supra* note 38.

<sup>65</sup> *Id.*

<sup>66</sup> *See supra* note 6 and accompanying text.

<sup>67</sup> *See* John F. Stinneford, *Rethinking Proportionality Under the Cruel and Unusual Punishments Clause*, 97 VA. L. REV. 899, 927–28 (2011).

<sup>68</sup> A. C. EWING, *THE MORALITY OF PUNISHMENT* 1 (Patterson Smith ed., 1970) (1929).

<sup>69</sup> *Exodus* 21:24 (“Eye for eye, tooth for tooth, hand for hand, foot for foot . . .”).

<sup>70</sup> David Dolinko, *Three Mistakes of Retributivism*, 39 UCLA L. REV. 1623, 1626 (1992) (“Retributivism . . . is a philosophical theory aimed at providing a moral justification for the practice of punishing criminals. Punishment involves the deliberate imposition of suffering on persons convicted of crime . . .”); WESLEY CRAGG, *THE PRACTICE OF PUNISHMENT: TOWARDS A THEORY OF RESTORATIVE JUSTICE* 15 (1992) (“[Retributivism] takes the view that punishment is justifiable if it is merited or deserved. It is deserved when it is a response to injustice or wrongdoing.”).

<sup>71</sup> EWING, *supra* note 68, at 13 (“The retributive theory of punishment involves two main conceptions: (1) that it is an end-in-itself that the guilty should suffer pain; (2) that the primary justification of punishment is always to be found in the fact that an offence has been committed which ‘deserves’ punishment . . . whether for society or for the offender as an individual.”); Nygaard, *supra* note 6, at 262–63 (“A majority of the public believes that because one has violated the law, the violation itself legitimates the punishment because the offender deserves to suffer for having transgressed social order. It is the most simplistic form of reaction—the payback.”).

society deems acceptable at the time.<sup>72</sup> As time goes on, punishments change.<sup>73</sup> “Retributivism therefore plays an important role not just in the history of the common law, but in contemporary punishment policy and practice as well.”<sup>74</sup> Naturally, retribution, as a theory of punishment, stems from the retributivist school of thought.<sup>75</sup>

According to the theory of utilitarianism, punishment should be administered in a way that benefits society as a whole.<sup>76</sup> Deterrence is a major aspect of utilitarian theory. If the actor is deterred from committing a crime, society will benefit from the lack of crime.<sup>77</sup> Similarly, incapacitation is another theory that stems from utilitarianism.<sup>78</sup> This is because, in order to benefit the whole of society, if an actor is likely to commit another crime, incapacitating the actor would benefit society.<sup>79</sup> Finally, rehabilitation is also a theory that stems from utilitarianism; society will benefit if the actor is able to be rehabilitated, in the sense that the actor does not commit crime anymore.<sup>80</sup>

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<sup>72</sup> STANLEY E. GRUPP, THEORIES OF PUNISHMENT 6 (Stanley E. Grupp ed., 1971) (“Retribution must, however, be viewed within the cultural context. The punitive response and its interpretation are relative to time and place. What is viewed as a punitive response today may be viewed differently at another time and place.”).

<sup>73</sup> See *supra* note 7 and accompanying text.

<sup>74</sup> David Gray, *Punishment as Suffering*, 63 VAND. L. REV. 1619, 1659 (2010).

<sup>75</sup> RALPH D. ELLIS & CAROL S. ELLIS, THEORIES OF CRIMINAL JUSTICE: A CRITICAL REAPPRAISAL 56 (1989) (“In retribution theory, the purpose of punishment is neither to produce an effect, nor . . . is the punishment administered merely for the sake of emotional expression . . . Rather, it is administered because the criminal . . . has done something which he knows to be wrong, and therefore *deserves* punishment.”).

<sup>76</sup> RONALD J. PESTRITTO, FOUNDING THE CRIMINAL LAW 64 (2000) (“The modern utilitarian position rooted in the Enlightenment . . . focuses almost exclusively on public safety: the aim would be informed by something outside of conventional politics, but rather to secure the aggregate self-interest of society’s members.”).

<sup>77</sup> J. D. Mabbott, *Punishment*, in PHILOSOPHY OF PUNISHMENT 23, 23 (Robert M. Baird & Stuart E. Rosenbaum eds., 1988) (“[I]t is the threat of punishment and not punishment itself which deters, and that when deterrence seems to depend on actual punishment, to implement the threat, it really depends on publication and may be achieved if men believe that punishment has occurred even if in fact it has not.”); Nygaard, *supra* note 6, at 253–54 (“Deterrence is coercion by fear. As popularly used, it means that the threat of punishment, or punishment itself, causes individuals who would commit an offensive act to refrain from doing so.”); Stinneford, *supra* note 67, at 916 (“Deterrence is generally thought to depend on two main factors: the perceived harshness of the punishment and the perceived likelihood of getting caught.”).

<sup>78</sup> PESTRITTO, *supra* note 76, at 65 (“The utilitarian punishes because he believes this will effect an increase in societal utility; the belief is normally that future crimes will decrease by way of . . . incapacitation.”).

<sup>79</sup> See, e.g., Kevin Bennardo, *Incarceration’s Incapacitative Shortcomings*, 54 SANTA CLARA L. REV. 1, 2 (2014) (“Incapacitation is the removal of an offender’s ability to commit future crime against a relevant population.”); Leonard J. Long, *Rethinking Selective Incapacitation: More at Stake Than Controlling Violent Crime*, 62 UMKC L. REV. 107, 121–22 (1993) (“The most common method of incapacitation in the American criminal justice system is confinement or imprisonment. The predicted offenders are physically removed from society, thereby rendered incapable of committing certain acts that cause harm to society at large during the period of confinement.”).

<sup>80</sup> Put another way, using rehabilitation, the punishment could bring about a reduction in crime by handling the punishee in such a way that he is no longer disposed to engage in criminal behaviour. It might accomplish this in one of two ways. The first way is to educate the punishee so that he acquires sufficient moral insight and concern that he will hearken to his conscience and henceforth shun a life of crime. . . . The second way is to treat the punishee in some other, non-educative manner that is designed to ensure that crime

The four classic theories of punishment are: retribution, deterrence, incapacitation,<sup>81</sup> and rehabilitation. But, is there room for VR under any of these theories? The short answer is yes. Of the four theories of punishment, VR is already being used toward satisfying rehabilitation.<sup>82</sup> For example, the Fremont Correctional Facility, in Colorado, “started an early-release program for people convicted as juveniles and who’ve already served 20 years of their sentence.”<sup>83</sup> In this cutting edge rehabilitative program, inmates are afforded the opportunity to don head-mounted displays and hold input devices, giving them an immersive experience in VR.<sup>84</sup> The prisoners then run through a series of scenarios, such as doing laundry or buying groceries at a grocery store, to teach them the skills they need to successfully reacclimate with society.<sup>85</sup>

Similarly, VR has immense possibilities in the realm of education.<sup>86</sup> By using VR to educate prisoners, prisoners can learn in ways that are far superior to traditional prison learning environments.<sup>87</sup> The prisoner can learn at her own pace, from her own point of view that best suits her learning ability, and can repeat information as much as needed.<sup>88</sup>

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no longer holds the same attraction from him or, if it does, has come to hold an even stronger countervailing repulsion.

MICHAEL J. ZIMMERMAN, *THE IMMORTALITY OF PUNISHMENT* 41 (2011); *see also* FRANCIS T. CULLEN & KAREN E. GILBERT, *REAFFIRMING REHABILITATION* 247–48 (1982) (“[R]ehabilitation promises a payoff to society in the form of offenders transformed into law-abiding . . . citizens who no longer desire to victimize the public. Yet treatment ideology also conveys the strong message that this utilitarian outcome can only be achieved if society is willing to punish its captives humanely . . .”).

<sup>81</sup> The possibility of virtual reality satisfying incapacitation will not be discussed in this Comment.

<sup>82</sup> *See, e.g.*, Luke Dormehl, *VR Rehab Could Help Prisoners Learn the Valuable Life Skills They Need*, *DIGITAL TRENDS* (May 2, 2017), <https://www.digitaltrends.com/cool-tech/vr-tech-prisoners-rehabilitation/>; Catherine Kim, *Introducing Inmates to Real Life Via Virtual Reality*, *U.S. NEWS* (Mar. 15, 2018), <https://www.usnews.com/news/best-states/articles/2018-03-15/introducing-inmates-to-real-life-via-virtual-reality>.

<sup>83</sup> Taylor Dolven & Emma Fidel, *This Prison Is Using VR to Teach Inmates How to Live on the Outside*, *VICE NEWS* (Dec. 27, 2017), [https://news.vice.com/en\\_us/article/bjym3w/this-prison-is-using-vr-to-teach-inmates-how-to-live-on-the-outside](https://news.vice.com/en_us/article/bjym3w/this-prison-is-using-vr-to-teach-inmates-how-to-live-on-the-outside).

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> Some initiatives have been made in order to enhance the possibilities VR brings to education. For example, the U.S. Department of Education created an EdSim Challenge to encourage VR and AR developers to develop educational simulations. Jamie Feltham, *U.S. Department of Education Embraces VR/AR with \$680K EdSim Challenge*, *UPLOAD* (Nov. 3, 2016), <https://uploadvr.com/u-s-department-education-embraces-vr-ar-680k-edsim-challenge/>.

<sup>87</sup> *See, e.g.*, David Jagneaux, *Second Chances: How Virtual Reality Could be Used to Rehabilitate Convicted Criminals*, *UPLOAD* (Dec. 16, 2016), <https://uploadvr.com/virtual-rehab-vr/>; Leigh-Marama McLachlan, *Virtual Reality Unlocking Educational Doors for Inmates*, *RNZ* (Nov. 26, 2018), <https://www.radionz.co.nz/news/national/376842/virtual-reality-unlocking-educational-doors-for-inmates>.

<sup>88</sup> Christopher Zoukis, *Virtual Reality Behind Bars Could Change the Game for Prisoners*, *HUFFINGTON POST* (Nov. 15, 2016), [https://www.huffingtonpost.com/christopher-zoukis/virtual-reality-behind-ba\\_b\\_12791456.html](https://www.huffingtonpost.com/christopher-zoukis/virtual-reality-behind-ba_b_12791456.html).

VR is also breaking ground in the field of psychology.<sup>89</sup> By transporting the user to any number of virtual environments, psychologists are able to treat anxiety and certain phobias.<sup>90</sup> Recently, there have been efforts to use VR to treat post-traumatic stress disorder.<sup>91</sup> Using VR to treat prisoners is a step in the right direction toward rehabilitating them back into society.

The more difficult question is whether VR can be used to satisfy retribution and deterrence. VR arguably works as punishment under the framework of retribution. If the retributivist seeks to punish the criminal for the pain the criminal deserves,<sup>92</sup> then VR can achieve the retributivist's goal.<sup>93</sup> VR, as discussed below, can provide a virtual environment in which the criminal is punished for the crime he or she commits.<sup>94</sup> And, perhaps, the virtual environment could even go a step further in providing punishment.<sup>95</sup> This would, of course, satisfy deterrence.<sup>96</sup> By providing a virtual environment in which the criminal is punished to a greater effect or proportion than the crime he or she committed, future criminals may be deterred. Thus, it is clear that VR, through the use of different virtual environments, has the potential to satisfy retribution, deterrence, and rehabilitation.

### *B. Cruel and Unusual and Societal Pull*

There has been a comparatively slow evolution of Eighth Amendment jurisprudence in American history.<sup>97</sup> But the concept of cruel and unusual

<sup>89</sup> See, e.g., Daniel Freeman & Jason Freeman, *Why Virtual Reality Could be a Mental Health Gamechanger*, *GUARDIAN* (Mar. 22, 2017), <https://www.theguardian.com/science/blog/2017/mar/22/why-virtual-reality-could-be-a-mental-health-gamechanger>; Sue Halpern, *Virtual Iraq*, *THE NEW YORKER* (May 19, 2008), <https://www.newyorker.com/magazine/2008/05/19/virtual-iraq>; Cade Metz, *A New Way for Therapists to Get Inside Heads: Virtual Reality*, *N.Y. TIMES* (July 30, 2017), <https://www.nytimes.com/2017/07/30/technology/virtual-reality-limbix-mental-health.html>.

<sup>90</sup> E.g., Kirsten Weir, *Virtual Reality Expands its Reach*, *AM. PSYCHOL. ASS'N* (Feb. 2018), <https://www.apa.org/monitor/2018/02/virtual-reality.aspx>; Amy Westervelt, *Virtual Reality as a Therapy Tool; Doctors Say Immersing Patients in Simulated Situations Helps Them Confront Their Worst Fears*, *WALL ST. J.* (Sep. 26, 2015), <https://www.wsj.com/articles/virtual-reality-as-a-therapy-tool-1443260202>.

<sup>91</sup> See, e.g., Halpern, *supra* note 89; James Lake, *Virtual Reality Exposure Therapy for PTSD in the Military*, *PSYCHOL. TODAY* (Feb. 19, 2017), <https://www.psychologytoday.com/us/blog/integrative-mental-health-care/201702/virtual-reality-exposure-therapy-ptsd-in-the-military>; Kevin Loria, *Virtual Reality is About to Completely Transform Psychological Therapy*, *BUS. INSIDER* (Jan. 22, 2016), <https://www.businessinsider.com/how-virtual-reality-is-used-for-ptsd-and-anxiety-therapy-2016-1>.

<sup>92</sup> GRUPP, *supra* note 72, at 5 (“The Retributivist defends the desirability of a punitive response to the criminal by saying that the punitive reaction is the pain the criminal deserves, and that it is highly desirable to provide for an orderly, collective expression of society’s natural feeling of revulsion toward . . . criminal acts.”).

<sup>93</sup> See *infra* Section III.A.

<sup>94</sup> See *infra* Section III.B.

<sup>95</sup> See *infra* Section III.C.

<sup>96</sup> See Stinneford, *supra* note 67, at 916.

<sup>97</sup> Though the Eighth Amendment was ratified in 1791, the first Eighth Amendment case did not appear before the Supreme Court until 1867. See *Pervear v. Commonwealth*, 72 U.S. 475, 476 (1867). Though the Court did not consider the substantive issue in the case, it held that the Eighth Amendment did not “apply to State but to National Legislation.” *Id.* at 479–80.

punishment has its roots in early English history.<sup>98</sup> The concept made its way to North America during the middle of the seventeenth century by the Massachusetts Body of Liberties with the “first detailed enactment by a colonial legislature on the subject of human rights . . . .”<sup>99</sup> Subsequently, most colonies had versions of cruel and unusual punishment clauses in their constitutions.<sup>100</sup> During the next 150 years, society continued to accept different forms of corporal punishments, the most common form being whipping.<sup>101</sup> Certain forms of incorporeal punishments were also socially acceptable, such as certain humiliating devices and public penance.<sup>102</sup> With the ratification of the Bill of Rights, the Eighth Amendment was born, and a new era of cruel and unusual punishment began.

Since ratification, the Supreme Court’s Eighth Amendment jurisprudence has left many unanswered questions.<sup>103</sup> However, there are two categories of Eighth Amendment jurisprudence that provide the scaffolding in which to examine how the Eighth Amendment applies to VR: (1) proportionality, and (2) evolving standards of decency.

First, the idea that punishment should be proportional is one that society has accepted for some time.<sup>104</sup> Even before the Supreme Court first interpreted the Cruel and Unusual Punishments Clause, “punishments within statutory limits would not be held cruel and unusual unless the punishment was grossly and inordinately disproportionate to the offense so that the sentence was evidently

<sup>98</sup> See, e.g., LARRY CHARLES BERKSON, *THE CONCEPT OF CRUEL AND UNUSUAL PUNISHMENT* 3 (1975) (“The present day language of the concept [was] first found in the English Bill of Rights (1689) . . . .”); BESSLER, *supra* note 7, at 171 (“The Magna Carta of 1215 guaranteed proportionate fines, tying ‘ameracements’ to the ‘gravity,’ ‘degree,’ or ‘manner’ of the offense; the 1682 Frame of Government of Pennsylvania provided that ‘all fines shall be moderate’; and the English Bill of Rights of 1689 . . . forbade . . . ‘cruell and unusuall Punishments.’”); Anthony F. Granucci, “*Nor Cruel and Unusual Punishments Inflicted.*” *The Original Meaning*, 57 CALIF. L. REV. 839, 852–53 (1969) (“[A] declarations of rights was drafted which the new monarchs, William and Mary, would ratify. The tenth declaratory clause of the bill . . . was transcribed verbatim into the Virginia Declaration of Rights in 1776 . . . .”); John F. Stinneford, *The Original Meaning of “Cruel”*, 105 GEO. L. J. 441, 474 (2017) (“The English Bill of Rights, adopted in 1689, contains the first known use of the phrase ‘cruell and unusuall [p]unishments.’”); Clifton Leaf, *Cruel and Unusual*, FORTUNE (June 28, 2018), <http://fortune.com/2018/06/28/trump-border-separations-cruel-and-unusual/> (“[T]racing back to the Virginia Declaration of Rights of 1776, and before that to the English Bill of Rights in 1689, and before that to the English common law, and before that to the *lex talionis*, and the Leviticus . . . .”).

<sup>99</sup> BERKSON, *supra* note 98, at 4; see also David Fellman, *Cruel And Unusual Punishments*, 19 J. POL. 34, 34 (1957) (“Section 46 of the Massachusetts Body of Liberties of 1641 declared that ‘for bodilie punishments we allow amongst us none that are inhumane Barbarous or cruell.’”).

<sup>100</sup> BESSLER, *supra* note 7, at 177–79; Fellman, *supra* note 99, at 34.

<sup>101</sup> See, e.g., BERKSON, *supra* note 98, at 5–6; PESTRITTO, *supra* note 75, at 119 (“The Crimes Act also added corporal punishments for some crimes: whippings of up to thirty-nine stripes for stealing or falsifying federal records, for larceny, and for receiving stolen goods, and an hour in the pillory for perjury.”).

<sup>102</sup> BERKSON, *supra* note 98, at 5 (“Physical harm often accompanied such punishment, as onlookers threw stones and other missiles at the helpless convicts . . . .”).

<sup>103</sup> See John F. Stinneford, *The Original Meaning of “Unusual”: The Eighth Amendment as a Bar to Cruel Innovation*, 102 NW. U. L. REV. 1739, 1751–53 (2008).

<sup>104</sup> It is important to note that the idea of proportionality is not without controversy. See Stinneford, *supra* note 67, at 938 (“Justice Scalia has made a textual and an historical argument against the proposition that the Cruel and Unusual Punishments Clause prohibits excessive punishments.”).

dictated not by a sense of public duty, but by passion, prejudice, ill-will, or another unworthy motive.”<sup>105</sup> The Supreme Court has also contemplated whether proportionality applies to the Cruel and Unusual Punishments Clause<sup>106</sup> ever since the Court incorporated the Punishments Clause, applying it to the states through the Due Process Clause of the Fourteenth Amendment.<sup>107</sup> However, the theory of proportionality is not without controversy in the Supreme Court’s jurisprudence.

For example, in *Harmelin v. Michigan*,<sup>108</sup> the Court, in an opinion composed by Justice Scalia and Justice Kennedy, offered insight into its proportionality jurisprudence.<sup>109</sup> Justice Scalia argued that proportionality does not apply between crime and punishment.<sup>110</sup> Thus, he did not find that an extremely harsh prison sentence was cruel and unusual under the Eighth Amendment.<sup>111</sup> On the other hand, Justice Kennedy argued that proportionality should apply to the Eighth Amendment, but still found that the prison sentence did not violate the Eighth Amendment.<sup>112</sup> This is because Justice Kennedy, in an attempt to determine the scope of proportionality, developed the “grossly disproportionate” test,<sup>113</sup> which would virtually make any prison sentence valid under the Punishments Clause.<sup>114</sup> Therefore, even under the framework of Justice Kennedy’s proportionality doctrine, apart from capital cases,<sup>115</sup> it is very unlikely that a prison sentence will be found

<sup>105</sup> BERKSON, *supra* note 98, at 9.

<sup>106</sup> See *Atkins v. Virginia*, 536 U.S. 304, 311 (2002); *Harmelin v. Michigan*, 501 U.S. 957, 997–98 (1991); *Robinson v. California*, 370 U.S. 660, 666–67 (1962).

<sup>107</sup> In *Robinson v. California*, the Supreme Court determined that the Eighth Amendment’s Cruel and Unusual Punishments Clause applied to the state through the Fourteenth Amendment. 370 U.S. 660, 667 (1962). For years before this decision, the Court continually held that the Cruel and Unusual Punishments Clause did not apply to the states. See *Pervear v. Massachusetts*, 72 U.S. 475 (1867); *In re Kemmler*, 136 U.S. 436 (1890); *O’Neil v. Vermont*, 144 U.S. 323 (1892).

<sup>108</sup> 501 U.S. at 961. In *Harmelin*, the petitioner was convicted of possession of cocaine. A Michigan law required that anyone guilty of this offense would be mandatorily sentenced to life in prison without the possibility of parole. *Id.*

<sup>109</sup> See Youngjae Lee, *The Constitutional Right Against Excessive Punishment*, 91 VA. L. REV. 677, 695–97 (2005); Alice Ristroph, *Proportionality as a Principle of Limited Government*, 55 DUKE L.J. 263, 309–10 (2005).

<sup>110</sup> *Harmelin*, 501 U.S. at 994–96.

<sup>111</sup> *Id.*

<sup>112</sup> *Id.* at 996 (Kennedy, J., concurring in part and concurring in judgement).

<sup>113</sup> *Id.* at 1001 (“The Eighth Amendment does not require strict proportionality between crime and sentence. Rather, it forbids only extreme sentences that are ‘grossly disproportionate’ to the crime.”).

<sup>114</sup> For example, in *Ewing v. California*, Ewing stole three golf clubs and, under California’s three strikes law, was sentenced to twenty-five years to life in prison. 538 U.S. 11, 28 (2003). The majority, which Justice Kennedy joined, determined that this sentence was not grossly disproportionate to the crime, and, thus, was not unconstitutional under the Punishment’s Clause. *Id.* at 30–31.

<sup>115</sup> The Court has been slow to hold certain aspects of capital punishment unconstitutional. It was not until 1986 that the Court finally held that it was unconstitutional to execute a prisoner, under the Punishments Clause, who was mentally insane. See *Ford v. Wainwright*, 477 U.S. 399 (1986) (plurality opinion). Even more shocking, it was not until 2005 that the Court held that it was unconstitutional, under the Punishments Clause, to execute a prisoner who was under eighteen-years-old during the commission of the crime. See *Roper v. Simmons*, 543 U.S. 551 (2005). Though these punishments were held unconstitutional under a proportionality lens, the analysis is not the same as non-capital cases. That is, the reasoning behind the Court decisions in these examples is distinct to capital cases. The same cannot be said for non-capital cases. In non-capital cases, the Court is very hesitant to hold any legislatively enacted punishment

unconstitutional, because the “grossly disproportionate” test is so hard to overcome.<sup>116</sup> And, because the Court shows such deference to the legislature in determining proportionality,<sup>117</sup> the Court will likely uphold any prison sentence. Given that the Court is intent on showing great deference to the legislature, what is the impact when VR serves as a punishment?<sup>118</sup>

Next, though proportionality is one framework in which these questions can be analyzed, the second, and arguably stronger, framework is that of “evolving standards of decency.”<sup>119</sup> The Court has, through its interpretation of the Eighth Amendment, reinforced the idea that punishment is a product of what society deems acceptable at the time. In *Weems v. United States*, the Court held that it was cruel and unusual to punish a man for fifteen years with chains<sup>120</sup> and hard labor simply for falsifying a document.<sup>121</sup> In its opinion, the Court hinted at society’s influence on the Eighth Amendment when it stated that “[t]he clause of the Constitution . . . may be therefore progressive . . . [and] may acquire meaning as public opinion becomes enlightened by a humane justice.<sup>122</sup> Again, in *Trop v. Dulles*, the Court hinted at society’s influence when it stated that the Eighth Amendment “must draw its meaning from evolving standards of decency that mark the progress of a maturing society.”<sup>123</sup>

The Court has kept the “evolving standards of decency” language throughout its recent Eighth Amendment jurisprudence.<sup>124</sup> According to Professor Stinneford, the test has two purposes:

First, it purports to be objective. By looking to various external indicia of current societal moral standards, it is claimed, the Court may make decisions regarding the constitutionality of punishment without relying on the subjective feelings of the individual Justices. Second, the evolving standards of decency test is supposed to free us from the outmoded standards of a vengeful past. When the Eighth Amendment

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unconstitutional for the reasons explained throughout this Section. Furthermore, the analysis used in capital cases may only provide insight into determining how different virtual environments might be unconstitutional, while the method of the punishment is constitutional. *See infra* Section III.C.

<sup>116</sup> *See, e.g.*, Erwin Chemerinsky, *Cruel and Unusual Punishment*, 12 *AMASS* 63, 63–65 (2003).

<sup>117</sup> *Harmelin*, 501 U.S. at 985 (“Neither Congress nor any state legislature has ever set out with the objective of crafting a penalty that is ‘disproportionate’ . . .”).

<sup>118</sup> *See infra* Section III.C.

<sup>119</sup> *See* Meghan J. Ryan, *Does the Eighth Amendment Punishments Clause Prohibit Only Punishments That Are Both Cruel and Unusual?*, 87 *WASH. U. L. REV.* 567, 584–91 (2010); John F. Stinneford, *The Illusory Eighth Amendment*, 63 *AM. U. L. REV.* 437, 476 (2013) (“[T]he ‘evolving standards of decency’ test . . . [is where] the Court asks whether a given punishment violates a current societal moral consensus . . .”).

<sup>120</sup> BESSLER, *supra* note 7, at 197 (“This bizarre penalty [cadena temporal], which was unknown to Anglo-Saxon law, entailed a minimum of 12 years’ imprisonment chained day and night at the wrists and ankles, hard and painful labor while so chained, and a number of ‘accessories’ including lifetime civil disabilities.”).

<sup>121</sup> 217 U.S. 349, 381 (1910).

<sup>122</sup> *Id.* at 378.

<sup>123</sup> 356 U.S. 86, 101 (1958).

<sup>124</sup> *See, e.g.*, *Roper v. Simmons*, 543 U.S. 551, 561 (2005).

was adopted, punishments such as flogging, mutilation, and branding were permissible. The death penalty was imposed for crimes as minor as the stealing of a “ship or vessel, or any goods or merchandise to the value of fifty dollars.” The evolving standards of decency test frees the Court from these harsh standards and allows it to enforce the presumed kinder and more civilized standards of today.<sup>125</sup>

However, as is the case with Eighth Amendment jurisprudence, the Court has muddied the standard that it claims to accept. In fact, the Court has overturned punishments that society and legislatures have deemed acceptable at the time.<sup>126</sup> Nonetheless, it is clear that under the evolving standards of decency test, the Court still shows great deference to society and the legislature before holding a punishment unconstitutional. For instance, in *Furman*, although wrong in its determination that society’s acceptance of the death penalty was dwindling, the Court looked to the national consensus on the death penalty.<sup>127</sup>

Regarding the Court’s deference to the legislature, the Court, outside of capital cases, has not struck down legislatively enacted punishments under the Eighth Amendment.<sup>128</sup> In *Weems* and *Trop*, the Court struck down both punishments under the Eighth Amendment;<sup>129</sup> however, both were punishments that were never legislatively enacted nor would ever be enacted. Because of this reason, the medieval punishment and loss of citizenship were easy for the Court to strike down. There is an agreed upon consensus that the Court prohibits excessive or barbaric punishments.<sup>130</sup> Yet when a majority of society approves of a punishment and the legislature enacts it—according to this history of Eighth Amendment jurisprudence—the Court will almost never strike down that punishment under the Punishments Clause, regardless of whether it is reviewed under the proportionality framework or the evolving standards of decency framework.

Currently, society has “matured” into a technological era. Technology is so intertwined with our daily lives that it would be hard to imagine a world without it. As VR becomes more mainstream, society is accepting its injection into daily life.<sup>131</sup> Therefore, it is not beyond imagination that as society continues to “mature,” it will accept VR as punishment. After all, VR is already being used in the area of rehabilitation.<sup>132</sup> Of course, a maturing society is only part of the equation. The

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<sup>125</sup> Stinneford, *supra* note 67, at 918.

<sup>126</sup> See, e.g., *Furman v. Georgia*, 408 U.S. 238, 240 (1972); see also Northwestern University Pritzker School of Law, *Cruel and Unusual Punishment*, 63 J. CRIM. L. & CRIMINOLOGY 484, 484–92 (1972).

<sup>127</sup> *Furman*, 408 U.S. at 299 (Brennan, J., concurring) (“The evolution of this punishment evidences, not that it is an inevitable part of the American scene, but that it has proved progressively more troublesome to the national conscience.”).

<sup>128</sup> *But see* *Miller v. Alabama*, 567 U.S. 460, 489 (holding that mandatory life imprisonment without the possibility of parole violates the Eighth Amendment).

<sup>129</sup> See CHRISTOPHER E. SMITH, *THE REHNQUIST COURT AND CRIMINAL PUNISHMENT* 42–43 (1997).

<sup>130</sup> Stinneford, *supra* note 67, at 910.

<sup>131</sup> See *supra* Section I.C.

<sup>132</sup> See *supra* Section II.A.

punishment must also be aligned with the “evolving standards of decency” of society.<sup>133</sup> For this, the Court also “takes into account objective evidence of contemporary values before determining whether a punishment comports with the fundamental human dignity that the [Eighth] Amendment protects.”<sup>134</sup> Thus, when society morally accepts VR as punishment, the Court will have its “objective” evidence.

If this seems like the plot of a science fiction novel, think again. Society has already begun to accept VR in many industries, such as medicine,<sup>135</sup> psychiatry,<sup>136</sup> entertainment,<sup>137</sup> and defense.<sup>138</sup> It is only a matter of time before society begins to explore the idea of using it to punish criminals.<sup>139</sup> As the technology evolves and society becomes increasingly intertwined with the use of VR, the Court will have its objective evidence that society accepts VR. But even if the Court accepts VR as a method of punishment, what would be the Eighth Amendment implications of using different degrees of virtual environments to punish criminals?

### III. VIRTUAL REALITY AS PUNISHMENT THROUGH VIRTUAL ENVIRONMENTS

#### A. *Virtual Environments That Mimic Punishments Currently Accepted By Society*

Placing a criminal in a virtual environment that mimics already established physical environments used to punish poses an interesting question for society.<sup>140</sup> To what extent will society morally allow the use of virtual environments to replicate or amplify punishment? As a thought experiment, imagine a criminal who is placed in prison for committing a crime. Society accepts the premise that, if a criminal commits a certain crime, she should be punished, often times confining the individual in prison. Now, imagine that while this prisoner is in her jail cell, she is required to don a head-mounted display. She is placed in a virtual environment that completely replicates her physical environment—she is still confined to the four

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<sup>133</sup> *Trop v. Dulles*, 356 U.S. 86, 101 (1958).

<sup>134</sup> *Ford v. Wainwright*, 477 U.S. 399, 406 (1986).

<sup>135</sup> See, e.g., Sarah DiGiulio, *3 Ways Virtual Reality Is Transforming Medical Care*, NBC NEWS: MACH (Aug. 22, 2017), <https://www.nbcnews.com/mach/science/3-ways-virtual-reality-transforming-medical-care-cna794871>; Lucette Lagnado, *Enlisting Virtual Reality To Ease Real Pain*, WALL ST. J. (July 24, 2017), <https://www.wsj.com/articles/enlisting-virtual-reality-to-ease-real-pain-1499869442>; Abigail Zuger, *Yes, Medicine Can Use Virtual Reality, Emphasis On Reality*, N.Y. TIMES: WELL (Aug. 15, 2016), <https://well.blogs.nytimes.com/2016/08/15/yes-medicine-can-use-virtual-reality-emphasis-on-reality/>.

<sup>136</sup> See *supra* note 89 and accompanying text.

<sup>137</sup> See, e.g., Katie Benner & Emily Steel, *Virtual Reality Lures Media Companies to A New Frontier*, N.Y. TIMES (Apr. 19, 2016), <https://www.nytimes.com/2016/04/20/technology/virtual-reality-lures-media-companies-to-a-new-frontier.html>; Carlos M. Gutierrez, Jr., *Virtual Reality Is Changing The Entertainment Business*, HUFFINGTON POST (May 16, 2017), [https://www.huffingtonpost.com/entry/virtual-reality-is-changing-the-entertainment-business\\_us\\_591a17d2e4b0f31b03fb9e41](https://www.huffingtonpost.com/entry/virtual-reality-is-changing-the-entertainment-business_us_591a17d2e4b0f31b03fb9e41).

<sup>138</sup> See, e.g., Adam Stone, *How Virtual Reality Is Changing Military Training*, INSIGHTS: DEFENSE (July 13, 2017), <https://insights.samsung.com/2017/07/13/how-virtual-reality-is-changing-military-training/>.

<sup>139</sup> See *supra* note 82.

<sup>140</sup> This section will not be a comprehensive discussion of current punishments accepted by society. Rather, it will simply present a few scenarios for further study.

walls of her jail cell in the virtual environment.<sup>141</sup> Here, nothing has changed, except for the fact that the prisoner is now in a virtual world as opposed to her physical world. The punishment is exactly the same. Only the method has changed. This replication by virtual environment should pose no problems for society or the Eighth Amendment.

However, what if the punishment, through the virtual environment, was amplified? While the prisoner is still physically in her same jail cell, she is now placed in a virtual environment in which she is in solitary confinement.<sup>142</sup> Would this current form of punishment offend society? Though solitary confinement has its issues, it is still currently used in many prisons throughout the United States,<sup>143</sup> and it is still not unconstitutional to carry out this form of punishment.<sup>144</sup> In this case, the prisoner would not actually be in solitary confinement; she would only be immersed in a virtual environment in which she was in solitary confinement.<sup>145</sup> Again, this situation would seem to cause no issue with the majority of society. Prisoners are in solitary confinement each day without society giving much thought to the morality of the situation.<sup>146</sup> Generally, solitary is reserved for “bad” inmates.<sup>147</sup> But, if society continues to accept solitary confinement as a form of punishment, then placing a criminal in a virtual environment that replicates solitary confinement should not pose a substantial issue under the Eighth Amendment. Again, in this instance, only the method of punishment would change, not the actual physical punishment.

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<sup>141</sup> The VR technology for this thought experiment already exists. For example, Project Empathy, a virtual reality company that makes VR films, has created a VR environment where the user experiences what it is like to be in prison. Daniel River, *Virtual Reality Series Lets You Experience Life in Prison*, BUS. INSIDER (Sep. 15, 2016), [https://www.businessinsider.com/virtual-reality-prison-project-empathy-2016-9?amp;utm\\_medium=referral](https://www.businessinsider.com/virtual-reality-prison-project-empathy-2016-9?amp;utm_medium=referral); cf. Caroline Davies, *Welcome to Your Virtual Cell: Could You Survive Solitary Confinement?*, GUARDIAN (Apr. 27, 2016), <https://www.theguardian.com/world/2016/apr/27/6x9-could-you-survive-solitary-confinement-vr> (using virtual reality for solitary confinement); Zara Stone, *Virtual Reality's Role in Building the Next Generation of Jails*, FORBES (June 24, 2018), <https://www.forbes.com/sites/zarastone/2018/06/24/virtual-realitys-role-in-building-the-next-generation-of-jails/#3c221ef4311e> (using virtual reality for prison design).

<sup>142</sup> The technology to place an individual in a solitary confinement virtual environment also currently exists. Davies, *supra* note 141.

<sup>143</sup> See R. George Wright, *What (Precisely) Is Wrong with Prolonged Solitary Confinement*, 64 SYRACUSE L. REV. 297, 301–04 (2014); Jason M. Breslow, *What Does Solitary Confinement Do to Your Mind?*, FRONTLINE (Apr. 22, 2014), <https://www.pbs.org/wgbh/frontline/article/what-does-solitary-confinement-do-to-your-mind/> (“[S]olitary can cause a specific psychiatric syndrome, characterized by hallucinations; panic attacks; overt paranoia; diminished impulse control; hypersensitivity to external stimuli; and difficulties with thinking, concentration and memory.”).

<sup>144</sup> *McElvaine v. Brush*, 142 U.S. 155, 158–159 (1891).

<sup>145</sup> See Davies, *supra* note 141.

<sup>146</sup> Editorial Board, *Solitary Confinement Is an Affront to Human Decency*, WASH. POST (Oct. 13, 2018), [https://www.washingtonpost.com/opinions/easing-the-torture-of-solitary-confinement/2018/10/13/68c50238-cd80-11e8-920f-dd52e1ae4570\\_story.html?utm\\_term=.5f307af76246](https://www.washingtonpost.com/opinions/easing-the-torture-of-solitary-confinement/2018/10/13/68c50238-cd80-11e8-920f-dd52e1ae4570_story.html?utm_term=.5f307af76246) (“According to a new survey by the Association of State Correctional Administrators and the Liman Center at Yale Law School . . . the number of such inmates [in solitary] in state prisons, where most of America’s incarcerated population resides, is falling.”).

<sup>147</sup> See *id.* (“[T]he path of least resistance for disciplining unruly inmates has run directly to solitary confinement . . .”).

What if the punishment, through the virtual environment, was again amplified? This time, while the inmate remains in her original jail cell, she is placed in a virtual environment in which she is detained in a CIA camp somewhere in the Middle East.<sup>148</sup> She experiences that, as she looks to her right, she sees her reflection in a mirror.<sup>149</sup> Furthermore, each time she looks in this mirror, she is reminded that her body is contorted to fit inside a small box.<sup>150</sup> Additionally, she is forced to listen to heavy-metal music playing at a high volume.<sup>151</sup> After a short period of time, the inmate, though in reality sitting in her comparatively more comfortable jail cell, would begin to believe and experience the discomfort of actually being in the real-world situation her virtual environment portrays her in.<sup>152</sup> Would this virtual environment survive the Punishments Clause?

Initially, it may seem that this virtual environment has pushed the envelope. This scenario is one usually left to situations of national security.<sup>153</sup> After all, this practice that the virtual environment simulates would not be allowed in United States prisons. But how much pain is this punishment actually causing the inmate? She is not actually being detained in a CIA camp. Her body is not actually contorted. Society is presented an option on whether to morally accept this form of punishment. Physical pain can stem from this virtual environment,<sup>154</sup> however, not more pain, arguably, than is conceivable from being placed in solitary confinement. Or, how about the pain of being in prison for years? Would society be more willing to accept this punishment on a proportional basis?

Examining two scenarios might start to answer this question. Criminal A is sent to prison for a minor drug crime.<sup>155</sup> Criminal B is sent to prison for kidnapping.<sup>156</sup> Criminals A and B are both individually placed in the CIA detention

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<sup>148</sup> Nonny de la Peña, Peggy Well, Joan Llobera, Elias Giannopoulos, Ausiàs Pomés, Bernhard Spanlang, Doron Friedman, Maria V. Sanchez-Vives & Mel Slater, *Immersive Journalism: Immersive Virtual Reality for the First-Person Experience of News*, 19 PRESENCE: VIRTUAL & AUGMENTED REALITY 291, 295 (2010).

<sup>149</sup> *Id.* at 297.

<sup>150</sup> *See id.* at 297–98.

<sup>151</sup> *Cf. id.* at 295–97.

<sup>152</sup> *Id.* at 297–98. The brain can be tricked to believe that it is in a certain situation that it is not in, thus allowing an individual to experience sensations that are not actually happening to the individual. *E.g.*, H. Henrik Ehrsson, Nicholas P. Holmes & Richard E. Passingham, *Touching a Rubber Hand: Feeling of Body Ownership Is Associated with Activity in Multisensory Brain Areas*, 25 J. NEUROSCIENCE 10565, 10569–71 (2005).

<sup>153</sup> *See* Associated Press, *These Are the 13 ‘Enhanced Interrogation Techniques’ the CIA Used on Detainees*, BUS. INSIDER (Dec. 10, 2014), <https://www.businessinsider.com/the-13-enhanced-interrogation-techniques-the-cia-used-on-detainees-2014-12> (“Cramped Confinement—The interrogator would put the detainee in a box, sometimes big enough to stand in, for up to 18 hours, or only one big enough to curl up in for up to two hours . . . .”); Sheri Fink & James Risen, *Psychologists Open a Window on Brutal C.I.A. Interrogations*, N.Y. TIMES (June 21, 2017), <https://www.nytimes.com/interactive/2017/06/20/us/cia-torture.html>; Larry Siems, *Inside the CIA’s Black Site Torture Room*, GUARDIAN (Oct. 9, 2017), <https://www.theguardian.com/us-news/ng-interactive/2017/oct/09/cia-torture-black-site-enhanced-interrogation>.

<sup>154</sup> *See* de la Peña et al., *supra* note 147, at 298.

<sup>155</sup> *E.g.*, 21 U.S.C. § 863(a)(1) (2018) (for example, the “sell or offer for sale [of] drug paraphernalia.”).

<sup>156</sup> 18 U.S.C. § 1201(a) (2018).

virtual environment.<sup>157</sup> The utilitarian would argue that placing criminal A in this virtual environment could have great value, in terms of deterrence. Placing the criminal in a virtual environment that exceeds the punishment society would deem proportional to the offense could deter future criminals. But perhaps additional justifications would be required for the majority of society to accept this virtual environment being used on criminal A because, of course, it may be easier to justify this virtual environment for criminal B. In line with retributivist theory, criminal B deserves to be placed in this virtual environment. The retributivist may argue that criminal B needs to feel what it is like to be the victim of a kidnapping, trapped in an unknown environment.

What would it take for the majority of society to accept this virtual environment for both criminals? A solution may come from fact that the virtual environment is not real, even though with deep immersion into the virtual environment the criminal will believe that their experience is real. Thus, society should be ready to decide the tough question of whether using a virtual environment that goes beyond a punishment we would currently deem appropriate agrees with evolving standards of decency. If we allow these punishments—placing someone in jail, solitary confinement, in a detention camp (in extreme cases)—in real life, would replicating them in virtual environments be any different? Since these forms of real-world punishment are sound under the Punishments Clause,<sup>158</sup> replicating them should pose no issue.

Again, the punishment is the same, but the method of delivery is different. Even when the punishment, through the use of a virtual environment, is disproportionately (to the offense) amplified, the Court should look to society for the answer to whether the virtual environment is justified. Moreover, if the legislature approves of these sorts of virtual environments that mimic already established punishments in our criminal justice system under the Court's proportionality doctrine, the Court will be extremely hesitant to conclude that the punishment violates the Eighth Amendment.<sup>159</sup> But what happens when the virtual environment provides a punishment that replicates the crime that the criminal committed?

### *B. Virtual Environments that Replicate Crimes Committed*

Punishing a criminal by exacting the same crime against them has been banned by society for some time. Even the retributivist would say that this form of punishment would go too far. An “eye for an eye” is a relic of the past, with the exception of the death penalty. However, VR may be able to place an additional

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<sup>157</sup> See *supra* text accompanying note 148.

<sup>158</sup> Sentencing an individual to prison is not antithetical to the Punishments Clause. Furthermore, as already mentioned, solitary confinement has been held constitutional under the Punishments Clause. See *McElvaine v. Brush*, 142 U.S. 155, 158–61 (1891). Finally, cramped confinement has been used, for the most part, in national security instances. See *supra* note 153 and accompanying text. However, the Supreme Court has not heard a case involving cramped confinement, so it is unclear whether it would survive the Eighth Amendment's Punishments Clause (although it likely would not).

<sup>159</sup> See *supra* note 117 and accompanying text.

exception on this form of punishment. It is possible that society could accept punishing criminals in virtual environments that replicate the offender's crimes, this achieving an "eye for an eye" through VR.

These punishments would most likely be crime specific. However, there are perhaps a few instances that could justify this form of punishment. Take, for example, a person who has committed a child abuse crime.<sup>160</sup> That offender could be immersed in a virtual environment where they are placed in the body of a child.<sup>161</sup> Once fully immersed in this virtual environment, the offender could experience what it was like to be abused—as a child would.<sup>162</sup> The environment would have real, physical effects on the offender.<sup>163</sup> And this would, technically, be equal punishment, classic retribution. What if this offender abused a child for one year? And, what if the offender was kept in this virtual environment for one year? This virtual environment would now not only seem to satisfy retribution but also possibly rehabilitation. A tough, and disturbing, question is whether society would accept this.

With this amplified form of punishment, the question remains: Would this survive the Punishments Clause? It seems that it would depend on whether a maturing society would accept this virtual environment as a form of punishment. VR presents a novel issue in this circumstance. How could society replicate the punishment of child abuse on an adult offender? VR technology provides the capacity to replicate the aforementioned punishment; it allows the offender to be placed in a virtual environment and have the crime he or she committed done to them. Again, the disturbing question must be asked. For a crime of this sensitivity (against children), would society be opposed to inflicting this punishment on the offender?

A comparison to an extreme punishment might provide an answer. In times of war, certain punishments are often used for national security purposes.<sup>164</sup> One

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<sup>160</sup> *E.g.*, IND. CODE § 35-46-1-4(a)–(b), (c) (2018).

<sup>161</sup> See S. Seinfeld, J. Arroyo-Palacios, G. Iruretagoyena, R. Hortensius, L.E. Zapata, D. Borland, B. de Gelder, M. Slater & M.V. Sanchez-Vives, *Offenders Become the Victim in Virtual Reality: Impact of Changing Perspective in Domestic Violence*, 8 SCI. REP., 2018, Art. No. 2692, at 1–2 (Feb.), <https://www.nature.com/articles/s41598-018-19987-7.pdf> ("Here we introduce a new paradigm to study empathy and aggression in violent populations, which includes and goes beyond perspective-taking, since it allows participants to vividly experience a violent virtual situation from the perspective of the victim. This work is based on recent findings that have used immersive virtual reality (VR) to induce full body ownership illusions. In these studies, participants experience the perceptual illusion of ownership over a life-sized virtual body that visually substitutes their own body."); see also Elizabeth Bernstein, *The Future of Therapy: Becoming Someone Else in VR*, WALL ST. J. (Apr. 16, 2018) <https://www.wsj.com/articles/the-future-of-therapy-becoming-someone-else-in-vr-1523888616> (explaining a study done by two researchers in which the person's body is swapped with another body in the virtual environment).

<sup>162</sup> Katherine Purvis, *Virtual Reality Lets Adults See Neglect and Abuse Through a Child's Eyes*, GUARDIAN (Nov. 13, 2017), <https://www.theguardian.com/social-care-network/2017/nov/13/virtual-reality-neglect-abuse-adoption-fostering>.

<sup>163</sup> See Seinfeld et al., *supra* note 161.

<sup>164</sup> See *supra* note 153 and accompanying text.

such punishment is waterboarding.<sup>165</sup> Though it is safe to say that society generally abhors this form of punishment, society accepts it in some circumstances. According to one study, forty-eight percent of Americans still think that there are some circumstances in which torture is acceptable.<sup>166</sup> Could this statistic give us any insight in to whether society would accept a certain virtual environment for crimes it abhors, like child abuse? If virtual environments provide the opportunity for offenders to be punished for crimes society despises, would society not accept it? And if society accepts this punishment, does this not provide the objective evidence the Court wants in order to hold that that form of punishment is not cruel and unusual?<sup>167</sup> But what if VR was used to exceed even that standard? Could we bring back “barbarous methods generally outlawed”?<sup>168</sup>

*C. Virtual Environments that Exceed Punishments Currently Accepted by Society*

The most controversial aspect of using virtual reality to punish arises when the virtual environment exceeds punishments currently accepted by society. We have discussed the different arguments for using VR to replicate currently accepted punishments. Furthermore, we have contemplated whether certain virtual environments that replicate the crime back on the offender may be accepted by society. So, what if VR was used to go beyond that? Would society ever be willing to allow a virtual environment to replicate what would be considered torture?

If we take up our waterboarding example,<sup>169</sup> there are interesting parallels between that form of punishment and VR. While waterboarding simulates drowning, it does simply that: simulates the feeling of drowning.<sup>170</sup> VR is similar in the sense that when a person is placed in a virtual environment, and a criminal is being punished, they are not actually being punished in the same sense they would be were the punishment physically happening to them in a real-world environment. The virtual environment is only simulating the punishment. But which virtual environment is too far, too much, or cruel and unusual?

To make this thought experiment easier, imagine a criminal who has committed the most heinous crime you can imagine. The majority of society would agree that torturing the criminal is cruel and unusual. At worst, the criminal could receive capital punishment. But what if there was a more cost-effective,<sup>171</sup> or time-

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<sup>165</sup> Jessica Schulberg, *Here's What Waterboarding Is Really Like, According to People Who suffered Through It*, HUFFPOST (May 9, 2018), [https://www.huffingtonpost.com/entry/what-waterboarding-is-really-like\\_us\\_5ab3b4bae4b008c9e5f4d6b5](https://www.huffingtonpost.com/entry/what-waterboarding-is-really-like_us_5ab3b4bae4b008c9e5f4d6b5).

<sup>166</sup> Alec Tyson, *Americans Divided in Views of Use of Torture in U.S. Anti-Terror Efforts*, PEW RES. CTR. (Jan. 26, 2017), <http://www.pewresearch.org/fact-tank/2017/01/26/americans-divided-in-views-of-use-of-torture-in-u-s-anti-terror-efforts/>.

<sup>167</sup> See *supra* text accompanying note 134.

<sup>168</sup> *Ford v. Wainwright*, 477 U.S. 399, 406 (1986).

<sup>169</sup> See *supra* note 165 and accompanying text.

<sup>170</sup> Schulberg, *supra* note 165.

<sup>171</sup> See Kelly Phillips Erb, *Consider the Death Penalty: Your Tax Dollars at Work*, FORBES (May 1, 2014), <https://www.forbes.com/sites/kellyphillipserb/2014/05/01/considering-the-death-penalty-your-tax-dollars-at-work/#15d70669664b>.

efficient, way to punish that criminal? What if there was a virtual environment that could satisfy both retributivism and utilitarianism?

Perhaps there could be a virtual environment to punish the criminal based on fear. For instance, imagine this same criminal feared spiders, and he was placed in a virtual environment that completely mimicked his real-world jail cell. However, his jail cell now in the virtual environment contains one spider crawling around his cell. And, as each day passes, an additional spider is added to his jail cell. After thirty days, there would be thirty spiders crawling around his cell. Naturally, as the spiders crawl on him, he feels the experience through his haptic sense.<sup>172</sup> Eventually, there would be hundreds of spiders. This would be torture if this exact experiment happened in reality. In fact, it would be barbaric; the exact genre of punishment the Court outlawed and society disapproved of many years ago. However, this presents the most difficult problem yet because this experience would not physically happen to the criminal. There would not actually be hundreds of spiders crawling around him and his jail cell. It is only a simulation, but at what point would this virtual environment cross the line?

There is of course no precedent for this. This virtual form of punishment may not even be one that the Court is (or should be) prepared to consider. However, the technology is currently available to create this sort of virtual environment.<sup>173</sup> Is society ready to accept this form of punishment? We already allow extreme psychological punishment,<sup>174</sup> so it is not farfetched to imagine that one could ask: why not allow these types of virtual environments? We should at least begin to discuss whether we want to accept this form of punishment in the future. As technology evolves and the use of VR becomes more mainstream, these different avenues of punishment may be explored. If the Court accepts VR as a form of punishment, it will have to parse out which virtual environments survive the Punishments Clause. If we are to guess how the Court will analyze these virtual environments based on the current Eighth Amendment jurisprudence, a few points are clear. If the majority of our maturing society accepts VR as punishment in our criminal justice system, then the Court will have the objective evidence it looks for when deciding cases under the evolving standards of decency doctrine. Moreover, if the legislature were to accept VR as punishment, the Court would be reluctant to hold the legislatively enacted VR as punishment unconstitutional under the Punishments Clause. Lastly, if death penalty jurisprudence is any indication of how the Court analyzes VR, in the sense that the Court holds capital punishment is constitutional but places limits on it,<sup>175</sup> it could take years for the Court to decide what virtual environments are allowed. The possibilities are endless in creating virtual environments that exceed currently accepted forms of punishment, and it

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<sup>172</sup> See *supra* note 58.

<sup>173</sup> See *supra* Section I.C.

<sup>174</sup> See Breslow, *supra* note 143.

<sup>175</sup> See *supra* note 115.

will be up to our maturing society to decide if it wants to accept VR as a form of punishment compatible with its evolving standards of decency. Again, this is why it is important to contemplate these forms of punishment. If we do not, the technology can get ahead of us. And as discussed, the technology could be used to administer disturbing virtual environments.

## CONCLUSION

This Comment is meant to serve as a point of discussion about difficult questions. Society determines punishment. Therefore, society should conduct a discussion about the future of punishment, so it can continue to “mature” and choose the most effective forms of punishment. Equally important, society should attempt to understand the consequences of the punishment it deems most effective. VR, once a topic of science fiction, is here to stay. VR is a rapidly growing area of technology, and, as each day passes, the capabilities VR platforms provide are continuing to blur the lines of reality. All of the virtual environments discussed in this Comment currently exist. Once the technology allows for a fully immersive experience, we will not only be able to replicate the virtual environments discussed in this Comment, we will be able to create virtual environments that go beyond imagination.