

TORTS IN THE VIRTUAL WORLD

I. INTRODUCTION

Last year, virtual reality (VR) and its counterpart, augmented reality (AR), erupted with popularity. At long last, the highly publicized head-mounted displays (HMDs), through which users can enter into a virtual world, went on sale to the public, including Facebook's Oculus Rift,¹ Samsung's Gear VR,² Sony's PlayStation VR,³ and HTC's Vive.⁴ Virtual Reality and Augmented Reality have hit the mainstream. Indeed, in 2016, four major VR hardware platforms were released, as well as numerous VR applications, from games to immersive news reporting to social experiments.⁵ Also, let us not forget the summer of 2016, where the world went nuts for Pokémon GO,⁶ and as a result, local hospitals and the Holocaust Memorial Museum were forced to put up signs asking players to please stop catching Pokémon on their premises.⁷

For most of the world, Pokémon GO was the advent of augmented reality. AR allows digital content to be superimposed in the real world through special glasses or, more typically, the screen of a smartphone. AR adds digital content to a user's perception of the real world, whereas virtual reality replaces the real world altogether. In VR, a user wears a HMD with speakers and can fully interact with a virtual world in the

1. Oculus VR, *Oculus Rift Pre-Orders Now Open, First Shipments March 28*, OCLUS BLOG (Jan. 6, 2016), <https://www3.oculus.com/en-us/blog/oculus-rift-pre-orders-now-open-first-shipments-march-28>.

2. Oculus VR, *Samsung Gear VR Now Available for Pre-Orders at \$99*, OCLUS BLOG (Nov. 10, 2015), <https://www3.oculus.com/en-us/blog/samsung-gear-vr-now-available-for-pre-orders-at-99>.

3. Press Release, Sony Computer Entertainment, *PlayStation VR Launches October 2016* (Mar. 15, 2016), https://www.sony.com/en_us/SCA/company-news/press-releases/sony-computer-entertainment-america-inc/2016/playstationvr-launches-october-2016-available-glob.html.

4. HTC, *HTC Vive Update*, HTC BLOG (Dec. 8, 2015), <http://blog.htc.com/2015/12/htc-vive-update>.

5. See, e.g., *PlayStation VR to debut in October for \$399*, CNBC (Mar. 16, 2016, 2:29 AM), <http://www.cnbc.com/2016/03/16/playstation-vr-to-debut-in-october-for-399.html> (PlayStation VR); see also Signe Brewster, *Behind the Numbers of Virtual Reality's Sluggish Debut*, MIT TECH. REV. (Dec. 30, 2016), <https://www.technologyreview.com/s/603208/behind-the-numbers-of-virtual-realitys-sluggish-debut> (Oculus, Sony, and HTC); see also Darrell Etherington, *Google's Daydream View Made me a Believer Again in Consumer VR*, TECHCRUNCH (Nov. 10, 2016), <https://techcrunch.com/2016/11/10/googles-daydream-view-made-me-a-believer-again-in-consumer-vr> (Google Daydream View).

6. Hayley Tsukayama and Ben Guarino, *What is really behind the Pokémon GO craze*, WASH. POST (July 12, 2016), <https://www.washingtonpost.com/news/the-switch/wp/2016/07/12/what-is-really-behind-the-pokemon-go-craze>.

7. Andrea Peterson, *Holocaust Museum to Visitors: Please Stop Catching Pokémon Here*, WASH. POST (July 12, 2016), <https://www.washingtonpost.com/news/the-switch/wp/2016/07/12/holocaust-museum-to-visitors-please-stop-catching-pokemon-here>; Suzanne Baker, *At Naperville Hospital and Schools, It's Pokémon 'No'*, CHI. TRIBUNE (July 19, 2016), <http://www.chicagotribune.com/suburbs/naperville-sun/ct-nvs-naperville-pokemon-no-st-0720-20160719-story.html>.

same way as the real world. To simulate a realistic, three-dimensional environment and experience, interactive software and hardware digitizes a user's eye movements and body movements through optical tracking with an imaging device and non-optical tracking with a variety of sensors that are often attached to the body of the user.

VR and AR technology continue to advance at an exponential pace with no signs of slowing down. Seventy-five percent of the 100 companies on the Forbes World's Most Valuable Brands list have either developed VR or AR experience for their customers or have at least invested substantial amounts of capital in the technology.⁸ Last year's Coachella music festival even provided attendees with a custom cardboard VR headset, which allowed them to explore the festival grounds and preview performances.⁹

In contrast to the virtual world, however, HMDs and VR/AR technology raise numerous real-world legal questions, especially in the areas of intellectual property, privacy, the First Amendment, and consumer safety. This Article only addresses tort lawsuits, by users against VR and AR companies and by outsiders against VR and AR companies. The objective of this Article is to identify the forthcoming crucial questions regarding VR/AR tort lawsuits and present possible answers to these questions. As HMDs and VR/AR technology become more ubiquitous in our world, legislation and case law will likely give us more concrete answers and tell us which issues require further regulation and innovation.

II. TORT LAWSUITS BY USERS

Simultaneously coinciding with the rise of VR/AR popularity is a growing number of reports of physical injuries resulting from the use of the technology. Last July, two men who were playing Pokémon GO fell several stories off an ocean bluff while they were trying to catch characters.¹⁰ Similarly, a lawsuit was filed against Snapchat after at least one victim sustained brain injuries when she was struck by a car driven by a woman who was distracted with Snapchat's "speed filter."¹¹ However, the case was dismissed earlier this year in January, as the plaintiff's claims were barred by the Communications Decency Act, 47 U.S.C. § 230(c) (the CDA), which grants broad immunity to Internet platforms

8. Maria Korolov, *75% of top brands have VR projects*, HYPERGRID BUS. (Oct. 29, 2015), <http://www.hypergridbusiness.com/2015/10/75-of-top-brands-have-vr-projects/>.

9. Jamieson Cox, *This year's Coachella attendees are being given custom Cardboard VR headsets*, THE VERGE (Mar. 9, 2016, 1:10 PM), <http://www.theverge.com/2016/3/9/11186360/coachella-google-cardboard-vr-headsets-welcome-box>.

10. Veronica Rocha, *2 California men fall off edge of ocean bluff while playing 'Pokemon Go'*, L.A. TIMES (July 14, 2016, 3:45 PM), <http://www.latimes.com/local/lanow/la-me-ln-pokemon-go-players-stabbed-fall-off-cliff-20160714-snap-story.html>.

11. Hope King, *Snapchat speed filter blamed for 107-MPH highway accident*, CNN TECH (Apr. 26, 2016, 1:37 PM), <http://money.cnn.com/2016/04/26/technology/snapchat-speed-filter/>.

and Web-based service providers from the threat of tort-based lawsuits in order to “maintain the robust nature of Internet communication.”¹²

The first theoretical plaintiff in these tort-based lawsuits against VR/AR companies is the user of the VR/AR technology itself. However, the likelihood of these types of lawsuits gaining any real traction is slim because the user is subject to any enforceable terms of use that might waive liability of the VR/AR companies to the users themselves. For example, Facebook’s Oculus Rift contains a robust terms of service (TOS) agreement and product warnings that would most likely shield Facebook from any lawsuit originating from the user itself.¹³ The health and safety warnings of the Oculus Rift even go so far as to remind the user “that the objects you see in the virtual environment do not exist in the real environment, so don’t sit or stand on them or use them for support.”¹⁴ Additionally, as noted by Professors Eugene Volokh and Mark Lemley in a recent working paper on virtual reality and the law, “If a VR or AR operation wanted to disclaim any liability stemming from indecent exposure, virtual groping, and the like, it could do so.”¹⁵

When users of VR/AR technology purchase a HMD or download a VR/AR game, they are immediately warned of the hazards of interactive gameplay, and are required to consent to arbitration and agree that their use of the technology is at their own risk.¹⁶ Oculus Rift’s TOS are effective upon purchase, access to, and use of any of its services.¹⁷ Jurisdictions around the country have largely held that these types of agreements and similarly expressed “clickwrap” waivers of liability are enforceable.¹⁸ With regard to VR hardware, simply putting on the head-mounted display is likely to be considered as agreeing to the terms of service by most modern courts.¹⁹ Furthermore, even if a user has not read the terms and has not verbally or expressly agreed to them in a normal sense, the user will still be bound by the terms of agreement.²⁰

Another reason why plaintiffs who bring lawsuits against VR/AR operators will have a tough time succeeding in court is because VR/AR

12. See *Maynard v. McGee*, No. 16-SV-89, 2017 WL 384288, at *2 (Ga. State Ct. Jan. 20, 2017); see also *A win for Snapchat in crash lawsuit tied to speed filter*, CBS NEWS (Jan. 23, 2017, 3:30 PM), <http://www.cbsnews.com/news/snapchat-speed-filter-accident-lawsuit-claim-dismissed/>.

13. OCULUS TERMS OF SERVICE (last updated Mar. 28, 2016), <https://www.oculus.com/legal/terms-of-service/>.

14. OCULUS HEALTH AND SAFETY WARNINGS 1 (retrieved April 8, 2017), https://static.oculus.com/documents/310-30023-01_Rift_HealthSafety_English.pdf.

15. Mark A. Lemley & Eugene Volokh, *Law, Virtual Reality, and Augmented Reality* 48 (Stan. Pub. Law Working Paper No. 2933867, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2933867.

16. See OCULUS TERMS OF SERVICE, *supra* note 13.

17. *Id.*

18. See, e.g., *Moore v. Microsoft Corp.*, 741 N.Y.S.2d 91, 91 (N.Y. App. Div. 2002); see also *M.A. Mortenson Co. v. Timberline Software Corp.*, 998 P.2d 305, 315 (Wash. 2000).

19. Lemley & Volokh, *supra* note 15, at 48 n. 152.

20. See, e.g., *Davis v. HSBC Bank Nevada, N.A.*, 691 F.3d 1152, 1157 (9th Cir. 2012) (finding clickwrap agreement enforceable even though consumer did not read the agreement).

operators may not owe their users a legal duty of care. As every first-year law student should know, a prerequisite to any claim rooted in tort liability is the existence of a legal duty. A duty may be defined as “an obligation, to which the law will give recognition and effect, to conform to a particular standard of conduct toward another.”²¹ Courts are usually more willing to impose a legal duty on the defendant if the risk (the manner of injury) is more foreseeable.²² “A court determines whether a duty exists by analyzing the legal relationship between the parties, the foreseeability of injury, the likelihood of injury, public policy as to which party can best bear the loss occasioned by the injury, and other general policy considerations.”²³

Courts have been reluctant to impose a legal duty of care on video game designers and distributors.²⁴ For example, in 2011, the U.S. District Court for the District of Utah dismissed a case brought by a user of Google Maps who was injured after the application instructed her to cross a busy highway where she was subsequently hit by an oncoming car.²⁵ The court refused to impose a legal duty on Google, explaining that while it was foreseeable that a user could be injured while walking across a busy highway, users are ultimately responsible for their own safety.²⁶ The court also noted the “high social utility” of applications like Google Maps and found that imposing a duty on Google to warn its users of all traffic hazards would “clearly be difficult, if not impossible for Google to bear.”²⁷ Applying these same principles to VR/AR technology, users who run into walls, furniture, the ceiling, and other users while wearing a HMD are responsible for their own safety. Forgetting that virtual objects are not real, VR users have attempted to sit or lean on nonexistent chairs and tables, but are quickly brought back into reality when they fall and injure themselves on the very real and hard floor.²⁸ However, according to the court in the Google Maps case, virtual reality is not responsible for these injuries. Rather, it was the underlying reality of the user’s lack of awareness of his or her real surroundings and subsequently hitting the floor that caused the injuries.

21. WILLIAM LLOYD PROSSER & W. PAGE KEETON, PROSSER AND KEETON ON TORTS § 53, at 356 (5th ed. 1984).

22. *See, e.g.*, *AMS Salt Indus. Inc. v. Magnesium Corp. of Am.*, 942 P.2d 315, 321 (Utah 1997).

23. *See, e.g.*, *Normandeau v. Hanson Equipment, Inc.*, 215 P.3d 152, 158 (Utah 2009); *see also Lee v. Farmer's Rural Elec. Coop. Corp.*, 245 S.W.3d 209, 212 (Ky. Ct. App. 2007).

24. *See, e.g.*, *Rosenberg v. Harwood*, No. 100916536, 2011 WL 3153314 (D. Utah May 27, 2011); *see also Sanders v. Acclaim Entm't, Inc.*, 188 F. Supp. 2d 1264, 1268 (D. Colo. 2002).

25. *Rosenberg*, 2011 WL 3153314, at *1.

26. *Id.* at *9.

27. *Id.* at *8.

28. *See, e.g.*, Kurt Schlosser, *Reality bites: Watch as man using VR in Microsoft store falls from fake cliff and hits real floor*, *GeekWire* (Nov. 29, 2016, 9:55 AM), <http://www.geekwire.com/2016/reality-bites-watch-man-using-vr-microsoft-store-falls-fake-cliff-hits-real-floor/>.

Lastly, under current law according to the Communications Decency Act, 47 U.S.C. § 230(c), VR/AR operators may be immune from liability for the majority of misconduct by their users. The relevant portion of Section 230 states: “No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider.”²⁹ On its face, Section 230 creates a federal immunity to any cause of action that would make service providers liable for information originating with a third-party user of the service. Section 230 is what protects services such as YouTube, Yelp, the New York Times, and America Online from liability for defamation, invasion to privacy, or emotional distress in items that are created and posted by their users.³⁰ With regard to virtual reality, Section 230 would effectively immunize VR/AR companies from offensive textual, visual, and audio communications by their users, including communications that may cause physical harm, such as the deliberate use of strobe lighting or high-pitched noises. However, virtual reality applications differ in significant ways from the paradigm beneficiaries of Section 230, in that the services that VR/AR companies provide are inherently much more physically-based than the services provided by web-based applications like YouTube and Yelp.

As with all new and groundbreaking technology, refinements in both the technology and the applicable laws will continue as long as developers and consumers continue to use the technology. Health and safety warnings, terms of service, and hardware improvements that minimize the risk of physical injury to the user³¹ will continue to be modified and will almost certainly be tested in future litigation.

III. TORT LAWSUITS BY OUTSIDERS

The second theoretical plaintiff is an individual who is not a user of the VR/AR technology and has signed no waiver of liability. For example, a Pokémon GO aficionado might run into someone else³² or cause property damage through trespassing. A plaintiff who is less likely to have been contributorily negligent in his injuries would presumably be more successful in bringing an action against a VR/AR company. However, courts have been reluctant to find third-party injuries that result from video games sufficiently foreseeable to outweigh vital public policy

29. 47 U.S.C. § 230(c)(1).

30. See, e.g., *Zeran v. America Online, Inc.*, 129 F.3d 327 (4th Cir. 1997), cert. denied, 524 U.S. 937 (1998).

31. See, e.g., *Oculus Guardian System* (retrieved April 8, 2017), <https://developer3.oculus.com/documentation/pcsdk/latest/concepts/dg-guardian-system/>.

32. See Hayley Tsukayama, *Pokemon Go's unexpected side effect: injuries*, WASH. POST (Jul. 10, 2016), <https://www.washingtonpost.com/news/the-switch/wp/2016/07/08/pokemon-gos-unexpected-side-effect-injuries>.

considerations.³³ In 2002, the U.S. District Court for the District of Colorado dismissed claims brought against a video game company by a widow of a teacher murdered in the Columbine High School massacre.³⁴ The court dismissed the claims for lack of duty, finding that the actions of the Columbine High School shooters were not sufficiently foreseeable by the video game company to outweigh the important social utility of creative works.³⁵ Similarly, in 2002, the U.S. District Court for the District of Connecticut dismissed a lawsuit where the plaintiff alleged that the designers of *Mortal Kombat* were liable after a child fatally stabbed his friend.³⁶ In both of these cases, the video game designers and publishers did not have a legal duty to the third parties affected by the actions of users.

Applying these same principles to VR and AR technology, VR/AR companies may be immune from liability to third parties who suffer injuries from users of VR and AR technology. In a recent working paper titled *Law, Virtual Reality, and Augmented Reality*, authors Mark Lemley and Eugene Volokh argue that potential VR or AR system defects, such as “an AR system defectively instructing you to turn in the wrong place, or a VR system that claims to sense whether someone walks into your room but then defectively fails to properly report it,” should trigger strict liability.³⁷ They liken the VR and AR manufacturers to the publishers of a flawed aeronautical chart, attempting to draw similarities between the “instructions” provided by the VR and AR headsets and the directional information provided in the charts.³⁸ Even though Lemley and Volokh acknowledge that “[t]he fact that information is involved complicates things, because the publication of information – even false information – might implicate the First Amendment,”³⁹ the authors overlook the fact that aeronautical charts are the only communication media ever judged by any court to be “products” and the only communication media ever deemed subject to “strict product liability.”⁴⁰ Furthermore, the case law supporting the application of strict liability to aeronautical charts is dubious at best.⁴¹

33. See *Sanders v. Acclaim Entm't, Inc.*, 188 F. Supp. 2d 1264, 1268 (D. Colo. 2002); see also *Wilson v. Midway Games, Inc.*, 198 F. Supp. 2d 167, 170 (D. Conn. 2002).

34. *Sanders*, 188 F. Supp. 2d at 1281–82.

35. *Id.* at 1279–81.

36. *Wilson*, 198 F. Supp. 2d at 182–83.

37. Lemley & Volokh, *supra* note 15, at 41.

38. *Id.* (citing *Brocklesby v. United States*, 767 F.2d 1288 (9th Cir. 1985)).

39. Lemley & Volokh, *supra* note 15, at 41.

40. DAVID OWEN, *PRODUCTS LIABILITY LAW* 45 (3d ed. 2015) (noting that courts refuse to apply strict liability to the provision of information, except for aeronautical charts containing false information); see also Robert B. Schultz, *Application of Strict Product Liability to Aeronautical Chart Publishers*, 64 J. Air L. & Com. 431, 431 (1998).

41. See Schultz, *supra* note 40, at 440 (noting that the issue in *Brocklesby* was “whether information communicated by a chart is a product. More to the point, can a publisher be held liable for accurately communicating “defective” information? This is where the Ninth Circuit’s logic

VR and AR companies are more akin to cell phone manufacturers, not aeronautical chart publishers, as Lemley and Volokh argue. Courts have continuously rejected claims by car-crash victims who sued cellphone manufacturers on the grounds that the cellphone manufacturers should have foreseen that texting would enable reckless driving.⁴² For example, an Indiana state court exclaimed that imposing such a duty on cellphone companies “would effectively require the companies to stop selling cellular phones entirely because the companies have no way of preventing customers from using the phones while driving.”⁴³ Similarly, VR and AR companies have no way of preventing users from using their HMDs in unsafe environments, such as in a room full of furniture with a ceiling fan or in crowded areas full of non-user third parties. To further shield itself from potential liability, Facebook warns users in the Oculus Rift Health and Safety Warnings that they should only use the headset in a safe environment, and the Warnings go on to list several potential hazards that users should consider before activating the headset.⁴⁴

In summary, not only does the First Amendment and Section 230 of the CDA likely bar claims by third parties against VR and AR companies, but public policy considerations also likely outweigh an imposition of a legal duty of care to third parties upon VR and AR companies.

IV. CONCLUSION

As the law continues to play catch-up to the rapidly expanding world of virtual and augmented reality, VR and AR companies can expect to receive more guidance regarding regulations and liability from the courts in the coming years. In the meantime, companies can find solace in the steadfast precedent pertaining to video game developers and cellphone manufacturers. Indeed, courts have been reluctant to find game companies and electronic device manufacturers strictly liable for both user injuries and third-party injuries arising from the published content that they provide. Shielded by frequently enforced “clickwrap” terms of service agreements, Section 230 of the CDA, the First Amendment, and significant public policy considerations, VR and AR companies may continue mounting vigorous defenses until a real legal framework is in place. Unfortunately for plaintiffs, by the time such a concrete legal framework is in place, virtual and augmented reality technologies, like many groundbreaking technologies of yesteryear, may be ancient history.

collapsed. . . . [I]t concluded [that] a party is . . . strictly liable for accurate communication of “defective” information because a manufacturer is strictly liable for any defects in component parts.”)

42. See, e.g., *Williams v. Cingular Wireless*, 809 N.E.2d 473, 479 (Ind. Ct. App. 2004); see also *Durkee v. C.H. Robinson Worldwide, Inc.*, 765 F. Supp. 2d 742, 749 (W.D.N.C. 2011), *aff’d sub nom.*, *Durkee v. Geologic Sols., Inc.*, 502 F. App’x 326 (4th Cir. 2013).

43. *Williams*, 809 N.E.2d at 479.

44. See *OCULUS HEALTH AND SAFETY WARNINGS*, *supra* note 14.

By: Roderick O'Dorisio *

* Roderick O'Dorisio is a Staff Editor on the *Denver Law Review* and a 2018 J.D. Candidate at the University of Denver Sturm College Of Law. He holds a B.S. in Computer Science from the University of Denver and is a registered patent agent.