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Ready Player Two ... for Tort Liability in the Metaverse?

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“Things used to be awesome, but now they’re kinda terrifying.”¹

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¹ ERNEST CLINE, READY PLAYER ONE 17-18 (2011).

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0. ABSTRACT

In the past few years, augmented reality (AR) and virtual reality (VR) platforms have seen rapid expansion. The metaverse uses AR and VR to create a parallel virtual world where users can work, play, and interact. With one of the world's largest tech giants pivoting to the metaverse—described as an \$800 billion market opportunity—new advances are bound to make the metaverse more interactive and immersive than it already is. Developments in the field of AR and VR that might add sensory cues to create highly immersive and realistic environments have the potential to evoke real-world stimuli and a complete sense of presence and bodily embodiment in the virtual environment. In a highly immersive and realistic virtual environment, if a harmful event occurs, users may receive real-world sensory cues, including taste, smell, and touch, and react to those events, actively experiencing and embodying the harm. These environments pose compelling legal and ethical questions for practitioners and law students alike. This article proposes integrating AR- and VR-based case studies into legal education to enhance student engagement and critical thinking, illustrated by the hypothetical case of Olivia v. Thomas⁴⁴², in which a VR user experiences emotional and physical distress following a virtual attack. The article demonstrates the pedagogical value of such hypothetical scenarios in preparing future practitioners for emerging challenges in technology-driven contexts.

I. INTRODUCTION

We are living in times of rapidly evolving technology, including artificial intelligence (AI), virtual reality (VR), and augmented reality (AR). In a first for the legal system, virtual reality recently played a role in a criminal hearing, when a judge was asked to don a VR headset to experience the recreation of an alleged crime scene.² The point was for the judge to sense what it was like for the criminal defendant in the moment, as he was surrounded by a large, angry crowd, causing him to pull out a gun and point it toward the ceiling to deter them.³

The use of VR in a courtroom is a significant advancement, reflecting how the technology has developed to the point that it can bring high levels of realism to a user. The technology continues to evolve with the development of haptic suits, which can be worn around the body and stimulate sensory receptors through vibration and pressure.⁴ As with all advancements in

² Christina Vazquez, *Broward judge dons virtual reality headset in what's thought to be a courtroom first*, LOCAL10.COM (Dec. 17, 2024, at 8:21 ET), <https://www.local10.com/news/local/2024/12/17/broward-judge-dons-virtual-reality-headset-in-whats-thought-to-be-a-courtroom-first/>.

³ The defense attorney in the case stated: “We put headsets on the judge, the prosecutors and the witness and the judge was able to see from my client’s own eyes, from his own perspective, what he faced when he was surrounded by intoxicated partygoers. . . . They grabbed him, and he felt at that point in time he needed to pull out his weapon to defend his own life and his property.” *Id.* However, Broward Circuit Judge Andrew Siegel ultimately ruled against the defendant in May 2025. Rafael Olmeda, *Broward judge rejects self-defense claim of gun-waving wedding venue Owner*, SUN SENTINEL (May 10, 2025, at 2:58 ET), <https://www.sun-sentinel.co>.

⁴ Daeseok Kang, Chang-Gyu Lee & Ohung Kwon, *Pneumatic and acoustic suit: multimodal haptic suit for enhanced virtual reality simulation*, 27 VIRTUAL REALITY 1647, 1648 (2023) (“A haptic suit provides various haptic cues to a user, and it covers a wide area of the user’s body to create realistic haptic feedback....”); Janet K. Gibbs, Marco Gillies & Xueni Pan, *A comparison of the effects of haptic and visual feedback on presence in virtual reality*, 157 INT’L J. HUM.-COMPUT. STUD. 102717, 102718 (2022) (“The objective of introducing haptic feedback to VR is to increase the player’s sense of ‘reality’ by reproducing more closely the kind of ‘real world’ conditions portrayed in the VR experience.”)

technology, however, they bring both positive and negative consequences. The heightened sensations provided by virtual and augmented reality have also provided opportunities for abuse. Within the past several years, there have been complaints by participants in virtual reality worlds, including children, that they were subject to sexual abuse by other players' avatars, causing them to suffer physical and emotional trauma.⁵

These events have focused attention on the question of whether an assault in the metaverse can be criminally prosecuted.⁶ Most scholars who have considered the issue have concluded that criminal liability does not exist under the current state of the law.⁷ Undoubtedly, the law will continue to evolve in this regard with continued advancements in technology. In this article, we focus on the civil side of liability for harms in the metaverse and suggest that wrongdoings in the metaverse could potentially lead to civil liability under existing law. In any event, examination of harms committed in the metaverse provides a lush, current, and interesting opportunity to teach torts and ethics in the classroom.

As AR and VR technology become more accessible, cases of harm caused by hyper-realistic environments are likely to increase.⁸ Teaching tort law in the context of AR/VR cases can foster critical thinking among law students, helping them develop a deeper understanding of tort concepts and their implications in a changing technological landscape. If “[t]he fundamental purposes of our tort system are to deter wrongful conduct, shift losses to responsible parties, and fairly compensate deserving victims,”⁹ should that also apply to actions in the virtual world in addition to those in the real world?

Scenarios where harm occurred within the AR/VR arena provide an opportunity to examine the application of tort principles, like assault, battery, intentional infliction of emotional distress, false imprisonment, negligence, and strict product liability, in the virtual world. Consider a recent

⁵ See Chris Vallance, *Police investigate virtual sex assault on girl's avatar*, BBC (Jan. 2, 2024), <https://www.bbc.com/news/technology-67865327> (“According to an unnamed senior officer familiar with the matter who spoke to the paper the victim, under 16 at the time, suffered physical trauma ‘similar to that of someone who has been physically raped.’”); Naomi Nix, *Attacks in the metaverse are booming. Police are starting to pay attention*, WASH. POST, (Feb. 6, 2024), <https://www.washingtonpost.com/technology/2024/02/04/metaverse-sexual-assault-prosecution/>; Sheera Frenkel & Kellen Browning, *The Metaverse's Dark Side: Here Come Harassment and Assaults*, N.Y. TIMES (Dec. 30, 2021, 3:00 AM ET), <https://www.nytimes.com/2021/12/30/technology/metaverse-harassment-assaults.html> (citing a 2018 study finding that 49 percent of women who regularly used VR reported experiencing at least one instance of sexual harassment).

⁶ See Nix, *supra* note 5 (arguing that prosecuting crimes occurring in the metaverse would require a dramatic rewriting of legal precedent).

⁷ *Id.*; Sophia Staniunas, *Misconduct and the Metaverse: Legal Prevention and Prosecution of Virtual Sexual Harassment*, FORDHAM UNDERGRADUATE L. REV. BLOG (2025), <https://undergradlawreview.blog.fordham.edu/criminal-justice/misconduct-and-the-metaverse-legal-prevention-and-prosecution-of-virtual-sexual-harassment/>; Olivia Bellini, Note, *Virtual Justice: Criminalizing Avatar Sexual Assault in Metaverse Spaces*, 50 MITCHELL HAMLINE L. REV. 1, 77 (2024); Mark A. Lemley & Eugene Volokh, *Law, Virtual Reality, and Augmented Reality*, 166(5) U. PENN. L. REV. 1051, 1070-1101 (Apr. 2018), https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=9622&context=penn_law_review.

⁸ See Hilary Silvia & Nanci K. Carr, *When Worlds Collide: Protecting Physical World Interests Against Virtual World Malfeasance*, 26 MICHIGAN TECH. L. REV. 279, 303 (2020) (“The impact of AR games on the community is far-reaching, with parties on both sides presenting new and novel arguments to advance and defend against classic nuisance and trespass claims.”)

⁹ *Roberts v. Williamson*, 111 S.W.3d 113, 118 (Tex. 2003).

case where a woman was groped in Horizon Worlds, a virtual reality world by Meta.¹⁰ The assault occurred despite a safety feature that allows users to create a bubble around them if they sense any danger.¹¹ Legal scholars and students have long struggled with the concept of bodily presence in sexual assault cases.¹² This Horizon Worlds case provides an opportunity to explore that dilemma by applying it to a case where an alleged assault occurred without the presence of the corporeal body. Similar issues and legal debates can be extended into other events that transpire in the metaverse. Many students already use AR and VR, and this familiarity allows for an effective analysis and an insightful debate on upcoming legal issues pertaining to the use of AR/VR.¹³ Moreover, the use of court cases and hypotheticals as pedagogical tools in legal education is a well-established approach.¹⁴

This article proceeds in five parts. Part II explains AR and VR technologies, their rapid growth, and their role in the metaverse. It discusses emerging multisensory capabilities, real-world applications, and the corresponding legal and ethical implications. Parts III and IV examine current approaches to teaching law in immersive environments, highlighting existing use of AR and VR in legal education and proposing the integration of AR/VR into teaching torts. Part V reviews relevant law on existing legal doctrines, particularly common law torts. Part VI presents a detailed case study, *Olivia v. Thomas*⁴⁴², which applies tort principles—assault, battery, intentional infliction of emotional distress, false imprisonment, negligence, and strict products liability—to a virtual harm scenario. The case study is designed as a pedagogical tool for law students, encouraging critical analysis of doctrinal elements, defenses, and policy considerations when addressing harm in immersive virtual environments.

II. THE EVOLUTION OF AUGMENTED AND VIRTUAL REALITY

In the past few years, AR and VR platforms have seen rapid growth. Augmented reality “allows digital content to be superimposed in the real world through special glasses or, more typically, the screen of a smartphone,”¹⁵ whereas virtual reality transports a user wearing a head-

¹⁰ See Nix, *supra* note 5. Meta is the new name of the company previously known as Facebook, that operates the Facebook social media platform. See Mike Isaac, *Facebook Renames Itself Meta*, N.Y. TIMES (Nov. 10, 2021), <https://www.nytimes.com/2021/10/28/technology/facebook-meta-name-change.html>; Daniel Thomas, *Facebook changes its name to Meta in major rebrand*, BBC (Oct. 28, 2021), <https://www.bbc.com/news/technology-59083601>. The metaverse is a virtual reality world. A similar incident happened to Chanell Siggens while playing Population One, another Meta game. She claimed that “another player’s avatar approached hers. The stranger then simulated groping and ejaculating onto her avatar.” Siggens asked the other player to stop, and “[he] shrugged as if to say: ‘I don’t know what to tell you. It’s the metaverse—I’ll do what I want.’” Frenkel & Browning, *supra* note 5.

¹¹ *Safety and privacy tools for your child or teen in a world Meta Horizon*, META.COM, <https://www.meta.com/help/quest/articles/horizon/safety-and-privacy-in-horizon-worlds/safety-tools-for-your-teen-horizon/#> (last visited Aug. 29, 2025).

¹² Solveig Laugerud, *The Victimized Body: Sexual Violence, Incapacity, and the Materialisation of Unconscious Bodies in Rape Verdicts*, 29 BODY & SOCIETY 4, 29-52 (2023), <https://journals.sagepub.com/doi/epub/10.1177/1357034X231201942>.

¹³ Francis Mundin, *Emerging Legal Issues in Virtual Reality: Exploring the Intersection of Law and Immersive Technology in 2024*, LAW CROSSING.COM (April 3, 2024), <https://www.lawcrossing.com/article/900054621/Emerging-Legal-Issues-in-Virtual-Reality-Exploring-the-Intersection-of-Law-and-Immersive-Technology/>.

¹⁴ See, e.g., Hilary Silvia, *Learning Law Through Pleadings of the Rich and Infamous*, 38 J. OF LEGAL STUDIES EDUCATION 1, 5-35 (2021).

¹⁵ Roderick O’Dorisio, *Torts in the Virtual World*, 94 DENV. L. REV. FORUM 406 (May 30, 2017), <https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=1045&context=dlrforum>.

mounted-display (HMD) to an environment where they can immerse and interact, just as they do in the real world, with other people joining the virtual reality using their HMD.¹⁶ Augmented reality “adds digital content to a user’s perception of the real world.”¹⁷ The metaverse uses AR and VR to create a parallel virtual world where users can work, play, and interact. In October 2021, in an apparent homage to the future of the virtual world, Facebook changed its name to Meta.¹⁸ In an 11-minute video, co-founder and CEO Mark Zuckerberg explained the company’s pivot towards the new future of creating a highly interactive metaverse.¹⁹ Zuckerberg’s metaverse defined a world that would effectively tackle some real-world problems—lack of interaction in remote work environments, spreading opportunity to more people, reducing commute, and effectively reducing environmental harm, etc.²⁰ With one of the world’s largest tech giants pivoting to the metaverse—described as an \$800 billion market opportunity²¹—new advances are bound to make the metaverse more interactive and immersive than it already is.

Technological strides in the field have led to the introduction of new devices bringing the sensations of taste, smell, and touch to AR and VR users.²² Highly immersive VR systems promise high levels of realism.²³ Researchers have investigated the impact of multisensory systems, including tactile, olfactory, audio, and visual cues.²⁴ A higher number of sensory inputs can increase the subject’s sense of presence.²⁵ Progressing towards adding more sensory cues, Jung et

¹⁶ *Id.*

¹⁷ *Id.* at 407. Tim Cook, Apple’s CEO, described the difference between virtual and augmented realities as follows: “I’m excited about Augmented Reality because unlike Virtual Reality, which closes the world out, AR allows individuals to be present in the world but hopefully allows an improvement on what’s happening presently.” David Phelan, *Apple CEO Tim Cook: As Brexit hangs over UK, ‘times are not really awful, there’s some great things happening’*, THE INDEPENDENT (Feb. 10, 2017 12:27 EST), <https://www.the-independent.com/tech/apple-tim-cook-boss-brexit-uk-theresa-may-number-10-interview-ustwo-a7574086.html>.

¹⁸ See Isaac, *supra* note 10; see Thomas, *supra* note 10.

¹⁹ *Everything Facebook revealed about the Metaverse in 11 minutes*, CNET (Oct. 28, 2021), https://www.youtube.com/watch?v=gElfIo6uw4g&ab_channel=CNET.

²⁰ *Id.* Industries and disciplines such as medicine, language, and engineering are also adapting to the expanding use of VR. For instance, VR is being used in medical classrooms to “[deliver] cost-effective, repeatable, standardized clinical training on demand.” Jack Pottle, *Virtual reality and the transformation of medical education*, FUTURE HEALTHCARE J. (Oct. 2019), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6798020/>. Beyond teaching, VR is also being used in medical treatments. See D. Freeman, et al., *Virtual reality in the assessment, understanding, and treatment of mental health disorders*, 47 PSYCH. MED. 14 (Oct. 2017) <https://pubmed.ncbi.nlm.nih.gov/28325167/>. In one study, researchers concluded that the use of VR-based therapy improved balance and mobility in older adults. See Silvia Gr Neri, et al., *Do virtual reality games improve mobility skills and balance measurements in community-dwelling older adults? Systematic review and meta-analysis*, 31 CLIN. REHABIL. 10 (Oct. 2017), <https://pubmed.ncbi.nlm.nih.gov/28933612/>. If one is to trust in Mark Zuckerberg’s vision as delivered in the Meta launch announcement, it is likely that VR systems will expand further as research and developments in the field continue.

²¹ Matthew Kanterman & Nathan Naidu, *Metaverse may be \$800 billion market, next tech platform*, BLOOMBERG.COM (Dec. 1, 2021), <https://www.bloomberg.com/professional/blog/metaverse-may-be-800-billion-market-next-tech-platform/>.

²² See Erika Kerruish, *Arranging Sensations: Smell and Taste in Augmented and Virtual Reality*, 14 THE SENSES AND SOCIETY 1, 31–45 (Mar. 19, 2019); Kang, et al., *supra* note 4.

²³ Dean Takahashi, *Mark Zuckerberg unveils ultra-realistic VR display prototypes*, VENTUREBEAT.COM (updated June 18, 2025), <https://venturebeat.com/games/mark-zuckerberg-unveils-ultra-realistic-vr-display-prototypes/>.

²⁴ Kerruish, *supra* note 22; Sungchul Jung & Robert W. Lindeman, *Perspective: Does Realism Improve Presence in VR? Suggesting a Model and Metric for VF Experience Evaluation*, 2 FRONT. VIRTUAL REAL., (July 15, 2021), <https://www.frontiersin.org/articles/10.3389/frvir.2021.693327/full>.

²⁵ Jung & Lindeman, *supra* note 24.

al. designed a system that added vibration, wind, and olfactory cues.²⁶ The addition of sensory cues enabled a higher level of immersiveness and realism.²⁷ This is important since highly realistic systems can produce sensory stimuli that are nearly identical to real-world stimuli.²⁸ Therefore, developments in the field of AR and VR that might add similar sensory cues to create highly immersive and realistic environments have the potential to evoke real-world stimuli and a complete sense of presence and bodily embodiment in the virtual environment.²⁹

Recently, Southwest Ranches wedding venue owner, Miguel Arbizu, pulled out a gun during a wedding reception to attempt to manage unruly guests.³⁰ He was charged with nine counts of aggravated assault with a deadly weapon.³¹ His defense attorney, Ken Padowitz, used security video to create a VR video and asked the judge to wear the Oculus Quest 2 device to view it.³² Padowitz wanted the judge to sense what it was like for Arbizu in that moment, as the guests imposed their large, angry size on him. Louisiana Fifth Circuit Court Judge Scott Schlegel, a pioneering voice in courtroom technology, noted that with VR, “viewers don’t just observe a story—they live it.”³³

Partly due to these technological developments, AR and VR also pose strong legal and ethical questions for practitioners in the real world and law students alike. In a highly immersive and realistic virtual environment, if a harmful event occurs, users may receive real-world sensory cues, including taste, smell, and touch, and react to those events, actively experiencing and embodying the harm.³⁴ Previously, legal practitioners and researchers have questioned the significance of VR in criminal law because of the absence of the corporeal body in the virtual space.³⁵ However, if the developments in AR and VR make it possible to elicit physical and mental responses in the user’s corporeal body, can it pose civil legal challenges?³⁶

III. TEACHING TORTS THROUGH THE METAVERSE

A. Existing Teaching Using the Metaverse

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*; See Lemley & Volokh, *supra* note 7, at 1065 (discussing a case where VR was used to replicate the Milgram experiment: “In the original Milgram experiment the test subjects thought they were administering real electric shocks to real people. Not so in this experiment. In spite of the fact that all participants in the VR study knew that neither the stranger nor the shocks were real, the participants ‘tended to respond to the situation at the subjective, behavioral and physiological levels [as measured by skin conductance and heart rate] as if it were real.’ Those subjects who interacted with the stranger via text screen did not produce comparable levels of response.”)

³⁰ Vazquez, *supra* note 2.

³¹ Judge dons VR headset in what’s thought to be a courtroom first, WPLG LOCAL 10 (Dec. 17, 2024), <https://www.youtube.com/watch?v=FFdVPORhk10>.

³² Vazquez, *supra* note 2.

³³ Lars Daniel, *Historic First—Judge Dons Oculus VR Headset To Experience Crime*, FORBES.COM (Last updated Jan. 6, 2025, 3:25 ET), <https://www.forbes.com/sites/larsdaniel/2025/01/06/historic-first-judge-dons-oculus-vr-headset-to-experience-crime/>. Olmeda, *supra* note 3 (the trial judge ultimately ruled against the defendant).

³⁴ Lemley & Volokh, *supra* note 7, at 1065.

³⁵ *See id.*

³⁶ *Id.* at 1056; Alex Nicholson, et al., *Trespass to the ‘person’ in the metaverse*, INT’L REV. OF LAW, COMPUTERS & TECH. (Mar. 26, 2025), <https://www.tandfonline.com/doi/full/10.1080/13600869.2025.2479891#d1e242>.

Professors have yet to fully embrace AR and VR in the classroom, but a few have started the process. In London, REVRLaw (REal and Virtual Reality Law) is a research project at Westminster University, and is an immersive way to study a criminal (murder) case by “explor[ing] a real case scenario using VR technology to discover important pieces of evidence from a real-given scenario.”³⁷ University of North Texas Dallas College of Law has also experimented with using VR to study criminal law using a simulation of cases.³⁸ These two projects involve the use of VR to study criminal law. This article proposes using VR to teach civil torts.

A growing body of literature is investigating the application of existing laws into the virtual world. Studying law by extending common law principles to the metaverse has two main benefits. First, students would be preparing for the inevitable legal challenges posed by harmful events in the virtual world. For instance, British police investigated a minor girl’s claim that her avatar was gang raped and the Brussels police received claims of rape in the virtual world, the Second Life.³⁹ It is safe to assume that many more claims, such as harassment and assault, will make their way to the real world as virtual reality develops and becomes more accessible.⁴⁰ Secondly, VR can be a valuable tool to teach law via case simulations.⁴¹

Studying the potential legal challenges posed by AR and VR, especially as they rapidly develop to become more experiential, is important for current students. The students in classrooms today will be the ones dealing with these legal challenges in the future as AV and VR become more readily accessible, more experiential, and more widely used.⁴² Research has predicted that “children will spend approximately 10 years in VR over the course of their lifetime.”⁴³ Current students are part of one of the first generations to have widespread access to VR, as it has

³⁷ Markos Mentzelopoulos, et al., *REVRLaw: An Immersive Way for teaching Criminal Law using Virtual Reality*, 621 COMM. IN COMPUTER AND INFORMATION SCIENCE 1 (2016), <https://cti.westminster.ac.uk/wp-content/uploads/sites/61/2017/03/REVRLaw-paper-iLRN16.pdf>.

³⁸ Anna Stolley Persky, *How are law schools using virtual reality tools in classrooms*, INT’L. SOC. FOR PRESENCE RSCH., (May 14, 2019), <https://ispr.info/2019/05/14/how-law-schools-are-using-virtual-reality-tools-in-classrooms/>.

³⁹ Rebecca Camber, *British police prove VIRTUAL rape in metaverse: Young girl’s digital persona ‘is sexually attacked by gang of adult men in immersive video game’ – sparking first investigation of its kind and questions about extent current laws apply in online world*, DAILYMAIL.CO.UK (Jan. 2, 2024, at 3:15 EST), <https://www.dailymail.co.uk/news/article-12917329/Police-launch-investigation-kind-virtual-rape-metaverse.html> (noting that “officers said she suffered the same psychological and emotional trauma as someone who has been raped in the real world”); Benjamin Duranske, *Reader Roundtable: “Virtual Rape” Claim Brings Belgian Police to Second Life*, VIRTUALLYBLIND.COM (Apr. 24, 2007), <http://virtuallyblind.com/2007/04/24/open-roundtable-allegations-of-virtual-rape-bring-belgian-police-to-second-life/#:~:t>.

⁴⁰ Camber, *supra* note 39 (Ian Critchley, Britain’s National Police Chiefs’ Council’s Child Protection and Abuse Investigation Lead, cautioned that “the metaverse creates a gateway for predators to commit horrific crimes against children.”)

⁴¹ See Kunyi Jian, et al., *Simulation application of virtual reality technology in legal education*, 1419 J. PHYS.: CONF. SER. No. 012046 (2019), <https://iopscience.iop.org/article/10.1088/1742-6596/1419/1/012046>.

⁴² Brandt Ranj, *Goldman Sachs says VR will be bigger than TV in 10 years*, BUSINESSINSIDER.COM (Jan. 13, 2016, 9:19 AM PST), <https://www.businessinsider.com/goldman-sachs-predicts-vr-will-be-bigger-than-tv-in-10-years-2016-1#:~:text=In%20an%20analyst%20note%2>. Goldman Sachs predicted that the VR market would overtake the TV market by 2026. While that does not appear to be the case, there has nevertheless been dramatic growth in the use of VR.

⁴³ E+T Editorial Team, *Children likely to spend 10 years of their lives in VR metaverse, study suggests*, EANDT.THEIET.ORG (Oct. 9, 2023), <https://eandt.theiet.org/2022/04/20/children-likely-spend-10-years-their-lives-vr-metaverse-study-suggests#:~:text=New%2>.

transitioned from being confined to scientific literature and high-tech labs to becoming increasingly available in everyday settings.⁴⁴ Many in the classroom can relate to the case study discussed in this article, and thus it provides valuable analysis and contributes to the growing literature on legal challenges posed by virtual reality.

B. Literature Review

The scholarly work around crimes and torts in the virtual world remains scant, given the recency of AR's and VR's development. The existing body of work targets some possibilities of the application of current law in the virtual world.⁴⁵ Scholars and legal experts have mostly expressed their lack of faith in criminal lawsuits succeeding against AR/VR developers or other players.⁴⁶

Some scholars have, however, pointed out the possibility of virtual crimes being litigated in real-world courts. Danaher discusses the English case, *R v. Devonald* [2008] EWCA Crim 527, where a male perpetrator used his virtual avatar, posing as a 20-year-old woman, to persuade the victim, a 16-year-old boy and the ex-boyfriend of the perpetrator's daughter, to masturbate in front of a webcam.⁴⁷ The goal here was to record the boy masturbating and seek revenge for how the boy treated the perpetrator's daughter. The man was convicted of causing someone to engage in a sexual activity without their consent. Hence, there is a blurry line between the virtual and the real, and some virtual acts still have real-world consequences, which can sometimes be litigated under existing laws.⁴⁸

In line with the reasoning found in Danaher's discussion of *R v. Devonald*, virtual crimes have seen some prosecution in the real world. For instance, given that virtual property has value in the real world (e.g., gamers buy and sell on eBay), there have been some claims of theft under existing laws. A Dutch teen was charged with theft in 2007 for stealing virtual furniture from other

⁴⁴ See, e.g., Eric Adelson & N. Kirkpatrick, *Virtual reality has expanded into a new field: Job training*, WASH. POST (Aug. 10, 2023, 8:00 AM), <https://www.washingtonpost.com/technology/interactive/2023/virtual-reality-job-training/>; Danielle Fallon-O'Leary, *How Virtual Reality Technology Is Changing Manufacturing*, BUSINESS.COM (Dec. 19, 2025), <https://www.business.com/articles/virtual-reality-changing-manufacturing/>.

⁴⁵ See Silvia & Carr, *supra* note 8, at 305 ("The Milwaukee County Board passed an ordinance requiring creators of location-based augmented reality games to obtain permits ..."); *id.* ("The Milwaukee County Parks Department ... failed in its attempt to hold Niantic responsible for thousands of dollars in damages ...") (citing Stefanie Fogel, *AR Games Like 'Pokémon Go' Need a Permit in Milwaukee*, ENGADGET (Feb. 6, 2017), <https://www.engadget.com/2017/02/06/pokemon-go-milwaukee>); see also *Brown v. Entm't Merch. Ass'n.*, 564 U.S. 786, 790 (2011).

⁴⁶ See Lemley & Volokh, *supra* note 7, at 1070-1101; Michelle Shen, *Sexual harassment in the metaverse? Woman alleges rape in virtual world*, USA TODAY (Feb. 1, 2022, at 4:47 ET), <https://www.usatoday.com/story/tech/2022/01/31/woman-allegedly-groped-metaverse/9278578002/>; Kristin Hoffman, *Are there Real World Remedies for Virtual Reality Harassment?*, JURIS MAG. (Nov. 5, 2016), <https://sites.law.duq.edu/juris/2016/11/05/are-there-real-world-remedies-for-virtual-reality-harassment/>.

⁴⁷ John Danaher, *The Law and Ethics of Virtual Sexual Assault*, PHILPAPERS, <https://philpapers.org/archive/DANTLA.pdf> at 10-11 (last visited Aug. 30, 2025).

⁴⁸ *Id.*

Habbo users in the MMO Habbo Hotel.⁴⁹ In Japan, the police arrested an exchange student in 2005 “for stealing virtual property in an Asian MMORPG, *Lineage*.⁵⁰

However, in the above cases, the virtual actions led to real-world harm. Virtual actions that do not lead to tangible physical harm in the real world might be more difficult to pursue under existing laws. There is potentially a range of crimes that would be criminalized in the real world but cannot be criminalized in the virtual world.⁵¹ For instance, prostitution in the virtual world lacks any risk of disease, death, or physical injury. Moreover, “virtual prostitutes cannot be physically restrained without their consent, [so] there seems to be no risk of their being enslaved by pimps and madams.”⁵² Brenner analyzes the possibility of considering this “harmless”⁵³ form of virtual prostitution, pornography. However, non-obscene pornography is protected by the First Amendment and hence cannot be criminalized.⁵⁴ Similarly, crimes such as adultery and bigamy are victimless crimes in the virtual world.⁵⁵ Virtual relationships are not legally binding; however, even virtual bigamy and adultery can inflict “emotional pain” in the real world.⁵⁶

The paucity of existing literature makes it challenging to come to definite conclusions, but one can see two sides of the argument emerging. Some scholars have dismissed any possibility of virtual crimes being litigated under existing laws while others have expressed the possibility of some claims successfully making it to real world courts.

With respect to civil torts, however, scholars have been somewhat more optimistic about the possibility of at least some civil recourse for harms committed in the metaverse, including claims for assault, battery, negligence and intentional infliction of emotional distress against the perpetrator of harm.⁵⁷ There is also an issue of potential civil liability for the developers and

⁴⁹ Susan Arendt, *Dutch Teen Arrested for Virtual Theft*, WIRED (Nov. 14, 2007, at 10:38 AM), <https://www.wired.com/2007/11/dutch-teen-arre/#:~:text>All%20%5B...%5D,bought%20with%20real%2Dworld%20currency> (he “tricked other players into giving him their Habbo passwords, then nicked their belongings, which were bought with real-world currency.”)

⁵⁰ Susan W. Brenner, *Fantasy Crime: The Role of Criminal Law in Virtual Worlds*, 11 VANDERBILT J. OF ENT. & TECH. L. 1, 57 (2008), <https://scholarship.law.vanderbilt.edu/cgi/viewcontent.cgi?article=1317&context=jetlaw>.

⁵¹ *Id.* at 65-70.

⁵² *Id.* at 68.

⁵³ *Id.*

⁵⁴ *Id.*; see *Miller v. California*, 413 U.S. 15, 23–24 (1973); *Obscenity and Indecency: Constitutional Principles and Federal Statutes*, EVERYCRSREPORT.COM (June 5, 2002 – Apr. 28, 2009), <https://www.everycrsreport.com/reports/95-804.html>.

⁵⁵ Brenner, *supra* note 50, at 68.

⁵⁶ *Id.* at 69.

⁵⁷ See Nicholson, et al., *supra* note 36 (suggesting that with enhanced sensory cues, harms in the metaverse could constitute assault and battery under existing laws); Lemley & Volokh, *supra* note 7, at 1101 (“In theory, such [civil] liability might be possible in many of the circumstances we have identified, even if criminal law won’t apply. For instance, using strobe lights to deliberately cause a seizure in a person one knows is epileptic is likely at least negligence, and possibly also the intentional tort of ‘purposeful infliction of bodily harm.’ [citation omitted] For the other scenarios, tort liability would be more of a stretch, but not implausible.”); Caroline Valencia, *Considering Legal Remedies for Harassment and Assault in the Metaverse*, UMBLR INSIGHTS (Apr. 6, 2022), <https://business-law-review.law.miami.edu/considering-legal-remedies-for-harassment-and-assault-in-the-metaverse/> (“Until civil and criminal laws adapt to the ever-evolving tech world, intentional infliction of emotional distress (IIED) may provide victims of online sexual assault with an outlet to receive compensation. IIED permits the imposition of civil liability if a defendant has intentionally acted in an extreme and outrageous manner that caused severe emotional distress to the victim.”); Hoffman, *supra* note 46.

providers of experiences in the metaverse. There have been civil cases against web-based application developers and service providers in contexts outside of the metaverse. In a case against Snapchat (now known as Snap), the victim sustained brain injuries when the perpetrator hit him while being distracted by Snap's speed filter.⁵⁸ The case was dismissed by the trial court. The dismissal was affirmed by the court of appeal, which held that a manufacturer's duty to design reasonably safe products does not extend to a third party's intentional and tortious misuse of the product.⁵⁹ However, the case was reversed and remanded by the Georgia Supreme Court, which held that nothing in Georgia decisional law recognized a blanket exception to a manufacturer's design duty in all cases of intentional or tortious third party use.⁶⁰ The Georgia Supreme Court found that, at the pleading stage, the complaint sufficiently alleged that Snap owed a design duty with respect to the particular risk of harm at issue in the case—*injury resulting from a third person's use of the speed filter while driving at excess speed.*⁶¹

The courts are currently split regarding whether web-based platforms like Snap and TikTok are protected from liability pursuant to section 230 of the Communications Decency Act (CDA).⁶² The CDA provides that no provider or user of an interactive computer service shall be treated as the publisher or speaker of content posted by a third party.⁶³ *Lemmon v. Snap, Inc.*⁶⁴ involved a situation similar to *Maynard* where three young men tragically died while speeding using the Snap speed filter. The Ninth Circuit Court of Appeals rejected Snap's claim that it was immune from liability under the CDA because the complaint sought to hold Snap liable for negligent product design, not for its conduct as a publisher or speaker.⁶⁵ In contrast, *V.V. v. Meta Platforms, Inc.*⁶⁶ involved a young girl who was connected by Snap's Quick Add function to two adult sexual predators who contacted and ultimately sexually assaulted her, the first time when she was only 12 years old. The court found Snap to be protected from liability under the CDA because it held that it was the published content of the sexual predators ensnaring the girl that led to her injuries.⁶⁷

Historically, aside from claims of negligent product design, applications have generally not been held responsible for negligence, nor has a legal duty of care been imposed on them.⁶⁸ For example, a case against Google Maps was dismissed after Maps instructed the plaintiff to cross a

⁵⁸ O'Dorisio, *supra* note 15, at 408 (noting that the speed filter automatically detects the speed at which the user is going).

⁵⁹ *Maynard v. Snapchat, Inc.*, 851 S.E.2d 128, 131–32 (Ga. Ct. App. 2020), *rev'd and remanded*, 870 S.E.2d 739 (Ga. 2022).

⁶⁰ *Maynard v. Snapchat, Inc.*, 870 S.E.2d 739, 740 (Ga. 2022).

⁶¹ *Id.* at 747.

⁶² 47 U.S.C. § 230.

⁶³ *Id.*

⁶⁴ *Lemmon v. Snap, Inc.*, No. 20-55295, slip op. (9th Cir. 2021).

⁶⁵ *Id.* at 1091-92; *see also* *Anderson v. TikTok, Inc.*, No. 22-3061, slip op. (3d Cir. 2024), which was another very tragic case, where TikTok's algorithm recommended the Blackout Challenge to Nylah, the plaintiff's daughter, who was only ten years old at the time. Nylah tried to recreate the challenge, which involved asphyxiating oneself, and died. TikTok defended, claiming that the Blackout Challenge had been posted by a third party and therefore TikTok was immune under the CDA. The court held that TikTok's algorithm, which recommended the challenge to Nylah, was TikTok's own expressive activity and thus first party speech that was not protected by the CDA.

⁶⁶ *V.V. v. Meta Platforms, Inc.*, 2024 WL 678248 (Conn. Sup. Ct. 2024).

⁶⁷ *Id.* Ironically, the CDA was initially designed to regulate internet pornography and protect children from obscene and harmful material. *See Robert Cannon, The Legislative History of Senator Exon's Communications Decency Act: Regulating Barbarians on the Information Superhighway*, 49 FED. COMM. L.J. 51, 52–58 (1996).

⁶⁸ *See O'Dorisio, supra* note 15, at 409.

busy highway where she was hit.⁶⁹ While the risk was foreseeable, the Court held that the user was responsible for her own safety.⁷⁰ Another issue is the use of clickwrap waivers or terms of use by the AR/VR providers. Such waivers may limit the providers' liability or certain categories of damages.⁷¹ Lemley and Volokh note, however, that there may be circumstances under which a court would not enforce such waivers, and that there may be circumstances where AR/VR providers owe users a duty of care.⁷²

IV. EXTENDING EXISTING LAWS TO THE METAVERSE

A. Property Law

Some property cases in the virtual world have already made it to the real world and questioned the underlying concepts of existing property laws. Scholars have argued that current principles already accommodate the expansion of property rights into cyberspace.⁷³ Principles underlying property law have had the ability to extend to cyberspace for a long time. The *Ad Coelum* Rule which considers land to have “indefinite extent, upwards as well as downward” and include “not only the face of the earth, but everything under it, or over it”,⁷⁴ has long been embraced by common law in airplane overflight cases. The *Ad Coelum* Rule was displaced in *United States v. Causby*,⁷⁵ where the court cited the Air Commerce Act of 1926, which gave the United States complete and exclusive rights to the airspace over the country.⁷⁶ This limited property owners’ rights over some related areas to their physical property. *Causby* still confirmed that owners retained certain fundamental rights over their properties and associated spaces.⁷⁷

Newer cases are also considering the role of developers in causing real-world consequences to property through their AR/VR systems. In a class action lawsuit against the creators of the AR game *Pokemon Go*, the plaintiffs claimed nuisance caused due to Pokéstops on homeowners’ properties led to issues of trespass.⁷⁸ Niantic reached a settlement where it agreed to change its policy by removing any Pokéstops or gyms near residential areas. This settlement is meaningful because it required action from the creators in the form of a self-regulatory framework that protects

⁶⁹ *Id.* at 409–10.

⁷⁰ *Rosenberg v. Harwood*, No. 100916536, 2011 WL 3153314 (D. Utah May 27, 2011).

⁷¹ See, e.g., Nancy S. Kim, *Wrap Contracts: Foundations and ramifications*, OXFORD ACADEMICS (2013); see also Juliet M. Moringiello & William L. Reynolds, *From Lord Coke to Internet Privacy: The Past, Present, and Future of the Law of Electronic Contracting*, 72 MD. L. REV. 452 (2013); see also Mark A. Lemley, *Terms of Use*, 91 MINN. L. REV. 459, 467 (2006).

⁷² See Lemley & Volokh, *supra* note 7, at 1107–10, 1116–17.

⁷³ Silvia & Carr, *supra* note 8.

⁷⁴ See Declan T. Conroy, *Property Rights in Augmented Reality*, 24 MICH. TELECOMMUNICATIONS & TECH. L. REV. 1, 34 (2017), <https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1232&context=mtr> (quoting 2 WILLIAM BLACKSTONE, *COMMENTARIES* *18).

⁷⁵ See 328 U.S. 256 (1946).

⁷⁶ See Nanci K. Carr, *Look! It’s a Bird! It’s a Plane! No, It’s a Trespassing Drone*, 23 J. TECH. L. & POL’Y 2 (2019).

⁷⁷ See 328 U.S. 256 (1946).

⁷⁸ Pls.’ Mot. Supp. Prelim. Approval Settlement, *In re Pokémon Go Nuisance Litig.*, No. 3:16-cv-04300, at 1 (N.D. Cal. Feb. 14, 2019) (proposed settlement class includes “all persons in the United States who own or lease property within 100 meters of any location that Niantic has designated, without prior consent of such property owner or lessee, as a Pokéstop or Poké Gym in the Pokémon Go mobile application.”)

homeowners' property rights in the real world. It acknowledges that the AR game impacts and influences human behavior in the real world.

On one side, scholars highlight that existing laws can be extended to AR/VR property cases⁷⁹, and on the other side, scholars argue that extending current rules to AR/VR cases, while requiring proof of physical damage, can risk “eviscerating the underlying property right” and thus call for a new regime for AR/VR property rights and regulations.⁸⁰

B. Tort Law

Most scholars discuss virtual rape and sexual harassment as two of the typical case studies of “crime” in the virtual world, which have complicated real-world consequences. Numerous articles recognize that these virtual acts do not inflict physical injury, but can inflict severe emotional harm.⁸¹ However, since causing emotional harm has not been criminalized, it would not be prosecuted under existing criminal law. In contrast, tort law defines assault “as including an actor’s intentionally putting someone in ‘imminent apprehension’ of ‘offensive contact’.”⁸² Similarly, the tort of intentional infliction of emotional distress contemplates that emotional harm can be redressed under tort law.⁸³ Additionally, as the technology develops to allow realistic sensory cues, some touching initiated in the metaverse can be felt in the real world.⁸⁴ The current state of the technology, as well as the reporting of harms that have occurred in the metaverse, provides a lush, timely, and engrossing opportunity to use the metaverse to teach and analyze tort law, as well as to explore policy implications for further changes in the law to meet abuses occurring in this rapidly developing technology.

V. FOUNDATIONAL KNOWLEDGE - COMMON LAW TORT CLAIMS

This case study will focus on teaching some tort claims⁸⁵ that could potentially be brought against a defendant for harms occurring in the metaverse: assault, battery, intentional infliction of emotional distress, false imprisonment, negligence, and strict products liability. The fact pattern may be expanded by the instructor to teach other torts, including invasion of privacy, conversion, and so forth.

⁷⁹ *Id.*

⁸⁰ Conroy, *supra* note 74, at 42.

⁸¹ See Brenner, *supra* note 50, at 78; Vallance, *supra* note 5; Camber, *supra* note 39; Lemley & Volokh, *supra* note 7, at 1083 (noting that “people react physiologically to touches in VR much as if they had happened in the physical world.”)

⁸² Lemley & Volokh, *supra* note 7, at 1083; *See infra* Section IV.A.1.

⁸³ *See infra* Section IV.A.3.

⁸⁴ *See* Nicholson, et al., *supra* note 36.

⁸⁵ Tort law provides civil remedies for certain conduct that society deems to inappropriately invade the rights of others. *See* Eichenwald v. Rivello, 318 F. Supp. 3d 766, 772 (D. Md. 2018) (citing *Waffle House, Inc. v. Williams*, 313 S.W.3d 796, 802–03 (Tex. 2010)) (“The civil tort is a mechanism by which courts aid in the maintenance of a civil society, and as such ‘offensive contacts, or those which are contrary to all good manners, need not be tolerated.’”); Arthur Ripstein, *Theories of Common Law Torts*, STAN. ENCYC. OF PHIL. (Sept. 22, 2003), <https://plato.stanford.edu/archives/win2015/entries/tort-theories/> (“Conceiving of torts in terms of the paradigmatic case invites the thought that tort law proceeds by identifying wrongs that share some important normative characteristics with either trespass or battery – for example, that a tort involves an intention to disregard certain protected rights of others.”)

A. Intentional Torts

Intentional torts are torts, or civil wrongs, that are caused by an intentional act.⁸⁶ For this case study we will explore four common intentional tort claims: assault, battery, intentional infliction of emotional distress, and false imprisonment.

1. Assault: A defendant may be liable for assault if the plaintiff proves all of the following:

- a. The defendant acted intending to cause a harmful or offensive contact with the person of the other or a third person, or an imminent apprehension of such a contact.
- b. The plaintiff is thereby put in imminent apprehension of such contact. (The actor does not need to intend to cause the apprehension if they know with substantial certainty that their act will do so.)⁸⁷
- c. The plaintiff's apprehension must be reasonable.⁸⁸

2. Battery: To hold a defendant liable for battery, the plaintiff must show that the act was:

- a. Intentional— There must be intent to cause harmful or offensive contact, or intent to cause apprehension that such contact is imminent.⁸⁹ The doctrine of transferred intent provides that the defendant can also be held liable if the defendant intended for one tort to occur, but another tort took place.⁹⁰
- b. Harmful or offensive— To be offensive, the act must be calculated to offend a reasonable sense of personal dignity. The victim need not be aware of the contact at the time.⁹¹

⁸⁶ An actor is subject to liability to another for an intentional tort if: (a) the actor acts with the purpose of producing the consequence, or (b) the actor knows with substantial certainty that the consequence will result from their action. RESTATEMENT (SECOND) OF TORTS § 1 (AM. L. INST. 1965).

⁸⁷ See RESTATEMENT (SECOND) OF TORTS § 21 (AM. L. INST. 1965); See, e.g., Proffitt v. Ricci, 463 A.2d 514, 517 (R.I. 1983) (defendant committed civil assault by accelerating vehicle while plaintiff stood on the running board, causing plaintiff to reasonably apprehend imminent bodily harm).

⁸⁸ See, e.g., Cullison v. Medley, 570 N.E.2d 27, 30 (Ind. 1991) (“the apprehension must be one which would normally be aroused in the mind of a reasonable person.”)

⁸⁹ See, e.g., Garratt v. Dailey, 46 Wn.2d 197, 202 (Wash. 1955) (a five-year-old boy moved a chair just as plaintiff tried to sit down; the court held that if the child knew with substantial certainty that the woman would try to sit, it would be intentional conduct).

⁹⁰ See, e.g., Baska v. Scherzer, 156 P.3d 617, 628 (Kan. 2007) (assault and battery were committed when two party-goers got into a fight and intended to hit each other but hit the plaintiff, who had stepped in to intervene, instead); Morrow v. Flores, 225 S.W.2d 621, 624 (Tex. Civ. App. 1949) (defendant who aimed his gun at and intended to shoot one party but shot the plaintiff instead was nevertheless liable for assault and battery).

⁹¹ See RESTATEMENT (SECOND) OF TORTS § 19 (AM. L. INST. 1965) (bodily contact is offensive if it offends a reasonable sense of personal dignity); Leichtman v. WLW Jacor Communications, Inc., 634 N.E.2d 697, 699 (Ohio Ct. App. 1994) (offensive contact occurred when radio host intentionally blew cigar smoke in the face of an anti-smoking advocate during a broadcast). One of the most famous cases holding that the victim need not be aware of the contact at the time it occurs is Mohr v. Williams, 95 Minn. 261, (Minn. 1905), *rev'd on other grounds*, Genzel v. Halvorson, 248 Minn. 527 (Minn. 1957), where the plaintiff gave consent to operate on her right ear, but while she was under anesthesia, the doctor operated on her left ear.

- c. Touching of another— This includes touching anything connected to the person.⁹² This case can also discuss the major issues that highlight some gaps in existing laws, which might require new or reformed laws to govern the metaverse. For instance, one major issue is whether a metaverse (AR/VR) contact can be considered touching for purposes of this rule.⁹³
- d. Without consent— The plaintiff must not have expressly or impliedly consented to the harmful or offensive touching.⁹⁴

3. Intentional Infliction of Emotional Distress⁹⁵: To hold a defendant liable for intentional infliction of emotional distress, the plaintiff must show that:

- a. The act was intentional or reckless.
- b. The act was extreme and outrageous: The conduct must be beyond all reasonable bounds of decency. It must be considered atrocious and utterly intolerable in civilized society.⁹⁶
- c. The conduct caused the plaintiff to suffer emotional distress: The reasonable person standard applies.⁹⁷
- d. The emotional distress was severe.⁹⁸ Courts have sometimes required some physical manifestation of harm as a prerequisite to recovery.⁹⁹

4. False Imprisonment: An actor is subject to liability to another for false imprisonment if:

- a. The actor intends to confine the other or a third person within boundaries fixed by the actor;

⁹² See, e.g., *Fisher v. Carrousel Motor Hotel, Inc.*, 424 S.W.2d 627, 629 (Tex. 1967) (hotel employee snatched a plate from plaintiff's hand in a racially motivated act; the court held that contact with an object intimately connected to the plaintiff can satisfy the touching requirement).

⁹³ One player does not touch another player in the metaverse. Instead, it is the avatar controlled by one player that touches the other player's avatar. However, there is an argument that this is "virtually triggered" contact. See *Nicholson, et al., supra* note 36. There are headsets that "can deliver ultrasound waves to the mouth, allowing users to feel sensations in the lips and teeth." *Id.* at 10. Also, haptic clothing can convey touch to the player. *Kang, et al., supra* note 4.

⁹⁴ See RESTATEMENT (SECOND) OF TORTS § 13, 18 (AM. L. INST. 1965).

⁹⁵ See RESTATEMENT (SECOND) OF TORTS § 46 (AM. L. INST. 1965).

⁹⁶ See, e.g., *Intentional Infliction of Emotional Distress*, LEGALAIDATWORK.ORG (last updated Oct. 2024), <https://legalaidatwork.org/factsheet/intentional-infliction-of-emotional-distress/>.

⁹⁷ *Id.* ("The conduct must make the average, reasonable person exclaim, 'that's outrageous!'").

⁹⁸ See, e.g., *State Rubbish Collectors Ass'n. v. Siliznoff*, 38 Cal.2d 330, 339 (1952) (threats to beat up plaintiff and to run him out of business to coerce him to make a payment to resolve a dispute causing him to suffer great fright constituted intentional infliction of emotional distress); *Eckenrode v. Life of America Ins. Co.*, 470 F.2d 1, 2 (7th Cir. 1972) (wife's allegations that insurance company was aware of her husband's accidental death and her dire need for money and yet refused to pay her husband's life insurance policy proceeds in order to coerce her to compromise her claim stated a cause of action for intentional infliction of emotional distress).

⁹⁹ See, e.g., *Colten Kidd, Distressed and Not OK: How and Why Oklahoma's Physical Manifestation Requirement for Recovery of Emotional Harm Should Be Eliminated*, 60 TULSA L. REV. 217 (2024).

- b. The act directly or indirectly results in such a confinement of the other; and
- c. The other person is conscious of the confinement or is harmed by it.¹⁰⁰

B. Negligence

In contrast to intentional torts, negligence does not require that the defendant intend to cause the act or harm. To prove negligence, the plaintiff must prove the elements of duty, breach, causation, and damage:¹⁰¹

1. Duty: The defendant owed the plaintiff a duty to protect them from a foreseeable risk of harm.¹⁰² A reasonable person would consider (a) the burden of taking precautions; (b) the likelihood of harm; and (c) the seriousness of the harm. If the burden is low and the likelihood of serious harm is high, then a reasonable person would take that precaution. If the burden is high and there is only a small risk of non-serious harm, then a reasonable person would not take that precaution.¹⁰³

- a. A duty of care is owed to all foreseeable plaintiffs.¹⁰⁴

¹⁰⁰ See RESTATEMENT (SECOND) OF TORTS § 35 (AM. L. INST. 1965); *Sullivan v. Cnty. of Los Angeles*, 12 Cal.3d 710, 715 (1974) (intentional confinement in jail for several days beyond termination of sentence states claim for false imprisonment); *McCann v. Wal-Mart*, 210 F.3d 51, 54 (1st Cir. 2000) (family detained by Wal-Mart employees who said the family needed to come with them and that the police were being called and who refused to let the son use the bathroom committed false imprisonment). To make the actor liable for false imprisonment, the other's confinement must be complete. The confinement is complete even if there is a reasonable means of escape, unless the other knows of it. See RESTATEMENT (SECOND) OF TORTS § 36 (AM. L. INST. 1965); *Gable v. Univ. Accep. Corp.*, 338 F.Supp.3d 943, 957 (E.D. Wisc. 2018) (plaintiffs' confinement was not complete when tow truck driver blocked their ability to drive away; plaintiffs were free to leave the car). Arguing complete confinement in the metaverse could be a significant hurdle, given that the player can remove their headset or exit the game. However, a suggestion has been made that "the law should also recognise an individual's right to move around virtually... and offer a remedy in circumstances where deliberate action is taken by a third party to restrict that right." See *Nicholson, et al., supra* note 36, at 14.

¹⁰¹ See Patrick J. Kelley, *Restating Duty, Breach, and Proximate Cause in Negligence Law: Descriptive Theory and the Rule of Law*, 54 VAND. L. REV. 1039, 1041 (2001) (noting that the elements for negligence include duty, breach of duty, cause in fact, proximate cause, and damage).

¹⁰² See, e.g., *B.R. ex rel. Jeffs v. West*, 275 P.3d 228, 230 (Utah 2012) (stating that in negligence cases, a duty is "an obligation, to which the law will give recognition and effect, to conform to a particular standard of conduct toward another."); *Hetterle v. Chido*, 400 N.W.2d 324, 325-27 (Mich. Ct. App. 1987) (passenger in automobile owed duty to injured motorcycle rider not to distract the driver of the automobile); *West*, 275 P.3d at 238 (health care workers owe a duty to nonpatients when prescribing medication that affirmatively causes the patient to harm others). The classic law school case where the court found that a railroad company did **not** owe a duty to a waiting passenger who was injured when another passenger dropped explosives on the ground as he was assisted on board by the company's employees because such harm was not reasonably foreseeable is *Palsgraf v. Long Island R. Co.*, 248 N.Y. 339 (1928).

¹⁰³ This balancing test to determine duty was articulated by Learned Hand in *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947). Similarly, the California Supreme Court has stated: "Because application of [due care] is inherently situational, the amount of care deemed reasonable in any particular case will vary, while at the same time the standard of conduct itself remains constant, i.e., due care commensurate with the risk posed by the conduct taking into consideration all relevant circumstances." *Flowers v. Torrance Mem'l Hosp. Med. Ctr.*, 8 Cal.4th 992, 997 (Cal. 1994).

¹⁰⁴ See RESTATEMENT (THIRD) OF TORTS § 7, cmt. J (AM. L. INST. 2010) ("The general duty of reasonable care applies to all persons who might foreseeably be harmed by the actor's failure to exercise such care."); *Weirum v. RKO General, Inc.*, 15 Cal.3d 40, 45-46 (Cal. 1975) (radio station owed a duty to the decedent who was killed by a negligent driver participating in station's contest to be the first to reach the station's disk jockey). A minority of courts hold that

- b. The test involves answering whether a person of ordinary prudence and sensibilities would have acted as the defendant did, i.e., the reasonable person standard.¹⁰⁵
- c. Premises liability involves a sliding scale of duty owed to those on the defendant's land, with a higher duty owed to invitees and a lesser duty to foreseeable trespassers.¹⁰⁶

2. Breach: The defendant's acts or omissions violated that duty (the defendant did not act reasonably).¹⁰⁷
3. Causation: The defendant's conduct was both the actual and proximate cause of the plaintiff's damages.¹⁰⁸
 - a. Actual causation is determined by the "but-for" test (If not but for the breach, would the injury have happened anyway?).¹⁰⁹
 - i. "Substantial factor" test: Where several causes bring about injury, any cause alone would be enough to cause injury; the defendant's conduct is the cause in fact if it was a substantial factor in causing the injury.¹¹⁰

the duty of care extends to all persons and that foreseeability is considered only in the proximate cause analysis. *See, e.g.*, Schilling v. Stockel, 133 N.W.2d 335 (Wis. 1965).

¹⁰⁵ *See* RESTATEMENT (SECOND) OF TORTS § 283 (AM. L. INST. 1965).

¹⁰⁶ RESTATEMENT (SECOND) OF TORTS §§ 329–343 (AM. L. INST. 1965). The Third Restatement eliminates this rigid structure; however, courts may still consider the entrant's status (e.g., trespasser, invitee) as a factor in determining whether a duty was breached. *See* RESTATEMENT (THIRD) TORTS § 51 (AM. L. INST. 2012) (same duty owed to invitees and licensees); RESTATEMENT (THIRD) TORTS § 52 (AM. L. INST. 2010) (No general duty of reasonable care is owed to adult trespassers, except to refrain from willful, wanton, or reckless conduct or if the land possessor knows or should know of the trespasser's presence and the trespasser is in peril, or the danger is created by the landowner's activity). *See also* Rowland v. Christian, 69 Cal.2d 108, 119 (Cal. 1968) (rejecting common law classifications of status of visitor in determining duty). However, in the metaverse, would premises liability still apply since there is no real property in the virtual world? Lemley and Volokh suggest that a change in the law would be required to define "premises" to include the metaverse. *See* Lemley & Volokh, *supra* note 29, at 1107.

¹⁰⁷ *See* RESTATEMENT (THIRD) OF TORTS § 3 (AM. L. INST. 2010); Pipher v. Parsell, 930 A.2d 890, 893-94 (Del. 2007) (holding that whether a driver breached a duty by failing to prevent a passenger from grabbing the steering wheel was a question for the jury); Trimarco v. Klein, 56 N.Y.2d 98, 107-08 (N.Y. 1982) (evidence that shower door did not conform with custom and practice of using shatterproof glass could support finding of breach of duty).

¹⁰⁸ *See* RESTATEMENT (THIRD) OF TORTS §§ 26, 29 (AM. L. INST. 2010).

¹⁰⁹ *See* N.Y. Central R. Co. v. Grimstad, 264 F. 334, 335 (2nd Cir. 1920) (Ship lacked a life buoy; the captain fell overboard and drowned. No actual causation because there was no showing that the buoy would have saved the captain's life.)

¹¹⁰ *See* RESTATEMENT (SECOND) OF TORTS §§ 431, 433 (AM. L. INST. 1965); Anderson v. Minneapolis, St. P. & S. St. M. Ry. Co., 146 Minn. 430, 438-39 (Minn. 1920), *overruled on other grounds* by Borsheim v. Great Northern Ry. Co., 149 Minn. 210 (Minn. 1921) (Two fires--one caused by the defendant--merged and destroyed the plaintiff's property. Either fire alone would have been sufficient. The court applied the substantial factor test, holding the defendant liable because their fire was a substantial factor in the harm.)

- b. Proximate cause: After we establish actual causation, we assess how far the causation chain extends. The damages must be the natural and probable consequence of the defendant's breach.¹¹¹
- 4. Damages: The plaintiff suffered actual damages, whether physical injury, emotional injury, or property damages, and seeks to recover compensatory damages.¹¹²
- 5. Affirmative Defenses to Negligence:¹¹³
 - a. Comparative Negligence Doctrine: When a plaintiff is partially at fault, the jury will determine the allocation of fault and reduce the plaintiff's award by the percentage of fault assigned to the plaintiff.¹¹⁴ For example, if the jury determines that the plaintiff is 10% at fault and the defendant is 90% at fault, the plaintiff's award will be reduced by 10%.
 - b. Contributory Negligence Doctrine: Contributory negligence is conduct by the plaintiff that falls below the standard to which they should conform for their own protection, and which is a legally contributing cause in bringing about the plaintiff's harm.¹¹⁵ Contributory negligence is an "all or nothing" theory that bars all recovery when the plaintiff's negligent conduct contributed as a legal cause in any degree to the harm suffered.¹¹⁶
 - c. Assumption of Risk Doctrine: Assumption of risk is the voluntary consent to a known danger.¹¹⁷

C. Products Liability

Liability for a defectively designed or manufactured product or failure to warn of the product's dangers can be based either on negligence or strict liability. If based on negligence, the

¹¹¹ See *Zokhrabov v. Park*, 963 N.E.2d, 1044 (Ill. App. Ct. 2011) (pedestrian who crossed train tracks without looking and was struck by a train owed duty to waiting passenger who was hit by pedestrian's propelled body; it was reasonably foreseeable that pedestrian's conduct would cause injury to someone in the waiting area); *Clinkscales v. Nelson Securities*, 697 N.W.2d 836, 842-44 (Iowa 2005) (question of fact as to whether it was foreseeable that failure to adequately clean and maintain grill would injure bar patron who was burned while attempting to shut down propane tanks); *But see Palsgraff*, 248 N.Y. at 345-46 (harm to plaintiff resulting from a train passenger dropping a package of explosives concealed in a newspaper was not foreseeable).

¹¹² See *RESTATEMENT (SECOND) OF TORTS* § 328A (AM. L. INST. 1965); *Yehuda Adar and Ronen Perry, Negligence Without Harm*, 111 GEORGETOWN L. J. 187, 191-93 (2022).

¹¹³ Pursuant to Federal Rule of Civil Procedure 8, "[i]n responding to a pleading, a party must affirmatively state any avoidance or affirmative defense, including: assumption of risk [and] contributory negligence. . . ." FED. R. CIV. P. 8.

¹¹⁴ See, e.g., *Li v. Yellow Cab Co.*, 13 Cal.3d 804 (Cal. 1975). Whether comparative or contributory negligence is used varies by jurisdiction.

¹¹⁵ *RESTATEMENT (SECOND) OF TORTS* § 463 (AM. L. INST. 1965). Contributory negligence applies in Alabama (*Jackson v. Waller*, 410 So.2d 98 (1982)); Maryland (*Board of County Comm'r's v. Bell Atlantic Maryland*, 695 A.2d 171 (1997)); North Carolina (*Smith v. Fiber Controls Corp.*, 268 S.E.2d 504 (1980)); and Virginia (*Baskett v. Banks*, 186 Va. 1022 (1947)).

¹¹⁶ *Li*, 13 Cal.3d at 808.

¹¹⁷ *RESTATEMENT (SECOND) OF TORTS* § 496A (AM. L. INST. 1965); *see Knight v. Jewett*, 3 Cal.4th 296 (1992) (plaintiff assumed the risk of injury in a game of touch football).

elements of negligence previously discussed must be satisfied.¹¹⁸ Strict liability is referred to as liability without fault, as the focus of the analysis is whether the activity was abnormally dangerous, rather than a focus on the defendant's acts or omissions.¹¹⁹ The theory behind imposing this type of liability is that the activity is deemed to have enough social value that it should not be outlawed, but it is so risky that the defendant should carry all economic risk.¹²⁰ For instance, manufacturers must use due care in their product design, materials selection, appropriate production process, assembling and testing the product, adequate warnings, and inspecting and testing.¹²¹ If a product is defective, and that defect makes the product abnormally dangerous, then the defendant can be held strictly liable without an analysis of the manufacturer's acts or omissions in making that defective product.¹²² To hold a manufacturer liable for strict products liability, the following conditions must be met:

1. The product was in a defective condition when the defendant sold it,
2. A reasonable alternative design was available,
3. The defendant's failure to adopt the alternative design rendered the product not reasonably safe,
4. The defendant is normally engaged in the business of selling the product,
5. The product must be unreasonably dangerous to the end user/consumer, as either:
 - a. The product was dangerous beyond the expectations of the ordinary consumer, or
 - b. A less dangerous alternative was economically feasible, but the defendant failed to use it.
6. The plaintiff incurred physical harm to self or property,
7. The defect was the proximate cause of the plaintiff's injury, and

¹¹⁸ See *supra* Section IV.B.

¹¹⁹ See RESTATEMENT (SECOND) OF TORTS § 402A (AM. L. INST. 1965).

¹²⁰ See Luke Meier, *Achieving True Strict Product Liability (But Not for Plaintiffs with Fault)*, 57 UNIV. OF MICH. J. OF L. REFORM (2024); Reynold M. Sachs, *Negligence or Strict Product Liability: Is There Really a Difference in Law or Economics?* 8 GA. J. INT'L & COMP. L. (1978); *Escola v. Coca Cola Bottling Co. of Fresno*, 150 P.2d 436 (Cal. 1944).

¹²¹ See, e.g., *Maynard v. Snapchat, Inc.*, 870 S.E.2d 739, 747 (Ga. 2022) (duty to design to avoid foreseeable dangers); *Carlin v. Superior Court (Upjohn Co.)*, 13 Cal.4th 1104 (1996) (duty to warn); *Fahey v. Rockwell Graphic Systems, Inc.*, 482 N.E.2d 519 (Mass. 1985) (duty to design with reasonable care to eliminate avoidable dangers); *Greenman v. Yuba Power Products, Inc.*, 59 Cal.2d. 59 (1963) (defective design and construction); *MacPherson v. Buick Motor Co.*, 217 N.Y. 382, 394 (1916) (duty to inspect).

¹²² Consider *Aetna Cas. & Sur. Co. v. Jeppesen & Col.*, 642 F.2d 339 (9th Cir. 1981), where "Heppesen created charts that synthesized graphic representations of complex data provided by the Federal Aviation Administration. While the words and figures in the chart were correct, the scale was off, resulting in [a] crash that killed everyone on board." *Silvia & Carr, supra* note 8, at 312. The court noted that "the conflict between the graphic and the words rendered the chart unreasonably dangerous and therefore defective." *Id.*

8. The product must not have been substantially changed from the time the product was sold to the time the injury occurred.¹²³

VI. COURSE APPLICATION

A. Case Exercise: Exploring Issues of Battery, Assault, Intentional Infliction of Emotional Distress, False Imprisonment, Negligence, and Strict Products Liability in the Metaverse

Using this exercise, students will learn how existing laws can be applied to the metaverse and navigate the existing legal system to accommodate claims of harm in the metaverse. Students will find value in exploring not just existing laws but also the principles underpinning the current legal system. This case serves as an excellent learning tool for students to explore legal concepts such as allegations and remedies. The following discussion focuses on teaching the substantive issues raised within the case: battery, assault, intentional infliction of emotional distress, false imprisonment, negligence, and strict products liability.

B. Case Facts: Olivia v. Thomas442

Olivia is visiting her brother Jose to check out his NVH Vibe, a VR system made by Tedama. It is a relaxing Saturday, and Olivia planned to take turns with Jose in Jose's living room playing with his NVH Vibe. Olivia finally gets her turn and puts on the headset and logs in as Olivia25, creating an avatar that appears to be female with eyeglasses and long brown hair, making the avatar look like her. Jose left to run some errands while Olivia was playing, leaving her alone in his house.

Olivia feels transported to the elegant streets of Paris, with street artists, cafes, and historic monuments all around. She soon forgot that she was in Jose's living room. Olivia decided to make her experience more real by joining the multiplayer mode.

Olivia describes the next events as follows:

Thomas442 [another player], who appeared to be much larger than Olivia and very muscular, started following her in the virtual world. He reached out and grabbed her arm. She yelled, "Stop!" without remembering that she was in her brother's living room, not a Paris street, and that the avatar could not hear her shouts. She then started yelling at Thomas442 in the game, telling him to get away from her.

Thomas442 just laughed at her protests and continued to follow her.

Olivia began running and ducked into an alley. Thinking she had escaped him, she heard a noise and turned to find Thomas442 blocking the alley exit. Olivia was terrified and started to sweat. She then begged Thomas442 to get out of her way, but he just laughed at her. Suddenly, four more male avatars appeared at the alley exit. The five men closed in on Olivia and began to shove her back and forth. Thomas442 then picked up a brick and held it over Olivia's head,

¹²³ See RESTATEMENT (SECOND) OF TORTS § 402A (AM. L. INST. 1965).

sneering, “Kiss that little pea-sized brain of yours goodbye!” Olivia cowered in fear, covering her head, pleading for the men to stop.

Suddenly remembering that she was not in Paris, Olivia pulled the headset off and threw it to the ground. She began crying, with a combination of embarrassment since it was “just a game,” but also the trauma of what had just happened. Jose returned home to find Olivia vomiting in the bathroom. She was so upset about the VR incident that it had made her physically sick. While it was only 4 pm, she went to bed in Jose’s spare room and did not arise until 9 am the next morning. Over breakfast, Olivia was tearful, and her hands were shaking as she slowly explained to Jose everything that had happened. Jose was outraged that anyone would treat her that way. Sure, it was an avatar, but that avatar was operated by a real person, and Jose was livid that someone would attack his sister. Jose continued to check in on Olivia for the next week. She was having nightmares, imagining the attack over and over. She had decided to see a therapist to see if that would help her recover, but was worried about the cost. Jose suggested that Olivia meet his friend Jaylene, an attorney, to see if Olivia could sue Thomas442 and the manufacturer of the game and system.

If you were Jaylene, how would you advise her?

C. *Tort Liability*

Olivia wants to bring five claims against Thomas442—battery, assault, intentional infliction of emotional distress, false imprisonment, and negligence. Faculty should ask the students to analyze the claims and their elements to assess how courts might evaluate them.

1. Battery: Olivia wants to claim battery. Discuss each element individually, guided by the allegations and discussion points below.

a. Intent: The element of intent asks if the defendant intended to cause harmful or offensive contact, or intended to cause apprehension that such contact is imminent.

Discussion Points: Can the defendant’s intent be established from the defendant’s actions on the platform? If so, discuss the actions that can show intent.

b. Harmful or offensive: This element tests if the act was calculated to offend a reasonable sense of personal dignity, and the victim need not be aware of the contact at the time.

Discussion Points: (1) Can virtual shoving be considered enough to constitute touching or offend a reasonable sense of personal dignity? (2) Is there some bodily presence required for the defendant to offend a reasonable sense of personal dignity?

c. Touching of another: This includes touching anything connected to the person

Discussion Points: Can a metaverse (AR/VR) contact be considered touching for purposes of this rule?

- d. Without consent: The plaintiff must not have expressly or impliedly consented to it.

Discussion Points: Did Olivia imply consent when she joined the VR game?

- 2. Assault: Olivia claims that when Thomas442 held the virtual brick over her head and threatened to smash it, it constituted assault. Discuss each element individually, guided by the allegations and discussion points below.

- a. Intent: The element of intent asks if the defendant acted intending to cause a harmful or offensive contact with the person of the other or a third person, or an imminent apprehension of such a contact.

Discussion Points: Can Thomas442's intent be established by his conduct on the platform? If so, discuss the actions that can show intent.

- b. Imminent apprehension: This requires that the plaintiff be put in imminent apprehension of harmful or offensive contact. (The actor does not need to intend to cause the apprehension if they know with substantial certainty that their act will do so.)

Discussion Points: Did Thomas442's conduct put Olivia in imminent apprehension of harmful or offensive contact? If so, what conduct did so?

- c. Reasonableness: The apprehension must be reasonable.

Discussion Points: Was Olivia's apprehension reasonable? Is it reasonable to fear imminent harm in the metaverse?

- 3. Intentional Infliction of Emotional Distress: Olivia claims that Thomas442 intentionally caused her to suffer emotional distress. Discuss each element individually, guided by the allegations and discussion points below.

- a. Intentional or reckless acts: The class will analyze if the defendant's behavior was premeditated and intended to cause harm.

Discussion Points: The issue of intent is like that of the previous discussions. Did the defendant intend to cause Olivia emotional distress? If so, what conduct can demonstrate this intent?

- b. Extreme and outrageous conduct: The class will analyze if the behavior was atrocious and beyond the standards of a civilized society.

Discussion Points: This is often one of the most difficult elements to prove in a claim for IIED. Did Thomas442's conduct exceed the standards of a civilized society? Why or why not?

- c. Conduct caused the plaintiff's emotional distress: The plaintiff's emotional distress must be caused substantially by the defendant's conduct.

Discussion Points: Was Olivia's distress substantially caused by Thomas442's conduct? Were there other causes? If so, what does "caused substantially" mean in the context of this element?

- d. Emotional distress was severe: The emotional distress caused should be more than just hurt feelings. It should be severe enough to be distressing for any ordinary person.

Discussion Points: Can Olivia's distress be considered severe? Would it be distressing for any ordinary person? What facts of the scenario would support such an interpretation? For those states that require evidence of bodily harm before a claim for IIED can be stated, did Thomas442 inflict bodily harm on Olivia?

- 4. False imprisonment: Olivia claims that Thomas442 falsely imprisoned her by trapping her in the metaverse alley. Discuss each element individually, guided by the allegations and discussion points below.

- a. Intent to confine

Discussion Points: Did the defendant intend to confine Olivia within the metaverse alley?

- b. Direct or indirect confinement: Confinement must be complete, meaning there must be no reasonable means of escape unless the plaintiff is not aware of it.

Discussion Points: Did Olivia have a reasonable means of escape because she could pull off her headset and leave the metaverse? How would this analysis be impacted if Olivia were "caught up" in the experience and did not realize that she could leave? Should the metaverse be treated as its own "world" where one has the right to freely move about?

- c. Consciousness and harm: Olivia must be conscious of the confinement and be harmed by it.

Discussion Points: Here, there is no real issue as to whether Olivia was aware of her "confinement" in the metaverse. The more interesting point of discussion is where the harm must occur? In the metaverse? Or in the "real" world? Where did Olivia's harm take place? Was it sufficient to satisfy this element?

- 5. Negligence: Olivia next contends that the defendant was negligent. Discuss each element individually, guided by the allegations and discussion points below.

- a. Duty: The element of duty asks if the defendant had a duty of care while playing the game, and if so, to whom?

Discussion Points: The defendant owed the plaintiff a duty to act like a reasonable person. A reasonable person would consider (1) the burden of taking precautions, (2) the likelihood of harm, and (3) the seriousness of the harm. When determining their course of action, if the burden is low and the likelihood of serious harm is high, then a reasonable person would take precautions. If the burden is high and there is only a small risk of non-serious harm, then a reasonable person would not take precautions. Did the defendant owe Olivia a duty of care in a virtual setting?

- b. Breach of duty: The element of breach asks whether the defendant's actions fell below the standard of care expected of a reasonable person in similar circumstances.

Discussion Points: Based on the circumstances that the defendant was in, what behaviors or standards would be expected from a reasonable person in the same situation? Did the defendant's behaviors or actions meet these standards, or fall below them?

- c. Causation: The element of causation explores whether the defendant's acts or omissions were the actual and proximate cause of the plaintiff's injury.

Discussion Points: If there was a duty owed and that duty was breached, was the defendant's breach the cause of the Olivia's injuries?

- d. Damages: The element of damages requires students to identify and discuss the damages suffered, the measure of damages, and what is required, if anything, to make the plaintiff whole.

Discussion points: What monetary damages might the plaintiff have suffered because of the virtual assault? In an alternate scenario, ask students to think if the plaintiff going to therapy and taking sleep medications impacts the damage analysis.

- 6. Strict Products Liability: Discuss each element individually, guided by the potential allegations and discussion points below.

- a. Defective product: Can the lack of a VR safety protocol against virtual assault be considered a defect? Can Tedama be liable for the actions of its third-party users?
- b. Unreasonable danger: Can virtual assault be considered unreasonably dangerous?
- c. Physical harm: Did the plaintiff incur physical harm to self or property?
- d. Proximate cause: Was the “defect” the proximate cause of the plaintiff's injury?

Discussion Points: The students should be asked to consider if NVH Vibe can be considered defective because of the possibility of assault on the VR game. Can Tedama be held liable for the actions of its users? Does the possibility of assault make NVH Vibe unreasonably dangerous as a product? Was Tedama's failure to

prevent physical assault on its platform the proximate cause of the plaintiff's injury?

D. Additional Questions to Consider

To enhance the discussion, faculty may encourage students to consider the following questions:

1. What if Olivia were wearing a haptic suit connected to the VR system?¹²⁴ Since such a haptic suit would allow Olivia to feel the touches experienced by her avatar from another avatar, how would that change whether Thomas⁴⁴² was liable for battery?¹²⁵
 - a. Students should be aware that the intensity of touch that a player feels is generally adjusted in the VR system before a player puts on the suit, and no facts were provided about the intensity that Olivia set. While some suits can have high-intensity functions, no haptic suit completely mimics the received action as it would in the real world.¹²⁶ For instance, if another player shoots a virtual avatar, the player might feel a punch but would not feel the excruciating pain that shooting victims endure in the real world.
2. Should Tedama be liable for Olivia's injuries? If so, for what torts and what would make it liable?
 - a. Be sure to consider whether warnings appeared at the beginning of the game.¹²⁷
 - b. Consider what the terms of service were for NVH Vibe. What if the terms limited the liability of Tedama in connection with any torts or crimes committed by a player?
 - c. Consider whether the game is designed with a safety bubble, and how the player was informed of such bubble.¹²⁸ To what extent must Tedama anticipate "bad" behavior from its players?¹²⁹
 - d. What if the game prevents a player from escaping a threatening situation, or in the case of a haptic suit, quickly disabling it? Is that a defect in the game or suit that could bring about a claim for strict products liability?

¹²⁴ See Kang, et al., *supra* note 4.

¹²⁵ See Nicholson, et al., *supra* note 36.

¹²⁶ See Kang, et al., *supra* note 4.

¹²⁷ See generally Kim, *supra* note 71; Moringiello & Reynolds, *supra* note 71; Lemley, *supra* note 71; Lemley & Volokh, *supra* note 7, at 1107-110, 1116-17.

¹²⁸ See META, *supra* note 11.

¹²⁹ See Frenkel & Browning, *supra* note 5 (noting that Andrew Bosworth, Meta's Chief Technology Officer, stated that "moderating what people say and how they act in the metaverse 'at any meaningful scale is practically impossible.'")

3. Students may conclude that the current law is insufficient to give Olivia recourse. If so, should the law change to provide her with a remedy? How would it need to change? What are the policy considerations behind such a change?
4. Jurisdiction/Venue – What challenges are presented if players reside in different states or different countries?¹³⁰

VII. CONCLUSION

The rapid development of AR and VR technologies has raised issues regarding the boundaries of physical presence, harm, and liability. As immersive environments bring sensory experiences to the real world, the distinction between virtual acts and real-world consequences becomes increasingly blurred. The case study of *Olivia v. Thomas*⁴⁴² illustrates how existing tort doctrines—assault, battery, false imprisonment, intentional infliction of emotional distress, negligence, and strict products liability—can potentially be applied to virtual harms. It also highlights uncertainties in the current legal framework that may warrant further examination. The use of the metaverse as a pedagogical tool presents an opportunity to analyze traditional legal principles and serves as a springboard for deeper analysis. It brings students into an environment with which they are likely familiar and offers a teaching opportunity that is both current and engaging.

¹³⁰ See Maria Kalyvaki, *Navigating the Metaverse Business and Legal Challenges: Intellectual Property, Privacy, and Jurisdiction*, J. METAVERSE (2023) (available at https://www.researchgate.net/publication/368973015_Navigating_the_Metaverse_Business_and_Legal_Challenges_Intellectual_Property_Privacy_and_Jurisdiction; Lemley & Volokh, *supra* note 7, at 1103-04.