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Giant Monsters

Creating Compelling Immersive Virtual Reality through cultural analysis of genre, games, and history.

Rough draft

Abstract

The ambitions of emergent immersive VR technology cater to first-person shooter (FPS) experiences, which illustrates a Western obsession with gun-based aggressive fantasies in VR prototypes. In the realm of gaming, making FPS games in VR appears to be the natural next step in the gaming's evolution due to the popularity of the genre in current gaming culture. But for the realm of VR, this obsession could prove problematic, considering the potential of the technology for work outside of the genre. The mechanics behind gunplay are easily understood by most people in Western cultures, due to the predisposition of both adults and children to enjoy fantasies of fighting with guns. In Western cultures, people like living out these fantasies to feel more control over their own lives, which often stems from anxiety pertaining to the real world. This anxiety also coaxes people to find forms of escape and take out aggression in competitive games. In Eastern cultures, Japan specifically, there exists a different relationship between the people, technology, and violence, and coincidentally, FPS games show less prominence in Japanese gaming culture. By understanding this relationship exhibited in Eastern culture versus Western, content creators can begin to create compelling experiences in immersive VR.

Keywords: first person shooters, physical immersion, digital media, virtual reality, theater, mecha, anime, kaiju, cognitive science, neuroscience, accessibility

Introduction

When discussing virtual reality, imagery of black masks strapped to people's faces typically comes to mind. The current state of virtual reality (VR henceforth) comes in the form of these black masks, the glowing screen moved from the entertainment center or gallery wall to directly in front of the optic nerve. In this exciting time of digital media, the human viewer inches closer and closer to the screen, pining for the day they truly interact with the virtual world inside it. This type of experience, this truly immersive digital VR, still waits for an adequate technological breakthrough to accurately translate the volition and embodiment of the human agent into digital space. At present, several inventions undergo development to complete this goal of immersive VR, with omni-directional treadmills to capture our legs, infra-red cameras to capture our hands, and plastic tubes filled with scents to capture our olfactories. But to do what, exactly? What does man do once he enters the digital world? Stare into the virtual sky and contemplate the virtual universe? Sit in the grass and sing "Kumbaya, my Lord?" From what developers of these immersive VR technologies indicate, and what the general public has voiced, we'll most likely want to shoot stuff.

The concept of virtual reality should not be constrained to the notion of video game played on a screen strapped to one's face. Virtual reality can include all of the world's we feel real but lay beyond our own reality-- the movies we watch, theater, epic sagas, even literature. And even in these virtual realities that currently exist, the romanticized hero with a gun can be found everywhere. What is it that makes gun violence in virtual worlds so appealing to so many people?

It doesn't require a massive amount of academic inquiry to know there's an obsession with aggressive gun-based fantasies in Western culture. The most popular video games around the world are first-person shooters (FPS); love it or hate it, *Call of Duty* is the 4th best-selling game franchise in history at 250 million copies sold over 13 years, behind only *Mario*, *Super Mario*, and *Pokemon*, which have been around nearly twice as long¹. *Call of Duty* is not the only FPS title to dominate the gaming market, and the list keeps growing.

From an eastern perspective of virtual worlds, one finds a departure from gunplay fantasies. The other three franchises that beat *Call of Duty* in sales? All three are Japanese titles which, while including agents of aggression, do not include gun play. They are also, however, not from the first-person perspective, which is common for most Japanese games. American games intend to make the character the player, whereas in Japanese games, the player controls a character separate from their own identity. The player does not need to be in the game to be compelled to play it, then perhaps immersion plays another role in virtual worlds. Before my lengthy endeavor of investigating the nuances of Japanese virtual worlds and the deep historical and cultural context, I was really interested in giant robots and giant monsters. Mecha and kaiju. The Gundams and Godzillas. These two genres of Japanese film and literature have deep roots in the country's rich and tragic history, which help examples of the genres indicate the themes and ideals generated by the special relationship Japanese content makers have with technology and violence. Additionally, out of the few FPS

¹McWhertor, Michael. "Call of Duty Surpasses 250 Million Games Sold Worldwide." Polygon. 2016.

games Japan produced, the successful ones star giant robots, or the player character pilots one.

The ancient media that influenced kaiju and mecha films speak to why they have been moderately successful in Japan and abroad, but also overlap with the reasons why FPS games are not so popular in Japan as they are in the United States, which I will discuss in depth. These genres, as well as other popular anime, manga, and games, share with American FPS games a satisfaction of aggressive fantasies, which speaks to the anxiety-inducing environment of our contemporary age. By considering the Japanese perspective towards technology, fantasy, and violence in virtual worlds, cross-analyzed with American perspectives towards immersive gaming, we can discover how to make compelling immersive virtual reality experiences. ...

Significance

Critics of VR do not hesitate to question leaving the “real” reality to play in a computer-rendered “fake” reality, especially when the most compelling examples shown so far have been limited to 360 degree journalism and games where you sit in a chair and playing a game where the head controls a camera. Not to say there have been great examples, which I will discuss case-by-case, but there lacks enough subtle elements missing. The current state of VR involves staring at a glowing screen, just like normal video games, using plastic controllers like other video games, with the exception of experiments of flakey hand gesture controls. A lot of people don’t like the “hype” surrounding VR, that people are excited about leaving physical reality, VR takes people out of physical reality. There’s something unsettling, something uncanny, about rejecting a fully capable world to play in a far more limited world.

The limitations not only affect immersion, but what people like to do in games and fantasy environments, such as real-time multiplayer competition and general shared experiences. The current state of VR is single player due to technical reasons, but before the tech is available, it’s critical to know why people want to play together and how that can translate to immersive VR, and why should multiplayer VR be attempted.

Attempts at making games more immersive and more active are typically dictated by the requirements of a FPS game due to the popularity of the genre and the clear analog between the first person perspective and what the viewer of VR would experience. Therefore unlocking what about VR FPS cultivates excitement for general immersive VR applications is important to understand compelling content creation for the platform, not just FPS games. The findings may even apply to development of better non-aggressive experiences and games, and could open the door for really interesting VR experiences between multiple human players. Within this topic also holds information about making VR more inviting to current nay-sayers. What can make VR a more “legitimate” medium for outstanding work, instead of simply a fad or gimmick?

Clarification of terms

For the course of this paper, the following terms will carry the given meanings to avoid confusion.

Virtual reality(virtual world): any kind of artificially created fantasy that disconnects from the real world, and not limited to VR headsets like Oculus Rift and the like. It can include traditional video games, theater, cinema, literature, and even daydreaming.

Participant: the person who is “inside” the VR experience.

Immersion: the feeling a participant achieves in an experience when they feel like they are actually in the experience, that they are the avatar. As immersion increases, so does feeling of control over the avatar, and the divide between real and virtual begins to fade.

Presence: the feeling of occupying a physical space, or that one shares space with another entity.

Immersive VR: technology that allows the participant to adequately feel presence and potentially cause the participant to confuse the virtual with the real world.

Fantasy: a means of escape from real life that one finds entertaining or relieving.

Experience: in this context, what the participant takes part in when inside VR, be it a game, art piece, cinema, etc and how it affects the participant emotionally, mentally and physically. *Game:* a set of mechanics given to a player meant to fulfill an objective, which should result in interesting dynamics that entices the player to keep trying to fulfill the objective.

Aggressive fantasy: any number of desirable escape methods to a virtual world to that feature objectively violent or intense activities, usually resulting in harm to virtual entities in the occupied virtual space. Typically aggressive fantasy, when mentioned, will be linked to coping with real-world anxiety and pent-up emotional energy.

Fields and domains

Why pick on FPS genre?

The first-person shooter genre prevails in Western culture. In 2015, shooter games made 21.7% of the gaming market share, trailing behind action games by only 7 percent, and beating all other genres by large margins.² The genre has had a lasting impact on the reception of video games as a medium ever since *Doom* in 1996, and the prime culprit behind the negative perception of video games. Because of its significant placement in culture, it will likely affect the next steps in VR development, as seen by early prototypes of immersive game technology.³⁴ Most importantly, VR is “first person,” both in terms of perspective and agency. The participant does not control a separate character, they are the character. Of course, the perspective is not exclusive to shooters, as several puzzle games take place in the first-person perspective. What the FPS provides, however, is a unique continuous connection between the participant and the virtual world through navigating the space and by connecting

² McCarthy, Niall. "America's Favorite Video Game Genres [Infographic]." Forbes. Forbes Magazine. Web.

³ <http://www.virtuix.com/>

⁴ <http://www.priovr.com/>

projectiles to targets. This facilitates a mutual reinforcement of immersion and identification with the player character,⁵

If VR becomes “multiplayer,” people will want real-time competition, like something out of *Tron*, and the current offerings of first-person competitive games are predominantly FPS games. Few, if any, first-person games that pits human players against other human players do not involve violent conquest. The violence may or may not actually be problematic, as studies have disproven links to violent video games and abusive behavior,⁶ but limiting the imagination early could hurt future developments in immersive VR competitive games. Figuring out why FPS games are successful in some places and not in others can indicate the pleasant and unpleasant elements of the genre and how they can be applied to something even more compelling, exciting, and immersive.

Why talk about games?

Immersive VR is inherently interactive digital media from first person perspective, and the closest current analog for interactive digital media is video games, with the exception of a limited distribution of art-house demonstrations. Knowing why video games can grab and hold a participant’s attention and keep them returning to the game can lead to knowing how to make any interactive VR experience exhibit similar qualities. What does the viewer do in the virtual world? What brings them back? From my experience, when someone tries on a VR demo, when it’s not necessarily a game, they immediately ask, “what do I do?” This may be because the medium closely resembles a video game, but maybe it’s because people want something to guide them into the experience, an artifact to interact with which to interact and find the experience they were meant to have.⁷ Other reasons to consider game design is, again, what do people do together when they inhabit the same virtual world. Because of the inherent limitations of all gaming technology, not just current VR technology, it’s rather difficult to guide groups of participants to an intended experience unless they have some kind of concrete playful or engaging mechanic to interact with that effectively utilizes the constraints of the artifacts.⁸

Why talk about film, literature, and other visual/performance media?

I wish to briefly investigate western and eastern film and literature, as well as other art history. VR, as was previously established, invokes fantasy, and fantasy is often dictated by film, theater, and objective forms of visual art. Film and literature have had a huge impact on taste making and reinforcing cultural trends. When asking someone “why they play an FPS,” a reply such as “because they’re awesome” is not an acceptable answer: there must be something else. This something else is cultural influence provided books or movies, which capture the context of given moments in time of the society in which the work was created. For VR to be respected as an art form and to make truly compelling experiences, the history of film, literature, and visual art must play a critical role in developing story and context.

⁵ Call, Josh, Katie Whitlock, and Gerald Voorhees. *Guns, Grenades, and Grunts: First-person Shooter Games*. London: Continuum, 2012.

⁶ Violent video games and real-world violence: Rhetoric versus data. Markey, Patrick M.; Markey, Charlotte N.; French, Juliana E. *Psychology of Popular Media Culture*, Vol 4(4), Oct 2015, 277-295.

⁷ Schell, Jesse. *The Art of Game Design: A Book of Lenses*. Amsterdam: Elsevier/Morgan Kaufmann, 2008. 11.

⁸ Idid

Why talk specifically about kaiju films and mecha anime?

Despite the lofty goals and clouded objectives, the actual end goal of the research is to find what specifically makes certain fantasies compelling, especially aggressive fantasies. For extra challenge and academic inquiry, I wish to avoid fixating on something currently popular in gaming culture such as first-person shooters. Non-gun related aggressive fantasies typically come from an eastern perspective, but to have some holistic findings, we need something that is accessible to both the east and west. We find that in Godzilla. I don't have to cite a link referencing Godzilla, because there is a high chance the reader knows the name Godzilla. Godzilla is definitively Japanese, but he's also an internationally recognized character in the modern zeitgeist. Truly one of the first pieces of media to bridge the national gap, and only a decade after World War II. Godzilla also encapsulates the qualities of aggressive, violent fantasies, but without celebrating warfare or gunplay, and even condemning it.

Several mecha anime follow a similar suite, that is, condemning senseless death and war while remaining very violent and aggressive. Mecha culture adds another layer of nuance to the theme of "giant entity." The giant entity, the robot, is an identifiable tool that becomes an extension of the self, similar to a gamepad or a joystick. In this regard the mecha is something more identifiable, which has its own layers of context, whereas the kaiju is alien, immense, and unfathomable, which has opposite context interesting in its own right. For the sake of passion and narrowing down such a hefty scope of inquiry, I choose these two sub-genres of Japanese literature for historical and cultural context to the research, and to potentially serve as the backdrop for research.

Why talk about the differences in western and eastern perspective regarding aggressive fantasies, and why look at only America and Japan?

Even though Japan has westernized significantly over the past century, there is still a drastic cultural divide between the US and Japan. Because this an investigation of culture in search of a holistic approach to the problem of immersive VR, both the eastern and western perspectives must be considered. This balancing act is critical because of the amount of focus the investigation puts on anime and kaiju films, predominantly Japanese genres. Additionally, because FPS games are popular in the US and not in Japan, knowing the specific the reasons for the disparity will show how gamers in each country cater to aggressive fantasies, which will lead to a better understanding of aggressive fantasy. Like with my choice of kaiju and mecha as central subjects of investigation, I look at America and Japan as analogs of West and East, respectively, as the scope of this domain, for the sake of efficient investigation, and because the two countries are the primary players in creating technology and media that falls within the realm of virtual reality.

Case studies of current applications in immersive VR

The Void

A "virtual reality theme park" currently in development that intends to produce a mixed reality experience. This involves mapping a virtual world onto physical space, where each participant sees a computer-rendered virtual world in a head-mounted-display, which will correspond to walls and doorways in the real world. Concepts include physical props held by

participants and physical rides that utilize the VR mapping method. The examples, concept art, and job listings imply that the team intends to make the experiences game oriented, including some instances of the FPS genre.⁹

HTC Vive demos

A consumer product that tracks a participant's head and hand positions in physical space and maps the locations to virtual space, transmitted to a head-mounted-display. The hands are tracked with a controller in each hand, each resembling a pistol grip complete with trigger. This allows the player to manipulate objects in virtual space through button presses on the controller while also accurately tracking hand position. So far all of the demos simply show off the tech and do little less, with a few exceptions of narrative-driven demos. Also the system is limited to single-player.¹⁰

Birdly

This is a good example of an immersive VR experience that's not a game. It's definitely not aggressive, and has no competition. It exhibits a solid potential for what can be done with the medium of VR if every aspect of the tech is built around a single virtual experience. According to Bryan Bishop and Casey Newton of *The Verge*, Birdly can turn skeptics of VR into true believers. We learn from Birdly that in order to make something truly immersive, the participant needs to have full control over the avatar and interact with that avatar in a physical way. Birdly also introduces the idea of environmental effects, such as the wind generated by a fan and chemically-produced scents.¹¹

Playstation VR

Another consumer product, the Morpheus is a head-mounted display exclusively licensed for Sony's Playstation 4 gaming console. It functions much like the Oculus Rift, and uses the Playstation Move motion controls introduced earlier to track hand movement. The Morpheus, despite its hefty price tag, aims to be the more consumer-friendly alternative to the Oculus, which requires an intense computer graphics hardware that the average gamer likely does not have. As the potential for immersive VR increases, accessibility should take a high priority. However, what does reduced graphics capability say about immersion? Does graphics fidelity necessarily translate to more compelling immersion? Or does the quality lie in the interface? The success of the Morpheus may answer that question.¹²

Virtuix Omni and Cyberith Virtualizer

These are VR peripherals designed to capture human walking. They are essentially treadmills that harness the participant in a stationary position and they walk in place, which triggers avatar movement in the virtual world. These devices, while generating a lot of hype amongst game enthusiasts, are not well received by tech critics due to the discomfort caused by

⁹ <https://thevoid.com/blog>

¹⁰ http://blog.htcvive.com/us/?_ga=1.188588715.28045757.1458714980

¹¹ <http://www.somniacs.co/>

¹² <https://www.playstation.com/en-us/explore/playstation-vr/>

operation and how silly the operation looks.¹³ These are examples of tech that try to solve a problem of immersion without fully understanding what the participants will find truly compelling. An episode of the web series *Extra Credits* informed me of a related problem regarding the Xbox Kinect. The Kinect aims to capture gestures to trigger game events, such as running in place to trigger your avatar to run in a game. This kind of activity creates what they called “the uncanny valley of game controllers.” Just like the term applied to robotics and graphics, the actual activity that triggers the virtual activity that is very, very similar to the actual activity, but falls just short enough to feel uncomfortable or strange. Eventually the Kinect just collects dust because the initial novelty wears off. The “uncanny valley of game controllers” occurs with these treadmills as well, and must be considered in the overall end product.¹⁴

American historical context for aggressive media and first-person shooter games.

The FPS genre started in America around 1996 with the release of *Doom*. It wasn't the first FPS title, but it certainly started a trend. The years following were filled with releases of “Doom clones.” But to know why the US made the FPS before anyone else, let's look at the history and culture of the country.

The country has deep-seeded relationship with firearms. The liberty of the original colonies was one at the end of a musket, held in the hands of the armed public. The gun made the average citizen a hero, at least, that's the romanticized interpretation of it. This is the kind of image protected by the 2nd Amendment, that at any moment, the everyman can take up arms against a threat to his liberty. This romanticized ideal of gun violence continued as the country widened its frontiers into the west, where having a pistol or rifle was critical for the survival of family and livestock.¹⁵

Enlightenment brought with it a new sense of individuality, as respect for the person soon outgrew the respect for the group. It became the responsibility for the American man to be more self-sufficient, to defend himself when he or his cause were threatened. The industrial revolution came into conflict with this respect for individuality, where the factory machine diminished the worth of a single person. At this time, when the individual, one of the core values of American liberty, had lost value, the gun was seen as a tool to aid in self-sufficiency and self defense, and turn the everyman, once again, into the hero.¹⁶

The image of the hero with a gun was solidified after action in two world wars, in each of which the American public declared the US the victor. Despite the falsehood in their belief, post-WWII Americans saw themselves the world's police force, the most powerful military in the world, which only encouraged the proliferation of pro-gun and pro-war culture. Post-war America saw another shift in the roles of men. As the middle class grew, so did the amount of men taking desk jobs. The growing white-collar worker force began to feel in less control over their destiny, more dependent on the group in both professional and home life, in all regards “less of a man.” Gender politics aside, the anxiety permeating throughout

¹³ Wong, Raymond. "VR Startups: Stop Trying to Make Virtual Reality Treadmills a Thing." Mashable. Web.

¹⁴ Extra Credits: Kinect Disconnect. <https://www.youtube.com/watch?v=ijcezUy3ZzY>

¹⁵ Brumberg, Joan. "American Boys And Their Guns." History News Network. Web.

¹⁶ Emberton, Carole. "The Real Origin of America's Gun Culture." History News Network. Web.

society would create fertile ground for an aspiring film industry to take root and flourish, full of virtual worlds for people to escape their mundane lives.

The Western film genre reinforced the romantic tradition of the cowboy, the drifter, the gunslinger. About men who had to protect their land and their ideals with bad guys with guns, and had to secure their own meals. WWII movies maintained ideals of war heroics and the courage and risk the individual goes through in combat. In this new era of film we see an emergence of escapism, to leave the mundane world behind for a moment to witness heroics of your Humphrey Bogarts and John Waynes, excitement, drama not available in real life.

Later in the 1950s we see a fascination with destruction, with further destruction thwarted by, once again, the heroics of a man with a gun. Disasters were the outcomes of evil doers, and in the end evil is apprehended and crisis is averted by a hero with a gun.

Video games introduced decision making and skill into media consumption, which restored some sense of control to individual lives. Later, in the game *Myst*, first person perspective made the player the character, and the character's actions are the player's actions, immersing the player into a virtual world of puzzles and decision making. Once a gun was added to the immersive perspective, the FPS genre was ripe to take off. The gun restored control to the player's life: now instead of watching someone else escape reality and live vicariously through a character in a film, a video game player could be the one to literally call the shots. Multiplayer satisfied the individual need to be better than other individuals inherent in aggressive competition. The virtual violence in these competitive environments evoked the ideals of self defense against others, proving to the oneself that you are more capable than others of keeping themselves alive. In all games, players make decisions, a type of control, but in an FPS, the decisions must be made quickly and frequently in tests of control. Soon as graphical capabilities improved, American FPS games pushed the boundaries of realistic graphics, to make violent games as real and as gritty as possible.

Eastern perspective on violent conflict and tools

The ancient warrior society focused on strengthening the body and, most importantly, the spirit (Shinto and Buddhism). Strong village and community dynamic maintained the group of greater importance than the individual, with the exception of leadership.

Simply, Japan is a much older country than America, and predates the gun. America's upbringing and identity tied so closely to the gun whereas in Japan the gun is less important. Instead, focus is on the sword. As an analog to the gun, the sword is less of a tool but actually an extension of the self. It is not a disposable weapon like a gun, but an instrument to transmit skill and personal energy.

Ancient forms of theater and inventions aimed to perfectly mimic nature, to harmonize and pay homage to nature, not to dominate it. But in the 19th century, Western powers began imperialist engagements with Asian entities. American vessels used force to open up trade with Japan and, as a result, Japan underwent massive changes in its military and economy to prevent Western domination. By forming a strong, modern military and a rich economy, they soon had the capability to force colonies on neighboring countries, ironically becoming imperialist themselves.

World War II left Japan devastated. The US was much more technologically advanced, and Japan lost the war because of it. Massive destruction due to a combination of harmful intent and advanced technology affected Japanese culture for the rest of 20th century. Civilian scientists and engineers seek to always be technologically advanced, but a nation-wide belief in pacifism has prevented any kind of strong military research, and they were one of the first countries to advocate nuclear non-proliferation.¹⁷

Popular Japanese game genres include the classic puzzle platformers, like the *Super Mario* and *Legend of Zelda* franchises, 2D fighting games, role playing games in a unique visual and mechanical style (commonly referred to as JRPG), and the dubious interactive story games. The games align with several of the ideals that revealed themselves during cultural and historical research, such as putting the focus of the game on the story of another and not putting the player in the story, hence why the first-person perspective is generally not as popular as it is in the US. The games, especially action-oriented ones, also do not focus on making realistic depictions of reality; instead, the game renderings, while they may be beautifully detailed, make fantastically stylized renderings of characters and environments with over-the-top visuals. The immersion comes not from the perspective or the visuals, but from the storytelling, character development, and world-building. This kind of immersion is difficult to pull off effectively in a first-person perspective, because in order to do so, the story must dictate the intended life of the player, who assumes the role of the character internally instead of externally as an observer. Rarely is the player character the player in Japanese games. The player instead controls an avatar that is not supposed to be the player. The player is the puppet master instead of the puppet itself.¹⁸

The tools and weapons used by characters in Japanese games also align with this theme of having tools not as disposable objects meant to turn average people into heroes, as seen in American examples, but again as an extension of the self. The character and the weapon are one, and often each define each other. Some would argue that American FPS game follows this, when a character is “the sniper,” hence the character becomes defined by his tool, and he is one with the tool. But when the player is the character, the player is expected to pick up and use several guns, casting aside old guns when they run out of ammo or when a better one becomes available. In Japanese games, the artifact of the tool is the same and has its own maximized potential, as governed by science or lore. The effectiveness of the tool comes from the synergy it shares with its user and the user’s training and power.¹⁹

Kaiju culture and giant entities

The Godzilla franchise, among other Japanese horror films featuring giant creature, was directly inspired by Japan's history with nuclear weapons, which reflected older ideals of man cooperating with and not dominating nature. Godzilla, along with other Japanese horror movies featuring giant monsters, were warnings of what happens when the arrogance of man encourages flagrant abuse of science. The giant monster, just like several other examples of folklore from which the movies borrow extensively, behaves much like an American urban legend. The viewers of these films know the creature isn’t real, but the lessons represented by

¹⁷ Denison, Rayna. *Anime: A Critical Introduction*.

¹⁸ Extra Credits: Myth of the Gun. <https://www.youtube.com/watch?v=os3IWluGsXE>

¹⁹ Ibid.

the creature are very real and important. The special effects, which included human actors walking around miniature cities whilst wearing rubber suits, seem silly by today's standards, and certainly a healthy amount of disbelief suspension went into watching the movies between 1950 and the late 1990s. But the effects were successful because there wasn't a disconnect between the acting agent, the man in the rubber suit, and the environment. It felt more believable, and more comfortable to audiences. The movements were lifelike, and the level of detail, because of the "larger scale" than American 1950s horror films featuring stop-motion animation, could create fantastic looking monsters.²⁰ The use of rubber suits and puppets, which continued at the studio behind of all of the *Godzilla* movies up until the *Godzilla 2000*, has a direct connection to the ancient art of traditional Bunraku theater, which implements four-foot-tall puppets operated by several people to provide a visually striking and stylized performance. The traditional puppetry allowed for different kinds of effects not possible with actual subjects, like cutting off the front of a puppet's face during a sword fight scene. The effects did not focus on visceral realism, but instead stylistically depicting the situation to convey the base message and emotion tied to it.²¹ Hence both the traditional puppetry and the modern-film application of puppetry can create entertaining experiences that satisfy aggressive fantasy while immersing the viewer in story and message.

Immersive VR and the next steps

Inherently, VR is a first person experience. Whether a game or not, the viewer feels personally involved in the experience and beings to feel physically embodied in the media.

There is a sense of presence, the same sense when watching theater live versus a filmed recording, that the figures in the world exist in the same world as the viewer.²² This presence in a VR environment can create a somewhat uncomfortable disconnection, because the entity is there in virtual space, but cannot truly be felt physically. This ties back to the "uncanny valley" mentioned earlier. The disconnect is further compounded by motion, especially when the viewer moves in virtual space, but is stationary in physical space. The cognitive dissonance becomes so bad that it often elicits physical nauseating discomfort in many participants. The FPS game style solves many of these problems. To complete the goal of a shooter, you do not have to physically contact the opponent. You also do not have to travel to the opponent to complete the task; only the virtual projectile must come into contact with the virtual target. The gun then connects the viewer to a tangible tool. This is what physically connects the viewer to the virtual world, helping eliminate an uncomfortable disconnection. It grounds the viewer. The HTC Vive makes the tool more general, much like the WiiMote peripheral for the Nintendo Wii gaming console. The viewer still comes in contact with physical tools that translate to tools in the virtual world, or simply ground their own hands in the virtual world. The Vive, as well as the Void and other projects, attempt to go over the uncanny valley by mapping, one-for-one, the participants physical actions into virtual actions, instead of gesture control that simply map physical actions that are close but not quite like the virtual actions. Perhaps compelling VR can still be accomplished on the other side of the valley, with less action fidelity, much like Japanese anime and games are successful despite

²⁰ Barr, Jason. *The Kaiju Film: A Critical Study of Cinema's Biggest Monsters*.

²¹ Bunraku - The Ancient Art of Japanese Puppetry. <https://www.youtube.com/watch?v=44dH7j-riTw>

²² Drew, William. "Welcome to the Black Box." *Kill Screen*. Vol 1, Issue 8. Print.

unrealistic yet stylized depictions of life, that people sometimes feel more comfortable with than the real world.

There is still much work to be done, and this paper in its current state only serves as a blanket concept of what is to come. The separate section of the paper have ample opportunity for continued inquiry and expansion, and I have material ready to flesh out the support for the claims I have asserted. From what I have researched thus far, I believe I have enough evidence to justify my overall idea of creating compelling immersive VR that satisfy aggressive fantasies by first understanding the cultural dissonance of American versus Japanese gaming culture, inspired by the successful motifs and themes of kaiju and mecha film that appeal across the cultural divides. After that initial understanding, the intended VR experiences can become more compelling by accurately determining what specifically maximizes the intersection between full immersion and satisfying fantasy in a VR environment.

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