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TRADEMARK LAW IN THE VIRTUAL REALISM
LANDSCAPE

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The recent rise of virtual reality, augmented reality, and other related technologies has created vast amounts of virtual space. Within this space, novel forms of trademark infringement and expressive use may arise. This note categorizes the above-mentioned technologies under the umbrella term of “virtual realism” and examines trademark infringement in relation to such virtual realism technologies. In particular, the usage of physical-goods marks in virtual realism platforms is examined in relation to the usage of such marks in more traditional virtual platforms. This note argues that virtual realism platforms are less defendant-friendly in the trademark context than are traditional virtual platforms.

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INTRODUCTION

A. Trademark Law and Market Change

Throughout its history, United States trademark law has often had to adapt to and accommodate for unforeseen innovations and evolutions in the American market. The Trademark Act of 1905¹ was, in many ways, unable to account for the “realities of twentieth century commerce.”² From an inability to register services marks, to being silent on renewal and abandonment, the 1905 Act was blind to the changes in commerce that would take place in the decades following its adoption.³ The inadequacies of the 1905 Act were ultimately addressed by the Trademark Act

¹ Trademark Act of 1905, Pub. L. No. 58-84, 33 Stat. 724 (repealed 1946).

² 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 5:3 (5th ed. 2017).

³ *Id.*

of 1946, more commonly known as the Lanham Act.⁴ However, the Lanham Act too has had to rapidly adapt in order to address unique changes in commerce.⁵

In particular, the end of the twentieth century introduced significant changes to the market when commerce began shifting towards digital technology and internet services.⁶ Faced with novel issues arising from internet platforms, trademark law adapted to unforeseen characteristics of the internet age through measures such as the Anticybersquatting Consumer Protection Act (ACPA) of 1999.⁷

Trademark law, however, must still adapt further to current market changes. Despite past amendments and adaptations, trademark law's basic focus remains the prevention of public confusion arising from the usage of marks in relation to goods and services.⁸ Thus, evolutions in the market of goods and services will inevitably command a need for adaptation within trademark law. Novel goods and services may force novel legal interpretations to adequately achieve trademark law's basic focus.

Of particular relevance to the modern market is the evolving role of information technology,⁹ the importance of which is apparent from the proliferation of internet platforms, smartphone platforms, and digital services.¹⁰ New forms of information technology continue to enter the market.

In recent years, a particular class of new information technology has crept into the market. This class of technology concerns virtual experiences, providing a novel change in user experience in relation to virtual platforms. Such technologies include,

⁴ Lanham Act, ch. 540, 60 Stat. 427 (1946) (codified as amended in scattered sections of 15 U.S.C. (2012)); *see also* 1 McCarthy, *supra* note 2 § 5:4.

⁵ *See* Deborah F. Buckman, Annotation, *Lanham Act Trademark Infringement Actions in Internet and Website Context*, 197 A.L.R. Fed. 17 (2004).

⁶ *Id.*

⁷ 1 MCCARTHY, *supra* note 2, § 5:10.

⁸ Buckman, *supra* note 5 (“The basic focus of trademark protection has not changed: preventing the use of identical or similar marks in a way which confuses the public about the source of goods and services.”).

⁹ *See generally* 1-3 MANUEL CASTELLS, *THE INFORMATION AGE: ECONOMY, SOCIETY AND CULTURE* (1996).

¹⁰ MCKINSEY & COMPANY, *GLOBAL MEDIA REPORT 5* (2016) (“Digital media are the driving forces behind industry expansion today, both in consumer spending and, to an even greater extent, in advertising spend.”).

amongst others, virtual reality, augmented reality,¹¹ and location-based services.¹² While virtual-experience technologies differ in the ways that they add realism, they share a common effect in that they bring virtual user experiences closer to actual physical or real-world experiences. As these technologies grow in influence, the landscape of virtual interactions will significantly shift away from abstraction and towards what I call “virtual realism.”¹³ However, the evolution into virtual realism will not be without consequence. Virtual realism platforms will inevitably raise novel trademark disputes and, as a result, new questions of trademark law.¹⁴

In this note, I have two objectives. First, I identify and outline virtual realism as a phenomenon. Second, I seek to offer a preliminary discussion of how trademark law should be applied and adapted to the context of virtual realism. My discussion focuses on situations in which mark owners find their mark used without their permission within a virtual realism platform.

B. Overview of Note Structure

I proceed in four Parts. In Part I, I introduce and clarify the concept of virtual realism. In Part II, I provide three relevant examples of technologies which push towards virtual realism. The next two parts turn to a legal discussion of such technologies’ effect on trademark law. In Part III, I discuss the effect of virtual realism technologies on trademark infringement, particularly with respect to likelihood of confusion analyses. And in Part IV I discuss infringement defenses, particularly with respect to the expressive use defense. Ultimately, I argue that trademark owners should receive greater protection with respect to virtual realism platforms than they have traditionally received in the past in other virtual platforms.

¹¹ See generally *Demystifying the Virtual Reality Landscape*, INTEL, <https://www.intel.com/content/www/us/en/tech-tips-and-tricks/virtual-reality-vs-augmented-reality.html> (last visited May 19, 2019).

¹² See generally Ryan Goodwich, *Location-Based Services: Definition & Examples*, BUS. NEWS DAILY (Oct. 30, 2013), <https://www.businessnewsdaily.com/5386-location-based-services.html>.

¹³ Barry Werbin, *Trademarks in Virtual Worlds*, INT’L TRADEMARK ASS’N (Dec. 1 2009), <https://www.inta.org/INTABulletin/Pages/TrademarksinVirtualWorlds.aspx> (“Realism and social interaction in computer gaming have been greatly enhanced in recent years by advances in software technology, computer hardware and bandwidth . . .”).

¹⁴ *Id.* (“High levels of realism in games often require game designers to replicate material objects with which we interact in the real world, including branded products and services From a commercial perspective, 3D virtual worlds in particular present the opportunity for real-life companies to promote their own brands in a rich interactive environment to millions of potential viewers worldwide.”).

I DEFINING VIRTUAL REALISM

A. Realism and Abstraction

In order to define “virtual realism,” it is necessary to first introduce the concepts of “realism” and “abstraction.” As used in this note, “realism” and “abstraction” are contrasting characteristics with respect to virtual platforms. Realism denotes the qualities of an experience in the physical (or “real”) world, whereas abstraction denotes qualities that deviate from the physical (or “real”) world. For example, we might view limitations in graphical depiction as an abstraction from the sharp detail of the physical world.¹⁵ The pixels that make up the spaceship in *Space Invaders*, for instance, make the spaceship abstract in its two-dimensional simplicity and lack of any complex visual detail.¹⁶ Limitations on interaction may constitute another form of abstraction. In *Space Invaders*, the spaceship is restricted to two-dimensional movement, which is an abstraction from the range of interactions possible in an actual spaceship.

Abstraction might take many other forms. Virtual “money” in a video game, which is relatively worthless in the real world, could be seen as an abstraction of real money. A virtual “shopping cart” on a webpage, which does not move on wheels or hold tangible objects, is an abstraction of a physical-world shopping cart.¹⁷ The “front page” of a news website is an abstraction of a physical newspaper’s front page. A “like” on a social media post is similarly an abstraction of an in-person social interaction where one expresses appreciation for another’s statement.¹⁸

We might then see online markets such as Amazon or eBay as abstractions of physical-world marketplace.¹⁹ News websites such as nytimes.com can be seen as

¹⁵ Richard Cobbett, *The Evolution of Gaming Graphics*, TECHRADAR (June 17, 2009) <https://www.techradar.com/uk/news/gaming/the-evolution-of-gaming-graphics-609050> (“It can be tough to remember, but over the last 30 years, we’ve moved from simple shapes floating around black screens pretending to be spaceships... Part of the problem with these games is that they set out to simulate reality, albeit in a stylised way.”).

¹⁶ Simon Parkin, *The Space Invader*, NEW YORKER (Oct. 17, 2013) <https://www.newyorker.com/tech/annals-of-technology/the-space-invader>.

¹⁷ See generally *What is a Shopping Cart?*, BIG COMMERCE, <https://www.bigcommerce.com/ecommerce-answers/whats-shopping-cart/> (last visited Apr. 9, 2019).

¹⁸ See generally Kari Paul, *Does the ‘Like’ Mean Anything Anymore?*, INTELLIGENCER (May 5, 2016), <http://nymag.com/intelligencer/2016/05/does-the-like-mean-anything-anymore.html>.

¹⁹ See generally *How Are eBay and Amazon Different?*, INVESTOPEDIA, <https://www.investopedia.com/articles/investing/061215/how-are-ebay-and-amazon-different.asp> (last visited June 12, 2015).

abstractions of their physical newspaper counterparts.²⁰ Social media sites such as Facebook can be seen as abstractions of in-person social interactions.²¹ While these virtual platforms all achieve enough realism to invite user participation in some aspects, they are inevitably abstract and fail to achieve complete realism in other aspects due to technological limitations.

Recent technological advances, however, have allowed virtual interactions to shed some of their past limitations and abstractions. In particular, several well-known, new technologies allow for unprecedented forms of realism in the virtual world. This note categorizes such technologies as virtual realism technologies.

B. What is Virtual Realism?

This note defines “virtual realism” as the lack of abstraction and achievement of realism within a virtual platform. Even this definition, however, is not without ambiguities. Thus, it is important to clarify the concept virtual realism as follows.

First, this note construes virtual realism by reference to the user experience. A hyper-realistic virtual racing simulation, for instance, achieves virtual realism through a user’s experience playing it, not through a coder’s experience reading and writing the underlying software code. It is the consumer’s interaction with a virtual platform that is the focus here.

Second, this note does not attempt to draw a bright line separating platforms that achieve virtual realism from those that do not. Rather, the focus here is to examine a class of virtual platforms which provide a significant increase in the realism of the user experiences. In other words, the term virtual realism is not meant to allow for a clear categorization of every individual platform. Rather, it describes certain technologies that significantly shift platforms away from abstraction and towards higher levels of realism.

This limitation in scope is practical, as many older virtual platforms had some realistic features, and even the most modern platforms still retain some level of abstraction. For instance, early racing games were pixelated works, played in front

²⁰ See generally Jack Shafer, *Print vs. Online*, SLATE (Aug. 19, 2011, 5:47 PM), <https://slate.com/news-and-politics/2011/08/print-vs-online-how-the-print-edition-of-the-new-york-times-trumps-the-online-version.html>.

²¹ See generally Anna Akbari, *Identity in the Age of Social Media*, PSYCHOLOGY TODAY (Sept. 10, 2018), <https://www.psychologytoday.com/us/blog/startup-your-life/201809/identity-in-the-age-social-media>.

of a screen with a controller.²² Still, even early racing games had some elements of realism insofar as basic movement mechanics, sounds, and even spirit.²³ And while hyper-realistic on the whole, even modern racing simulations still retain elements of abstraction in that they cannot simulate, for instance, the danger of a life-ending crash or the feeling of wind tunneling through an open window.

Accordingly, as relevant to this note, virtual realism is used to describe goods and services that exhibit novel forms of realism *relative* to past goods and services. The group of technologies central to this note are not common in their ability to pass some objective bar for realism, but rather in their ability to significantly shift older technologies towards a higher level of realism.

Finally, virtual realism is used to describe a wide variety of technologies across a range industries; it is not limited to any single industry category. As discussed in this note, “virtual reality” and “augmented reality” are intended as illustrative examples of virtual realism, not as concepts synonymous or coterminous with virtual realism.

To summarize, virtual realism denotes a specific outcome of technological change. Where technologies provide for virtual realism, they significantly alter user experiences away from abstraction and toward the realism of physical-world experiences.

II

VIRTUAL REALISM TECHNOLOGIES

While there are many technologies that provide for virtual realism, this note examines three specific technologies which have recently gained popularity—virtual reality (“VR”), augmented reality (“AR”), and location-based services (“LBS”). All three stand out in that they provide a significant shift in user experience towards virtual realism. In many respects, this significant shift is more than a shift in degree. Rather, this shift is a fundamental change in the type of user experience—that is, a change in kind.

²² Darren Orf, *Racing Games: A Brief Visual History*, POPULAR MECHANICS (Nov. 25, 2013), <https://www.popularmechanics.com/culture/gaming/g1350/racing-games-a-brief-visual-history/?slide=1>.

²³ *Id.*

A. Virtual Reality

VR is a technology that has recently achieved popularity for its ability to completely immerse users inside a virtual world.²⁴ A VR headset replaces users' visual connection to their physical environment with a virtual environment.²⁵ Sensors in the headset make it such that one's physical head movements are replicated in the virtual world they see.²⁶ When they turn left, they see to their left in the VR world. When they turn right, they see to their right in the VR world. Some systems even track footsteps and controller movements so that a physical step forward or a hand gesture will trigger a parallel movement in the virtual world.²⁷

VR's growth and potential are vast, as VR and AR combined are expected to grow into a \$95 billion market by 2025.²⁸ Though VR's current demand comes primarily from the entertainment industry, its application has the potential to spread to "industries as diverse as healthcare, education, the military and real estate over time."²⁹

VR's rise to prominence represents a significant shift away from the traditional flat-screen medium (i.e., TVs, computer monitors, movie theater projections, etc.) towards an entirely different way of experiencing virtual content.³⁰

²⁴ *Demystifying the Virtual Reality Landscape*, *supra* note 11 ("VR is the most widely known of these technologies. It is fully immersive, which tricks your senses into thinking you're in a different environment or world apart from the real world.").

²⁵ *Id.* ("Using a head-mounted display (HMD) or headset, you'll experience a computer-generated world of imagery and sounds . . .").

²⁶ Tom Goodwin, *The 6 Dimensions of Virtual Reality*, FORBES (Apr. 20, 2016, 6:23 PM), <https://www.forbes.com/sites/tomfgoodwin/2016/04/20/the-6-dimensions-of-virtual-reality/#7d5edbb618be> ("A leap beyond 360 videos are VR headsets like Oculus Rift and HTC Vive and AR headsets like the Microsoft Hololens that allow your head position to be tracked within a specified area.").

²⁷ Dan Stapleton, *HTC Vive Review*, IGN (Apr. 6, 2016, 9:57 PM), <http://www.ign.com/articles/2016/04/07/htc-vive-review> ("Thanks to sensors that track your position as you physically move around a room and allow you to use your hands to interact with the imaginary as though it were real, the Vive is vastly more effective at making me feel present within a game or other virtual environment than anything else I've experienced.").

²⁸ Stefan Hall & Ryo Takahashi, *Augmented and Virtual Reality: The Promise and Peril of Immersive Technologies*, MCKINSEY & CO. (Oct. 2017), <https://www.mckinsey.com/industries/media-and-entertainment/our-insights/augmented-and-virtual-reality-the-promise-and-peril-of-immersive-technologies>.

²⁹ *Id.*

³⁰ *Id.* ("[VR] promises the replacement of rectilinear devices with technologies that depict worlds in ever-expanding concentric circles, providing a level of immersion and experience that has never been seen before.").

Whereas flat-screen televisions are only *part* of a user's environment (i.e., an aspect that they observed), VR *replaces* users' physical environment entirely, fully immersing them in a virtual world.³¹ VR platforms achieve realism not only through the complete replacement of a users' physical surroundings with a virtual world but also through the depth, dimension, and interactivity that is achievable in such virtual world. Whereas a flat screen is abstract in two-dimensional display, VR can accurately create a realistic three-dimensional world.³²

B. Augmented Reality

AR, like VR, finds much of its current application in the entertainment industry through mobile applications and video games.³³ However, AR probably has a larger range of potential applications.³⁴ Unlike VR, AR does not seek to completely replace one's physical environment with a virtual world. Instead, AR mixes the virtual world with the physical world, using various methods to overlay virtual images and video onto one's real-world surroundings.³⁵

An even more interactive version of AR is "mixed reality," which not only overlays virtual images but also allows for an interaction between the virtual and the physical, thus "anchoring" virtual objects into the physical.³⁶ For the purposes of this note, AR is an umbrella term which also encompasses mixed reality.

³¹ *Id.* ("This could be game-changing: users will no longer view content but will be placed inside ever-expanding virtual worlds and find themselves at the center, hence the 'immersive' nature of the technology.").

³² Goodwin, *supra* note 26 ("With these devices, you can draw in 3D and walk around your image, you can be transported to the Roman Coliseum and wonder around, and you see depth and parallax movements—you feel transported.").

³³ 3 MARY M. SQUYRES & NANETTE NORTON, TRADEMARK PRACTICE THROUGHOUT THE WORLD § 30:42 (2018) ("Although most uses of AR are confined to mobile applications or video games, the future is limitless. Any glass surface can provide a screen for AR, including eye glasses, a retail store window, or a television screen.").

³⁴ *Id.*

³⁵ *Demystifying the Virtual Reality Landscape*, *supra* note 11 ("AR overlays digital information on real-world elements. Pokémon GO* is among the best-known examples. Augmented reality keeps the real world central but enhances it with other digital details, layering new strata of perception, and supplementing your reality or environment.").

³⁶ Julia Tokareva, *The Difference Between Virtual Reality, Augmented Reality and Mixed Reality*, FORBES (Feb. 2, 2018), <https://www.forbes.com/sites/quora/2018/02/02/the-difference-between-virtual-reality-augmented-reality-and-mixed-reality/#65cd5b072d07> ("Mixed reality that starts with the real world—virtual objects are not just overlaid on the real world but can interact with it. In this case, a user remains in the real-world environment while digital content is added to it;

There are various ways in which AR can be implemented. Perhaps the best known example of AR is the 2016 global-phenomenon *Pokémon Go*.³⁷ *Pokémon Go* is a mobile phone game that utilizes the camera and screen of a smartphone to superimpose virtual characters onto one's surroundings.³⁸ Players move around the real world looking for characters to capture.³⁹ While *Pokémon Go* exemplifies a huge commercial success for AR, its limited entertainment role and confinement to smartphones does not demonstrate AR's full potential.

An example that might represent AR's full potential is imagined through Google's all-purpose AR eyewear: Google Glass.⁴⁰ Google Glass seeks to provide wearable, multifunctional AR that can be utilized in a variety of fields such as medicine, sports, and gaming.⁴¹ Though Google Glass has not been widely adopted,⁴² one can imagine a world in which Google Glass-type AR devices are as ubiquitous as smartphones, where every wearer's perception of the world is virtually augmented.⁴³ In such a world, physical ads on billboards would be rendered obsolete by virtual overlays. In a world with ubiquitous AR, virtual overlays would replace menus, storefronts, and other physical displays.

AR represents a significant shift towards an entirely different way of experiencing virtual content. Its virtual-physical hybrid experience is radically new and, compared to VR, fundamentally more "real" in that AR anchors users' virtual

moreover, a user can interact with virtual objects. This form of mixed reality can be considered an advanced form of AR.").

³⁷ See Alex Hern, *Pokémon Go Becomes Global Craze as Game Overtakes Twitter for US Users*, GUARDIAN (July 12, 2016, 1:33 PM), <https://www.theguardian.com/technology/2016/jul/12/pokemon-go-becomes-global-phenomenon-as-number-of-us-users-overtakes-twitter>.

³⁸ *Id.*

³⁹ *Id.* ("Pokémon Go is a spin-off of the long-running Pokémon series, in which players capture and battle the titular creatures (short for 'pocket monsters') in their quest to become the greatest Pokémon trainer in the world. Unlike in earlier videogames, players move around the real world looking for Pokémon to capture.").

⁴⁰ Paul Lamkin, *Google Glass Could Make Comeback in AR Revolution*, FORBES (Feb. 26, 2018, 3:45 PM), <https://www.forbes.com/sites/paullamkin/2018/02/26/google-glass-could-make-comeback-in-ar-revolution/#2c10ccb823a6>.

⁴¹ See Chris Smith, *2020 Vision: The Future of Google Glass*, TECHRADAR (Oct. 19, 2013), <http://www.techradar.com/news/world-of-tech/2020-vision-the-future-of-google-glass-1190832>.

⁴² See Siimon Reynolds, *Why Google Glass Failed: A Marketing Lesson*, FORBES (Feb. 5, 2015, 8:44 PM), <https://www.forbes.com/sites/siimonreynolds/2015/02/05/why-google-glass-failed/#4c775e1951b5>.

⁴³ Smith, *supra* note 41 ("[H]ow will Google Glass will look at the end of the decade? Will everyone be wearing one and if they are, what will they be wearing? How powerful can Augmented Reality become? How could it potentially change the way we work, study and consume?").

experiences in their physical surroundings. Thus, AR significantly shifts the landscape of virtual interactions towards virtual realism.

C. Location-Based Services

While perhaps not as experientially stunning as VR and AR, LBS are already widely used and significantly changing the way that users interact with virtual platforms. Like the changes driven by VR and AR, LBS-driven changes allow for user experiences that are less abstracted than previously possible.

LBS “use real-time geo-data from a mobile device or smartphone to provide information, entertainment or security.”⁴⁴ Essentially, LBS allow virtual platforms to track a person’s physical location, resulting in a variety of new interactions. Though location-based services can be used passively to deliver targeted advertisement or to provide extra security measures, LBS can also be used to provide interactive virtual experiences.⁴⁵

For instance, the popular rating platform Yelp utilizes LBS to create an incentive system which rewards users for virtual “check ins.”⁴⁶ Global media applications, such as Snapchat and Instagram, have introduced location-restricted “geostickers” and “geofilters” which provide specifically-located users with unique images that they can superimpose on their media.⁴⁷ Modern dating applications use LBS to quickly connect users within spatial proximity to each other.⁴⁸ By offering unique virtual interactions to only those within certain geographical boundaries, LBS-enabled platforms not only offer an incentive to travel but also create virtual boundaries, or “geofences,” that have both virtual and physical elements.⁴⁹

It should be noted that AR and location-based services are complementary. For example, *Pokémon Go* uses AR to superimposes virtual characters onto one’s

⁴⁴ Ryan Goodrich, *Location-Based Services: Definition & Examples*, BUS. NEWS DAILY (Oct. 30, 2013, 4:34 PM), <https://www.businessnewsdaily.com/5386-location-based-services.html>.

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ Josh Constine, *Instagram Stories Launches Geostickers as its Snap Attack Continues*, TECHCRUNCH (Mar. 7, 2017), <https://techcrunch.com/2017/03/07/instagram-geostickers/>.

⁴⁸ Chris Weller, *eHarmony is Gearing Up for a Battle to Win Back Millennials from Tinder and Bumble*, BUS. INSIDER (Feb. 18, 2017, 9:41 AM), <http://www.businessinsider.com/eharmony-win-back-millennials-2017-2>.

⁴⁹ Sarah K. White, *What is Geofencing? Putting Location to Work*, CIO (Nov. 1, 2017, 12:43 PM), <https://www.cio.com/article/2383123/mobile/geofencing-explained.html>.

physical environment and uses LBS to limit the discovery of such characters to specific geographic locations.⁵⁰

Whereas AR mixes virtual and physical stimuli, LBS mix the locational boundaries of a virtual platform and its incentive scheme with the physical geography of the real world. LBS, when used actively to incentivize user movement, can break down the barriers traditionally found between virtual experiences and the physical world. Whereas virtual platforms used to be completely disconnected from one's physical surroundings, LBS are now capable of inducing user movement.

The three technologies explained above do not represent an exhaustive list of all current or potential virtual realism technologies. However, for practical purposes, this note's discussion is limited to AR, VR, and LBS.

III

VIRTUAL REALISM AND LIKELIHOOD OF CONFUSION

Trademark law is fundamentally tied to the market, which means that significant shifts in the market with respect to virtual realism will inevitably raise questions of trademark law. The new wave of virtual platforms implementing VR, AR, and LBS are significantly different from their predecessors and may provide totally novel user experiences. Thus, the rest of this note examines virtual realism's implications for trademark law, ultimately arguing that trademark owners should be afforded greater protection in relation to the use of their marks in virtual realism platforms.

My examination of virtual realism and trademark law centers on virtual realism in the context of infringement and is divided into two parts. First, I examine the likelihood of confusion analysis. Second, I examine infringement defenses, focusing on the expressive use defense.

A. Infringement and Likelihood of Confusion Generally

With an influx of platforms utilizing VR, AR, and LBS, one can see the potential usages of trademarks within such platforms. Whether it be the trade dress of a soda bottle in a VR video game or a physical store's trademark superimposed on a building through an AR application, such platforms provide vast virtual spaces in which trademark infringement may be possible. While courts have yet to offer significant discussion with respect to trademark infringement in the context of VR

⁵⁰ Hern, *supra* note 37 (“But the core of the game is the Pokémon themselves, which can appear anywhere, anytime (though often themed around the location, with ghost-type Pokémon appearing in graveyards and water-type creatures near lakes and rivers).”).

and AR platforms, case law concerning trademark infringement in the context of non-VR and non-AR video games offers meaningful guidance.⁵¹

The fundamental test for trademark infringement is likelihood of confusion.⁵² At first glance, virtual realism intuitively denotes a greater likelihood of confusion between virtual and physical marks. For example, a higher level of realism in a virtual platform entails a higher level of realism for any marks used within that platform. Thus, marks used within virtual realism platforms have the potential to be more similar to their physical-world counterparts. Said similarity should, then, increase the likelihood that one might confuse virtual marks in virtual realism platforms with physical marks in the real world. This intuition also applies to the goods such mark is used in relation to, as well as other contextual experiences related to the mark.

The intuition above is also supported by the existing likelihood of confusion doctrine, for which each circuit has formulated similar, though slightly differing, multi-factor tests.⁵³ In particular, three common factors from the likelihood of confusion test are especially relevant for infringement analysis in the context of virtual realism: (1) proximity/similarity of goods; (2) similarity of marks; and (3) channels of trade/marketing. Since each circuit formulates their factors differently, the factors as described here may not explicitly match those used by some circuits. However, in circuits where there is not an explicit congruency in wording, a conceptual link with a factor can often be found.

B. Proximity/Similarity of Goods Factor

In general, the two most determinative factors with respect to likelihood of confusion are (1) proximity/similarity of goods and (2) similarity of marks.⁵⁴ Proximity of goods is especially important here, as it is the factor most affected by

⁵¹ See *Trademark Dispute: Can a Video Game Use Another Company's Trademark?*, DAVID LIZERBRAM & ASSOCIATES (Feb. 24, 2015), <https://lizerbramlaw.com/2015/02/24/trademark-dispute-can-video-game-use-another-companys-trademark/>.

⁵² 4 MCCARTHY, *supra* note 2, § 23:1 (“‘Likelihood of confusion’ is the fundamental test of both state common-law and statutory trademark infringement and federal statutory trade mark infringement.”).

⁵³ *Id.* (“[T]he federal courts have developed a multi-factor test to assist in the difficult determination of whether there is or is not a likelihood (probability) of confusion. The test used is not identical throughout the various federal circuits. Most such tests have about eight factors to consider and the number of factors varies slightly among the 13 federal circuits.”).

⁵⁴ *Id.* § 23:20.50 (“In applying a multi-factor analysis for likelihood of confusion, it will often be the case that the similarity of the marks and the similarity of the goods and services will be the most determinative of the factors.”).

virtual realism technologies. All of the circuits use a proximity of goods factor in one way or another.⁵⁵ This note, however, does not parse the differences between the circuits' differing formulations of the proximity of goods factor; rather, this note uses a broad conception of the factor.

In practice, the proximity factor for likelihood of confusion is often used quite broadly to incorporate elements of similarity, competition, and otherwise relatedness.⁵⁶ For disputes concerning marks normally reserved for physical goods and services, which are then used within a virtual platform, this factor cuts against a finding of likelihood of confusion. Namely, there is a notion that virtual goods/services and physical goods/services are not only different qualitatively but also separate spatially. However, such differences and separation are often a result of the technological limitations (i.e., abstractions) of past virtual platforms.

*E.S.S. Entertainment 2000, Inc. v. Rock Star Videos, Inc.*⁵⁷ is illustrative of how courts have failed to find proximity between virtual marks and their physical counterparts. There, the operators of a Los Angeles strip club named the "Play Pen" sued the creators of the video game series *Grand Theft Auto: San Andreas* ("*San Andreas*") for creating a virtual replica of the strip club named the "Pig Pen."⁵⁸ The game, which has sold millions of copies,⁵⁹ is set in a virtual city named "Los Santos," a fictionalized version of Los Angeles. To create Los Santos, the artists for the game took reference photographs of Los Angeles' businesses and people.⁶⁰ The Play Pen

⁵⁵ See, e.g., *Sorensen v. WD-40 Co.*, 792 F.3d 712, 726 (7th Cir. 2015) (listing "the similarity of the products" as a factor); *George & Co., LLC v. Imagination Entm't Ltd.*, 575 F.3d 383, 393 (4th Cir. 2009) (listing "the similarity of the goods or services that the marks identify" as a factor); *Am. Rice, Inc. v. Producers Rice Mill, Inc.*, 518 F.3d 321, 329 (5th Cir. 2008) (listing "similarity of the products" as a factor); *Frisch's Rest., Inc. v. Shoney's, Inc.*, 759 F.2d 1261, 1264 (6th Cir. 1985) (listing "relatedness of the goods" as a factor); *Pignons S.A. de Mecanique de Precision v. Polaroid Corp.*, 657 F.2d 482, 487 (1st Cir. 1981) (listing "the similarity of the goods" as a factor); *AMF, Inc. v. Sleekcraft Boats*, 599 F.2d 341, 348 (9th Cir. 1979), *abrogated by* *Mattel, Inc. v. Walking Mountain Prods.*, 353 F.3d 792 (9th Cir. 2003) (listing "proximity of the goods" as a factor); *Polaroid Corp. v. Polarad Elecs. Corp.*, 287 F.2d 492, 495 (2d Cir. 1961) (listing "the proximity of the products" as a factor).

⁵⁶ MARK S. LEE, ENTERTAINMENT AND INTELLECTUAL PROPERTY LAW § 2:55 (2018 ed.) ("For trademark purposes, 'proximity' refers to the extent to which goods or services are similar to, compete with, or otherwise 'relate' to each other.").

⁵⁷ 547 F.3d 1095 (9th Cir. 2008).

⁵⁸ *Id.* at 1097.

⁵⁹ *E.S.S. Entm't 2000, Inc. v. Rock Star Videos, Inc.*, 444 F. Supp. 2d 1012, 1017 (C.D. Cal. 2006), *aff'd*, 547 F.3d 1095 (9th Cir. 2008).

⁶⁰ *E.S.S. Entm't*, 547 F.3d at 1097 ("To generate their vision for Los Santos, some of the artists who drew it visited Los Angeles to take reference photographs. The artists took pictures of businesses, streets, and other places in Los Angeles that they thought evoked the San Andreas

was one such business that was modeled. In its examination of the proximity of goods and services, the Ninth Circuit noted that “[t]he Play Pen is a public establishment, where food and refreshments are served and live nude dancers perform. Video games such as *San Andreas* are generally played at home, sitting in front of a screen.”⁶¹ The court pointed to not only the differing features of a physical experience and a virtual experience but also the spatial separation between the two. Given the technological limitations in *San Andreas*, the court’s observation was proper. The virtual strip club in *San Andreas* is both visually and interactively abstracted from a physical strip club. Furthermore, the Pig Pen, which is located within an at-home video game, is spatially distant from the actual Play Pen, located in the physical world. Thus, it is hard to see the two goods/services as proximate in either their qualitative features or their literal geographical location.

In *E.S.S. Entertainment*, the lack of proximity was a crucial obstacle in finding likelihood of confusion.⁶² Moreover, such lack of proximity seems to be a symptom of the underlying virtual platform, rather than the specific video game at hand. However, while *E.S.S. Entertainment* provided a meaningful commentary on the difficulties of establishing likelihood of confusion in the context of traditional virtual platforms that are experienced at home in front of a screen, the opinion did not anticipate the rise of virtual realism technologies.

From the discussion in *E.S.S. Entertainment*, two problems arise concerning trademark infringement in virtual platforms: (1) lack of qualitative similarity between goods/services and (2) lack of spatial proximity between goods/services.

With respect to the qualitative similarity problem, VR, AR, and LBS all minimize the problem by contributing to an enhanced qualitative similarity between the virtual and physical goods/services. In particular, VR and AR allow for a more realistic virtual depiction of objects, surroundings, and interactions than was ever possible before. Using VR or AR, for instance, the Play Pen could be depicted in a hyper-realistic fashion. Virtual realism technologies provide significant improvements in other areas as well. For example, one might consider the extra dimension of realism a roller coaster simulation attains when played on an immersive VR system, rather than a traditional flat screen.⁶³

theme. They then returned home (to Scotland) to draw Los Santos, changing the images from the photographs as necessary to fit into the fictional world of Los Santos and San Andreas.”).

⁶¹ *E.S.S. Entm't*, 444 F. Supp. 2d at 1025.

⁶² *Id.*

⁶³ Dan Griliopoulos, *10 Best VR Rollercoasters for the Vive, Oculus, Cardboard and Gear VR*, TECHRADAR (Apr. 2, 2016), <https://www.techradar.com/news/gaming/10-best-vr-rollercoasters-for-the->

However, a particularly interesting scenario is presented by the recent “multiplayer online experience” known as *VRChat*, which is “a transformative platform like nothing you've ever experienced.”⁶⁴ *VRChat* is essentially a “virtual meeting space that lets people socialize, attend events, take classes, create art, play games, perform for large crowds, and explore virtual environments.”⁶⁵ Using VR, players possess a virtual avatar from an internal point of view and are able to control the speech and movement of their personal avatars.⁶⁶ The avatars in *VRChat* are user-created and span a vast range of possibilities.⁶⁷ A player using *VRChat* can use body-tracking technology to physically control an avatar to such detail that the player’s physical movements map directly onto the avatar’s virtual movements.⁶⁸ The body control is so precise that players can hold VR dancing events or yoga classes.⁶⁹

The realism of avatar control and social interaction on a platform like *VRChat* lends itself to a discussion of the similarity/proximity of virtual goods.⁷⁰ Imagine an avatar in *VRChat* with a virtual replica of a trademarked luxury bag. Not only would VR allow for the bag to be replicated in three-dimensional space with a high level of detail, but the bag would actually be worn on one’s “body” from the player’s perspective. The bag would move in synchrony with the player’s movements in real life. The bag could be interactive, such that it would open and close with the player’s hands in real life. Finally, a virtual bag could serve a purpose similar to that of a physical bag in that the player could choose to wear it as part of their personal image and identity, specifically for an occasion or environment like a virtual nightclub. All of these features draw the virtual bag closer in likeness to a real bag, and such closeness is only realized through the technological capabilities of VR.

vive-oculus-cardboard-and-gear-vr-1318108 (“Rollercoasters have been part of gaming’s heritage since the earliest days But VR’s inherent sense of presence makes the managed terror of roller coasters all the more impressive. It also has the added, uh, ‘bonus’ of sometimes inducing exactly the kind of sickness that you get from a really impressive rollercoaster . . .”).

⁶⁴ Kaylee Fagan, *A Large Number of People Have Come Out Saying VRChat Has Saved Their Lives — Here’s What it’s Like to Experience the Online Meeting Place of the 21st Century*, BUS. INSIDER (Mar. 1, 2018, 5:55 PM), <https://www.businessinsider.com/vrchat-explained-2018-2>.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ Gabriel Moss, *VRChat’s Full-Body Tracking Attracts Pole Dancers, Breakdancers and More*, VRFITNESSINSIDER (Nov. 30, 2018), <https://www.vrfitnessinsider.com/vrchats-full-body-tracking-pole-dancers/> (“And then there’s HTC’s house brew: the Vive Trackers. VERY accurate, to the point that you can do yoga and stuff.”).

⁶⁹ *Id.*

⁷⁰ *See generally id.* (“Nowadays, it’s no surprise that groups of people are already using full-body tracking in the virtual world to socialize and connect in entirely new and entirely real ways.”).

Whereas virtual bags in previous eras were limited to abstracted, two-dimensional displays on flat screens, VR has brought the potential for realistic, virtual bags to life. While this does not necessarily mean a finding of proximity/similarity of goods, it certainly provides a more convincing argument than was previously possible before.

For AR, much of the same detail and interactivity that is present in VR can be analogously superimposed onto one's environment. But AR may achieve additional qualitative similarities in that AR experiences borrow the "realness" of the physical environment onto which AR is superimposed. One might even say that games like *Pokémon Go* try to blur the line between virtual interactions and physical interactions, causing consumers to treat virtual representations as reality. With respect to *Pokémon Go*, consumers not only congregate outdoors in the thousands to pursue virtual rewards⁷¹ but also exhibit a passion for the game that has led some adults to commit crimes in pursuit of advancing through the game.⁷²

With respect to the spatial proximity problem, the relevant virtual realism technologies are AR and LBS. Using LBS, virtual platforms may be integrated with real-world geographical locations. Users of virtual platforms may be incentivized, or even required, to travel outside to real world locations. With AR, users have the ability to directly interact with their immediate environment, whether it is their living room or the façade of a public establishment. In order to better understand the features of AR and LBS, as well as to contrast them with the abstracted virtual world in *E.S.S. Entertainment*, we return to the global phenomenon of *Pokémon Go*.⁷³

Unlike older games, such as *San Andreas*, users interact with *Pokémon Go* by travelling to a variety of geographically dispersed, internet-connected locations. The technological capabilities of *Pokémon Go* advance beyond simple mobility, as it achieves mobile integration with its physical surroundings, thereby incentivizing player's to explore the real world and travel to specific locations. *Pokémon Go* achieves a virtually-augmented, hyper-real fantasy, in which the line between virtual interactions and physical interactions are blurred.

⁷¹ Julia Wong, *The World's Largest Pokémon Go Gathering Hits the Streets of San Francisco*, GUARDIAN (July 21, 2016, 7:47 AM), <https://www.theguardian.com/technology/2016/jul/21/pokemon-go-gathering-san-francisco>.

⁷² Ben Rappaport & Tim Stelloh, *Arizona Couple Abandons Toddler to Play 'Pokemon Go'*, NBC NEWS (Aug. 1, 2016), <https://www.nbcnews.com/news/us-news/arizona-couple-abandons-toddler-play-pokemon-go-n621006>.

⁷³ Hern, *supra* note 37.

Now, we might further imagine the potential of AR and LBS by considering a hypothetical AR version of *San Andreas* with game design similar to that of *Pokémon Go*. Theoretically, the game could utilize LBS to position a virtual strip club in an abandoned building next to the Play Pen. Furthermore, utilizing AR, the game could map a virtual façade depicting the mark “Pig Pen” onto the building. Perhaps the virtual façade could even mimic the aesthetic details of the Play Pen. Though it may still be considered only a “game,” the technologies that implement it and its ultimate result on user experience are completely different from traditional two-dimensional games—like *Grand Theft Auto: San Andreas*. In a hypothetical case involving trademark infringement within an AR-LBS version of *San Andreas*, establishing similarity/proximity of goods/services, and therefore establishing likelihood of confusion, seems possible, as the goods/services would be spatially adjacent and the virtual game would be qualitatively embodied in a physical building.

It is unclear what other kinds of virtual platforms will utilize AR and LBS and in what way they will implement them. However, it is clear that these technologies will intimately tie virtual goods/services to the physical world. Of course, while such technologies will not necessarily satisfy the proximity factor in every case involving virtual uses of physical marks, they will nevertheless increase the likelihood that virtual platforms may satisfy the proximity factor.

C. Similarity of Marks Factor

The second likelihood of confusion factor of interest is similarity of marks. This factor is also included in one way or another in most circuits.⁷⁴ This note, however, does not parse the differences between the circuits’ varying formulations

⁷⁴ See, e.g., *Sorensen v. WD-40 Co.*, 792 F.3d 712, 726 (7th Cir. 2015) (listing “the similarity between the marks in appearance and suggestion” as a factor); *Am. Rice, Inc. v. Producers Rice Mill, Inc.*, 518 F.3d 321, 329 (5th Cir. 2008) (listing “similarity of design between the marks” as a factor); *Sally Beauty Co., Inc. v. Beautyco, Inc.*, 304 F.3d 964, 972 (10th Cir. 2002) (listing “the degree of similarity between the marks” as a factor); *All. Metals, Inc. v. Hinely Indus., Inc.*, 222 F.3d 895, 907 (11th Cir. 2000) (listing “the similarity between the plaintiff’s mark and the allegedly infringing mark” as a factor); *Frisch’s Rest., Inc. v. Shoney’s, Inc.*, 759 F.2d 1261, 1264 (6th Cir. 1985) (listing “similarity of the marks” as a factor); *Interpace Corp. v. Lapp, Inc.*, 721 F.2d 460, 463 (3d Cir. 1983) (listing “the degree of similarity between the owner’s mark and the alleged infringing mark” as a factor); *Pignons S.A. de Mecanique de Precision v. Polaroid Corp.*, 657 F.2d 482, 487 (1st Cir. 1981) (listing “the similarity of the marks” as a factor); *AMF, Inc. v. Sleekcraft Boats*, 599 F.2d 341, 348–49 (9th Cir. 1979) (listing “similarity of the marks” as a factor); *In re E.I. du Pont de Nemours & Co.*, 476 F.2d 1357, 1361 (C.C.P.A. 1973) (listing “[t]he similarity or dissimilarity of the marks in their entireties as to appearance, sound, connotation and commercial impression” as a factor).

of the similarity of marks factor; rather, this note uses a broad conception of the factor.

The effect of virtual realism on the similarity of marks factor is minor, as even older virtual platforms were capable of replicating marks with a high degree of precision. This is especially true when replicating two-dimensional marks.

Nevertheless, virtual realism technologies have the potential to present uniquely detailed marks more realistically than was previously possible on virtual platforms. For example, VR may allow one to present a three-dimensional mark with more accuracy and precision and may enable a player to walk around and interact with the mark in a virtual three-dimensional space. VR can faithfully represent certain trade dresses that pertain to large spaces and buildings in stature and atmosphere. VR even has the potential to implement scent simulation in the future, thus allowing for the potential replication of scent marks.⁷⁵

Overall, however, virtual realism does not present any groundbreaking issues with respect to analyzing the similarity of marks. Even in older virtual platforms, most virtual marks can pass a similarity of marks analysis.

D. Channels of Trade/Marketing Factor

The third likelihood of confusion factor of interest is channels of trade/marketing. This factor is also included in one way or another in most circuits.⁷⁶ This note, however, does not parse the differences between the circuits' varying formulations of the channels of trade factor; rather, this note uses a broad conception of the factor.

⁷⁵ Andrew Tarantola, *Smellable VR is Coming Whether You Want It or Not*, ENGADGET (Nov. 13, 2017), <https://www.engadget.com/2017/11/13/smellable-vr-is-coming/>.

⁷⁶ See, e.g., *Sorensen*, 792 F.3d at 726 (listing “the area and manner of concurrent use” as a factor); *Am. Rice*, 518 F.3d at 329 (listing “identity of retail outlets and purchasers” as a factor); *Sally Beauty Co.*, 304 F.3d at 972 (listing “similarity of products and manner of marketing” as a factor); *All. Metals*, 222 F.3d at 907 (listing “the similarity of advertising methods” as a factor); *Frisch's Rest.*, 759 F.2d at 1264 (listing parties’ “marketing channels used” as a factor); *Interpace Corp.*, 721 F.2d at 463 (listing “whether the goods, though not competing, are marketed through the same channels of trade and advertised through the same media” as a factor); *Pignons*, 657 F.2d at 487 (listing “the relationship between the parties' channels of trade” as a factor); *AMF*, 599 F.2d at 348 (listing “marketing channels used” as a factor); *In re du Pont*, 476 F.2d at 1361 (listing “[t]he similarity or dissimilarity of established, likely-to-continue trade channels” as a factor).

The channels of trade/marketing factor inquires whether the plaintiff's and defendant's products or services share marketing channels, lines of commerce, etc.⁷⁷ For example, in *Checkpoint Systems, Inc. v. Check Point Software Technologies, Inc.*,⁷⁸ the court found a separation in channels because one party "marketed to physical and retail security specialists" while the other "marketed to computer information specialists."⁷⁹

For trademarks disputes concerning virtual platforms that use marks normally reserved for physical goods and services, this factor would heavily cut against likelihood of confusion. Namely, there is an argument that virtual channels and physical channels are per se separate. Even in *Checkpoint*, where the physical and virtual distinction was only brought up with respect to consumer expertise, there was a sense that the physical-world and virtual-world are separate "realms."⁸⁰

*Sherwood 48 Associates. v. Sony Corp. of America*⁸¹ sheds light on the difficulty of satisfying the channels of trade factor in infringement disputes with respect to virtual mediums.⁸² There, the owners of certain Times Square buildings sued Sony over a virtual depiction of the buildings in the 2002 movie *Spider-Man*.⁸³ In the movie, the buildings at issue are represented in their likeness, but with substitutions to the advertisements actually in place.⁸⁴ The court's likelihood of confusion analysis simply comprised the statement: "As to plaintiffs claim of confusion—as between whom was any purchasing decision affected?"⁸⁵ The separation between a virtual movie and the physical buildings of Times Square allowed for the easy dismissal of the infringement claim, primarily due to the fact that the consumers of each were entirely separated.

In contrast to movies, such as *Spider-Man*, it may be easier for plaintiffs to satisfy the channels of trade factor in relation to infringement cases involving AR

⁷⁷ LEE, *supra* note 56, § 2:57 ("The more similar marketing channels are for a plaintiff's and defendant's products or services that bear allegedly infringing marks, the greater the likelihood of confusion. However, even identical marks may not be confusing if other factors, such as marketing channels, lines of commerce, etc., weigh against confusion.").

⁷⁸ 269 F.3d 270 (3d Cir. 2001).

⁷⁹ *Id.* at 289.

⁸⁰ *Id.* ("Here, there is no evidence that a single security expert has sufficient knowledge in both the physical security and information security realms that he purchases both of these products for his corporation.").

⁸¹ 213 F. Supp. 2d 376 (S.D.N.Y. 2002).

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.* at 377.

and LBS platforms. With AR and LBS, one could imagine the situation in which the façade of the Times Square buildings is substituted, not in a movie, but rather through AR superimposition on the actual buildings in question. In such cases, the “marks” would directly compete for the same consumers, as they would physically take the same space, and so a court could weigh the channels of trade factor in favor of the mark owner. One could see the same sort of problems applying to the facts of *E.S.S. Entertainment*, where the at-home video game player is physically separated from the actual strip club.⁸⁶ There too, AR and LBS could utilize superimposition on the specific building to, perhaps, cause confusion in a similar channel of trade.

With virtual realism platforms, it is still hard to say whether virtual marks will enter the exact same channels of trade as physical marks. At the very least, however, courts may be more willing to weigh the channels of trade factor in favor of mark owners in relation to trademark disputes which arise in AR and LBS platforms.

IV VIRTUAL REALISM AND EXPRESSIVE USE

In addition to the infringement analysis above, virtual platforms also raise special questions concerning trademark infringement defenses. When it comes these defenses, courts often rule in favor of defendants in cases involving a virtual platform’s usage of physical goods/services. Namely, since many virtual platforms qualify as expressive works,⁸⁷ defendants can conveniently avoid infringement through protections under the First Amendment.⁸⁸

A. Rogers v. Grimaldi Test

In *Rogers v. Grimaldi*,⁸⁹ the Second Circuit set forth a balancing test for First Amendment defenses in the trademark context.⁹⁰ The *Rogers* test requires that courts construe the Lanham Act “to apply to artistic works only where the public interest in avoiding consumer confusion outweighs the public interest in free expression.”⁹¹

⁸⁶ *E.S.S. Entm’t 2000, Inc. v. Rock Star Videos, Inc.*, 547 F.3d 1095, 1097 (9th Cir. 2008).

⁸⁷ *See* 6 MCCARTHY, *supra* note 2, § 31:139 (“All types of entertainment media are considered as Constitutional free speech. Thus, enjoying free speech protection are: entertainment motion pictures; comic books; video games; and song titles and lyrics.”).

⁸⁸ *See id.* § 31:144.50 (“When a trademark is used in an expressive work, the *Rogers* test is a balancing of rights between the free speech policy of the First Amendment and the Lanham Act policy of preventing deception and confusion.”).

⁸⁹ 875 F.2d 994 (2d Cir. 1989).

⁹⁰ *See* 6 MCCARTHY, *supra* note 2, § 31:144.50 (“The Second Circuit’s *Rogers* balancing test is now widely used by almost all courts.”).

⁹¹ *Rogers*, 875 F.2d at 999.

Thus, the usage of a mark “falls outside the reach of the Lanham Act if it (1) has some artistic relevance and (2) does not explicitly mislead as to the source or content of the work.”⁹² This is a very low standard for a defendant to meet. Accordingly, defendants frequently rely on the *Rogers* standard to defend virtual platforms from infringement claims by physical mark owners.

For example, in *E.S.S. Entertainment*, the court applied the *Rogers* test and ultimately found that the Pig Pen was artistically relevant to Rockstar’s artistic goal of depicting the look and feel of Los Angeles.⁹³ Given that the “Pig Pen” did not explicitly mislead consumers, the court held that the usage of such mark was protected under the First Amendment.⁹⁴ In *Sherwood 48 Assocs.*, the court found first amendment protection in Sony’s depiction of Time Square in the movie *Spider-Man* given the depictions’ “artistic purposes.”⁹⁵ In *Mil-Spec Monkey, Inc. v. Activision Blizzard, Inc.*,⁹⁶ which concerned the virtual depiction of a trademarked military morale patch in a military-based video game, the court applied the *Rogers* test and entered summary judgment for the defendant.⁹⁷ Other courts applying the *Rogers* test to infringement disputes involving virtual platforms have similarly found in favor of defendants.⁹⁸

⁹² *E.S.S. Entm't 2000, Inc. v. Rock Star Videos, Inc.*, 444 F. Supp. 2d 1012, 1037 (C.D. Cal. 2006), *aff'd*, 547 F.3d 1095 (9th Cir. 2008).

⁹³ *E.S.S. Entm't 2000, Inc. v. Rock Star Videos, Inc.*, 547 F.3d 1095, 1100 (9th Cir. 2008) (“Like most urban neighborhoods, its distinctiveness lies in its ‘look and feel,’ not in particular destinations as in a downtown or tourist district. And that neighborhood, with all that characterizes it, *is* relevant to Rockstar's artistic goal, which is to develop a cartoon-style parody of East Los Angeles. Possibly the only way, and certainly a reasonable way, to do that is to recreate a critical mass of the businesses and buildings that constitute it. In this context, we conclude that to include a strip club that is similar in look and feel to the Play Pen does indeed have at least ‘some artistic relevance.’” (citation omitted)).

⁹⁴ *Id.* (“Nothing indicates that the buying public would reasonably have believed that ESS produced the video game or, for that matter, that Rockstar operated a strip club.”).

⁹⁵ *Sherwood 48 Assocs. v. Sony Corp. of Am.*, 213 F. Supp. 2d 376, 377 (S.D.N.Y. 2002) (“[W]hat exists here is for artistic purposes a mixture of a fictionally and actually depicted Times Square, which is central to a major scene in the movie thereby serving the theatrically relevant purpose of orienting the viewer to the location. This has First Amendment protection.” (citations omitted)).

⁹⁶ 74 F. Supp. 3d 1134 (N.D. Cal. 2014).

⁹⁷ *Id.*

⁹⁸ *See, e.g., VIRAG, S.R.L. v. Sony Comput. Entm't Am. LLC*, 699 F. App'x 667, 668 (9th Cir. 2017) (“Applying the *Rogers* test, we conclude that the First Amendment bars VIRAG's Lanham Act claims. Sony's use of the VIRAG trademark furthers its goal of realism, a legitimate artistic goal, and therefore satisfies the requirement that Sony's use of the trademark have ‘above zero’ artistic relevance to the Gran Turismo games. Moreover, Sony's use of the VIRAG trademark

B. Virtual Realism and the Role of Microtransactions

While many older virtual platforms have sought protection under the *Rogers* test, it is uncertain whether *Rogers* will afford same level of protection to virtual realism platforms. For at least two reasons, the *Rogers* test may not protect defendants in trademark disputes involving virtual realism platforms.

The first reason concerns hyper-realism. Virtual realism platforms allow for the replication of marks and corresponding goods at a higher level of realism than was ever before possible. Virtual realism platforms can recreate not only a mark's detailed appearance but also the functionality and interactive experience associated with the mark's corresponding goods. Where a luxury bag once could only be virtually copied as a two-dimensional image, it can now be replicated as a three-dimensional object in virtual reality with fleshed out interactive qualities. One can move their hand in the virtual reality world to grab, open, and close the bag much like in real life. Whereas previous virtual replicas were highly abstract, a VR replica is hyper-realistic.

This hyper-realism may make it more difficult for defendants to seek protection under *Rogers* test in trademark disputes involving virtual realism platforms. Given the hyper-realistic nature of virtual replicas, their existence should not be considered an expressive work. One can imagine a future world in which VR is able to produce a virtual handbag that looks, feels, acts, and even smells exactly like a real one. It is questionable whether such a bag should then be considered an expressive work. The copying of a handbag in VR does not seem to serve expressive or artistic purposes. Rather, such copying would seem more in line with traditional notions of counterfeiting.

Though it has been held that realism can be an expressive goal in virtual platforms, that view should be seen as a result of the technological limitations of the

meets the second requirement of *Rogers*, because VIRAG does not allege any 'explicit indication, overt claim, or explicit misstatement' that would cause consumer confusion." (citations omitted)); *Dillinger, LLC v. Elec. Arts, Inc.*, No. 1:09-CV-1236-JMS-DKL, 2011 WL 2457678, at *6 (S.D. Ind. June 16, 2011) ("It bears repeating that it is not the role of the Court to determine how meaningful the relationship between a trademark and the content of a literary work must be; consistent with *Rogers*, any connection whatsoever is enough for the Court to determine that the mark's use meets 'the appropriately low threshold of minimal artistic relevance.' EA has certainly shown that the 'mental imagery' associated with the Dillinger name has more than zero relevance to the content of the *Godfather* games." (citation omitted)).

past.⁹⁹ Because past virtual platforms were necessarily abstract, realism was not fully attainable and creative solutions were required to attain moderate levels of realism. However, in the virtual realism era, hyper-realistic virtual depictions may not require any creative solutions. The process of replicating a physical mark and/or object into VR or AR may very well be automated,¹⁰⁰ and it is further questionable how creative the motivation to replicate was to begin with. Where the creative process simply involves a desire to virtually counterfeit, it is questionable whether a truly expressive goal exists at all.

The second reason relates to microtransactions—a prominent business strategy associated with virtual platforms and video games.¹⁰¹ A microtransaction with respect to a virtual platform refers to anything you buy in a video game beyond the initial purchase of that game.¹⁰² After downloading a video game, for instance, a player may engage in microtransactions by purchasing virtual objects or experiences for use in that video game. *Fortnite*, which grossed \$3 billion in annual revenue despite being free to download,¹⁰³ is a prime example of a video game whose business model relies on microtransactions. *Fortnite* earns revenue by selling costumes and accessories with which players can equip their avatars in the game.¹⁰⁴ Microtransactions, such as those implemented in *Fortnite*, are expected to grow in ubiquity and may become the dominant business model associated with virtual realism platforms in the future.¹⁰⁵

⁹⁹ See *Brown v. Elec. Arts, Inc.*, 724 F.3d 1235, 1243 (9th Cir. 2013) (finding that “[g]iven the acknowledged centrality of realism to EA’s expressive goal, and the importance of including Brown’s likeness to realistically recreate one of the teams in the game, it is obvious that Brown’s likeness has at least some artistic relevance to EA’s work”).

¹⁰⁰ Sam Cribbie, *How We Turn Physical Products into Realistic 3D Models for AR*, MEDIUM (Dec. 6, 2017), <https://medium.com/shopify-vr/how-we-turn-physical-products-into-realistic-3d-models-for-ar-13f9dc20d964>.

¹⁰¹ Eddie Makuch, *Microtransactions, Explained: Here’s What You Need to Know*, GAMESPOT (Nov. 20, 2018, 8:31 PM), <https://www.gamespot.com/articles/microtransactions-explained-heres-what-you-need-to/1100-6456995/> (“[G]enerally speaking, a microtransaction is anything you pay extra for in a video game outside of the initial purchase.”).

¹⁰² *Id.*

¹⁰³ Paul Tassi, *Why Isn’t ‘Fortnite’ Going Away?*, FORBES (Jan. 4, 2019, 09:00 AM), <https://www.forbes.com/sites/insertcoin/2019/01/04/why-isnt-fortnite-going-away/#5bc8118a4380>.

¹⁰⁴ Connor Sheridan, *Fortnite Battle Royale Does Microtransactions Perfectly . . . With One Big Exception*, GAMESRADAR+ (Mar. 2, 2018), <https://www.gamesradar.com/fortnite-battle-royale-does-microtransactions-perfectly-with-one-big-exception/>.

¹⁰⁵ Makuch, *supra* note 101 (“Every major publisher in video games is already investing in microtransaction systems, and as mentioned, they bring in lots of money and at a high margin. You can therefore expect microtransaction systems to continue to exist and grow in ubiquity.”).

Microtransactions may limit defendants' ability to argue that virtual marks are purely expressive works under *Rogers*. If virtual objects in a platform can be bought and sold pursuant to individual transactions (i.e., microtransactions), then such virtual objects can be considered isolated goods which are separable from the platform as a whole. This isolation removes the need to consider expressive features of the platform as a whole when deciding whether the individual goods/services at hand are expressive. Even if the virtual platform as a whole is an expressive medium, a hyper-realistic virtual replica within that virtual platform might not be an expressive work if it is part of a microtransaction.

Hyper-realism and microtransactions may even play a role together, such as where hyper-realistic virtual objects are bought and sold pursuant to microtransactions. Such cases would be prime candidates for rejecting a *Rogers*-based defense, thereby allowing for a potential finding of infringement.

CONCLUSION

While past virtual platforms have generally resisted trademark infringement with respect to physical-goods marks, new classes of virtual platforms may not be afforded such immunity. With the rise of VR, AR, and other virtual realism platforms, vast amounts of virtual space will be created in which questions of likelihood of confusion and expressive use may no longer lean in favor of defendants. Where software developers may have previously been less averse to using marks for physical-goods within their platform, they may now need to be warier. Where owners of such marks may have previously been skeptical of the prospects of litigation, they may now be more inclined litigate.