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Independent Inquiry - ADAD6001

Dissertation, Timi O'Neill

**How Video Games as a medium of entertainment
have influenced Popular Culture in the last 50 years**

Wordcount: 6390

Declaration

I hereby declare that this dissertation is my own work and has been submitted exclusively to the University of Wales Trinity Saint David for the purpose of being marked. All research, studies, quotes and anything else from other individuals, organisations or otherwise used in this dissertation has been acknowledged as the work of other individuals, organisations or otherwise, and has been referenced accordingly and appropriately.

Signature *Gareth Owen Tilly*

Date *10/12/2019*

Abstract

The long-reaching influence of video games has been carried primarily upon their gameplay, but as the technology changes, slowly games have transitioned to a point where stories are as important as gameplay. Whilst these stories are primarily self-contained to video games, they have also seen adaption in to other media, such as film and television, bringing games forward to new audiences and in to the realm of multi-media franchises.

As the video game expands from self-contained references and small consumer base, to multi-media franchises with large audiences both casual and dedicated, their content has become referenced and iconic in popular culture, entering the realm of mainstream culture and creating its own momentum to preserve games place as a marker in pop-culture.

Whilst maintaining its momentum as a symbol of modern popular culture, the video game remains one of the most widely used home devices for home entertainment, being regarded as such an important device as to warrant it's being displayed in exhibitions and each latest release of a new console or game receiving significant media coverage with each release, with these new releases even being speculated on.

The Video Game has always served in the role of a device for play and entertainment, but as they have become more prevalent, the functions games serve have in turn expanded, with the video game now being used as an education tool, both in schools and on more personal devices, such as mobile phones.

Popular Culture has only been influenced by the video game however, as games take more than a bit of inspiration from other media, even directly adapting media such as films, toys and television in to video games, with entire intellectual properties often making the transition to the media and having some of its most significant successes in gaming.

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Introduction

The public experience with Video Games as a casual entertainment medium has been a long and storied one, from the earliest introductions to the medium such as *Pac Man* and *Tetris*, to the later games with simple appeals to younger fans of different mediums, such as television like *SpongeBob SquarePants: Battle for Bikini Bottom*, or adaptations of film into toys, as done by *Lego Star Wars II: The Original Trilogy*, featuring on the previous generations of video game consoles such as the PlayStation 2, involving basic problem solving as a mindless throw-away device in distraction and play, tapping in to the players love of other media. Even then, experiences with the ever-evolving medium of video games aren't just limited to the young, with more mature audiences playing games as a pastime, with the changing medium drawing upon historical and real-life elements to appeal to this more mature audience, with real time strategy titles such as *Hearts of Iron IV* and realistic military shooters *ARMA 3* on the PC, requiring the regular use of strategy and reflex as an interactive entertainment, often absorbing the attention and engrossing the player for hours at a time.

There are certainly other such games with unique appeals, aside from the examples presented, with the long and storied history of the medium and its perpetual grip upon generations of self-prescribed gamers and players alike, from Europe to North America, all with access to a wealth of titles with a great diversity of gameplay types and themes to them. According to the Entertainment Software Associations *2019 Essential Facts About the Computer and Video Game Industry*, 65% of American Adults play Video games, spread across various devices with 60% playing on smartphones, 52% on a personal computer and 49% on a dedicated console. (Entertainment Software Association, 2019).

The ESA data studies implies that the video game is no meagre footnote in entertainment to be lumped in as some side note product, and certainly no newcomer to the scene of interactive entertainment due to the broad range of the video game across multiple devices, attesting to the longevity of the video game and the development of the media from simple displays with simple

mechanisms of play, up to more modern and advanced open-world environments with a plethora of features and options for the player to immerse themselves in.

This ever-expanding medium, that has survived the video game crash of 1983 and the Dotcom Tech Bubble of the late 1990's to the early 2000's, with an ever increasing resonance, accompanied by the expected financial successes that come with the growth of the video game as a marketable home entertainment device, making \$35.8 billion in sales in 2018 in the US market alone, an increase from 2016's £25 billion in sales. (Entertainment Software Association, 2019).

As the Video game goes from strength to strength, it's raised and been at the centre of many hotly discussed issues and topic. Of them all, one that certainly might have been considered by the developers of, and perhaps to a lesser extent the players of, arguably the first video game *Pong*; The question of how video games as a medium of entertainment would have influenced popular culture in the last 50 years up to this day.

Video Games in Film and Television

The long-reaching influence of the video game has extended into popular culture for a considerable period of time across many mediums, with the manifestation of films directly inspired by video games for their source material. The most prominent example of this being *Tron*, displaying the trappings of the medium technological limitations of the time, but which had so inspired the Director, Steven Lisberger, as he said in an interview with Richard Patterson of the *American Cinematographer* about the makings and the origins of *Tron* “So when I saw Video Games for the first time, I thought, These games are something I can relate to. I was fascinated by them, and I wanted to do a film. I was starting to think how I could do a film about this, and immediately - I mean that same instant that the idea came to me I realized there were these techniques that would be very suitable for bringing video games and computer visuals to the screen. And that was the moment that the whole concept flashed across my mind.’ (Lisberger, 1982). Even with the limited methods available at the time for Lisbergers film, he was still driven and inspired by the simple graphical prowess of old video games from the time, such as *Pong* and *Space Invaders*, almost solely down to the appearance of them, and the interest behind not just the technology, but the possibilities that lay within for this then-nascent media.

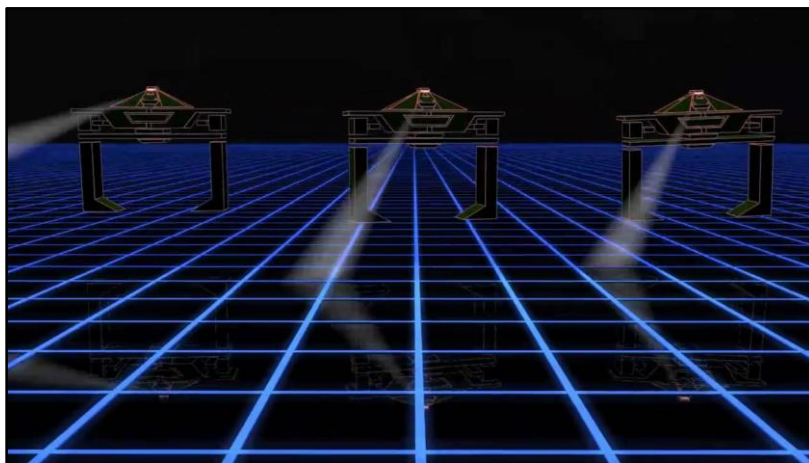


Figure 1 (*Tron*, 1982)

Later, films using Video games as the inspiration material would begin to adapt the story to try to follow the actual characters of the various video games, such as the *Super Mario Bros.* in 1993 grossing \$20,844,907 in the domestic box office of the United States. According to *The Numbers*, and the *Street Fighter* film in 1995 which grossed \$33,423,000 in the domestic box office of the United States. Released two years separate of one another, both based off popular video game titles of the same name, *Super Mario Bros.* and *Street Fighter*, with the *Street Fighter* film perhaps most closely following the theme of cartoon violence and fighting that the Video game used as its primary gameplay. These early attempts to capture the audience, the fanfare and the excitement that surrounded the video games of the same names could be seen as a cynical marketing ploy, but the concept behind bringing the video game out of an insulated medium and expanding its appeal is certainly sound enough of an idea. Most video games adhere to the same story-telling principles as Movies, with Scott Rogers attesting as much in his book, *Level Up! The Guide to great Video Game Design*, when addressing how video games should handle their own story crafting decisions “Hollywood has spent many years analysing and deconstructing the story. Don’t feel that you have to reinvent the wheel; learn what those in Hollywood have. Read screenwriting books, take classes, visit screenwriting websites.” (Rogers, 2014).

With such similar ways of writing and story craft, the idea of adapting a Video game to the big screen seems otherwise perfectly feasible and achievable, with the video game already following much of the same format that Hollywood has since the early days of cinema story craft, but for the time the concept was a untried and untested one, but the simple source material and the shallow narrative games of the time such as *Super Mario Bros* and *Street Fighter* made use of, was a good basis on which writers and directors could use to their advantage when adapting games to film.

The older the video game on the whole becomes, the more likely that attempts to adapt their stories and even the gameplay to various other media are to capture the nostalgia, each with varying degrees of success, such as the near-universally panned adaption of the *Super Mario Bros.* film, aging poorly,

even with the passage of time. As Kim Newman wrote in her review of the film in 2014 for *Empire* “The first film to be adapted from rather than in to a Nintendo cartridge, *Super Mario Bros.*, is a shrill, hectic and tiresome fantasy with little story, less excitement and no imaginable audience ... occasionally, the Special effects (a pet sized dinosaur, transformations, disintegrations) raise some interest, but there is never any sense that there is more than a technical showreel interspersed with Three Stooges cast-offs ... this poor imitation of a 90’s blockbuster stumbles from the start and winds up flat in the dirt. Game over, man.” (Newman, 2014). The film was neither well received by critics or the audience alike, or even the intended fan audience for *Mario*, citing poor pacing, confusing plot and most notable of all for a supposed adaptation, the differences in the film when compared to the source material, a continuing theme in film adaptations of video game titles bearing the same name.

Despite such scathing critique and poor reception of the *Super Mario Bros.* film, in no way an outlier for such critiques, being quite the common response for the time, speaking poorly of the attempts from the time, the adaption of *Street Fighter* press on, receiving similar reaction to the *Street Fighter* film upon its release two years later; an equally dismal reception. As William Thomas commented in his review of *Streetfighter* “Bearing in mind the commercial disaster that was *Super Mario Bros.*, you might think Hollywood would be wary of dipping its tootsies in to the world of computer games once more. Well, think again. In fact, with movie adaptations of both *Doom* and *Mortal Kombat* in the pipeline, there seems every prospect of consoles replacing comics as one of the studios’ primary sources of material. If the results are anywhere near as bad as *Streetfighter* [sic], however, then that is a very grim prospect indeed.” (Thomas, 2000). However, the film was defended for its eccentric performances, its campy action-scenes and at least a closer respect for the source material, but this would be quite heavily condensed to fit in to the films world building. Though these early attempts to adapt the Video game proved rather unsuccessful, outside of some nostalgia for the films from fans like myself and others, it was certainly not the last attempt to adapt the Video Game to another media, pushing ahead with the ambition of expanding the video games appeal to others.

A more recent controversy with adapting video game stories to the big screen has come from a genuine place of interest in many fans, who otherwise are keen to see their favourite Video Game icons adapted to the big screen. Such an example of this controversy can be seen in the upcoming 2020 film, *Sonic the Hedgehog*, and adaption of the popular *Sega Sonic the Hedgehog* video game series. This time not in reception to the actual film itself, but simply in a trailer of the upcoming release. The trailer displayed a rather unflattering depiction of the previously well-established *Sonic* character design, with an attempt to bring the character from the cartoon to the almost-life like. However, this was so poorly received that as *Rotten Tomatoes* writer Greg Dean Schmitz explains in the *Weekly Ketchup*, that it saw a character redesign “Back in December, the first silhouetted look at their movie version of *Sonic the Hedgehog* led to a flurry of mostly-not-very-positive social media reactions, mostly about Sonic’s legs. Keep in mind that Sonic the Hedgehog is a character that’s been depicted in dozens of video games, so there’s an established Sonic “Look”. This week, the *Sonic the Hedgehog* trailer debuted, and the collective fan backlash against Sonic’s design was even louder this time. (The eyes are too small, the nose is at the wrong angle and the teeth. Where to even begin with the teeth?)”.

Laying out the widely touted grievances of many fans at the perceived poor quality of the character adaption, the intensity of feeling behind such a simple but important component of the film, the character design itself, saw the response from the director almost immediately, as Schmitz continues “The good news, however, is that *Sonic the Hedgehog* director Jeff Fowler relatively quickly responded on Twitter, “The message is loud and clear ... you aren’t happy with the design & you want changes. It’s going to happen. Everyone at Paramount & Sega are fully committed to making this character the BEST he can be.”” . (Schmitz, 2019). The popularity of the character and such a loud and influential call from fans for a character redesign point to just how significant a video game, even its characters appearances, can be for fans, wanting as-close-as possible an adaptation of their favourite video games to the big screen.

These calls by fans bore fruit, as covered by *BBC Newsbeat* “Fans responded so badly to how Sonic looked to Jeff Fowler, the director of the movie, said he would change the design to please potential audiences. Now, a new trailer has given us a look at the hedgehog’s makeover. And fans seem happier, with one calling it “the glow up of the century.” ... one saying he is “at a loss for words” with the improvement of the redesign. “What a transformation” said another.” (BBC, 2019). Whether or not the film will be a commercial success isn’t certain, but from the article and others like it, the general consensus appears to be a favourable one with the new redesigns to the character, and a positive one for video game film adaptations, as well as being a solid indicator for the strength of feeling in the faithfulness of adaptations.



Figure 2 (*Sonic the Hedgehog*, 2019)

Arguably, the first successful adaptation of a Video Game to film, was not for the big screen, but would later go on to have a number of films that expanded upon its story and character roster, despite having only been intended as a television series. Instead, the first debatably successful attempt to bring the Video Game to the screen, came with the successful television series adaption of the popular *Pokémon Red and Blue* for the Nintendo GameBoy and GameBoy Color titled simply as *Pokémon*. The franchise is now seen as one of the most prolific titles, as well as the highest grossing media franchise according to *Screen Rant* contributor Craig Elvy, and the biggest media franchise according to *Innovation & Tech Today* assistant editor Anthony Elio, both written in 2018. The nature of the show being to compliment the Video Game series of the same name, this arrangement has suited the media juggernaut quite

well, as Craig Elvy acknowledges in her article “Pokémon can now consider itself the most financially lucrative media franchise on the planet according to a newly compiled list that takes into account revenue from all mediums.



Figure 3 (*Pokémon*, 1997)

Beginning life as a 1996 RPG for the Nintendo GameBoy, the *Pokémon* franchise quickly became a global phenomenon, with an anime series and trading card game proving just as popular as the video game releases ... The list takes into account a franchise’s total revenue from all streams since the year it began and judges Pokémon to come out on top with \$59.1 Billion.” (Elvy, 2018). Observing it’s other mediums, as well as the profit it enjoys from all its combined media output, over the many years since it’s admittedly humble origins on the GameBoy, it’s no surprise that as Anthony Elio remarks in his article “Pokémon is a franchise that I will always hold near and dear to my heart. Perhaps it’s the fact that I spent so much of my youth collecting and bonding with digital creatures. Maybe it’s the fact that I’ve seen the series evolve over the decades that as I myself have grown up ... Well, it looks as though I’m not the only person that keeps Pikachu and friends in high regard.” (Elio, 2018). *Pokémon’s* success is significant evidence that a Video game can be successfully adapted in to another medium and thrive, and furthering the concept of the venture of transforming the video game in to a mass-market appeal item and being a profitable one, setting new heights in franchise revenue and even beat all rivals to summit; all built off the back of a single video game for the GameBoy.

Video Games as Cultural References and Video Games Continued Significance

Video games haven't only been adapted to the big screen, but have also been carried over in to wider popular culture through as simple a thing as minuet references, even small lines and events from various games, spawning all sorts of associated parodies and merchandise. A prominent example being *Star Fox 64*, a 3D shooter released in 1997, with the now commonly quoted line "Do a Barrel Roll", said during one of the levels in *Star Fox 64* as nothing more than a cue for a player to press a button on a controller, the line has become almost prolific in its recognisability. A YouTube video uploaded in 2007, simply titled 'Do a barrel roll !' having well over 5.5 Million views. (DeusExBenigma, 2007). Even outside of online videos, there are physical products that bear the simple line, such as T-shirts, often times with the quote and a reference to *Star Fox 64* (Redbubble Ltd, 2019) emblazoned on the front of the T-shirt, such is the wide reach of such a throw-away line from a video game title, that it has had a lasting legacy on generations born even after the release of the game, when it was new and fresh in the minds of players and fans of *Star Fox* as a series, even to those who wouldn't have necessarily played the game have a popular reference to the game that is commonly proliferated in various materials both on the internet and in merchandise.



Figure 4 (*Star Fox 64*, 1997)

The Video Games continued advancement over the years of its existence from its inception as the Arcade Cabinet to the Video game console and computer has seen the media evolve from simple devices of large and immobile scale with limited capabilities to emulate and entertain a user, to the most modern console systems of the present generation that can even fit in a pocket. The ever changing home computers leading to the rise of dedicated and customised gaming computers for players and the rise of even more ambitious, immersive and expansive video game titles to appear on these various consoles and computers, a far cry from the earliest days of video gaming on the personal computer, such as *Microsoft Solitaire* on *Windows 3.0*. Its existence has been the talk of tech circles for some time, as well as an icon of continued advancement both in terms of software and hardware advancements, something that the video game has secured a foothold within since its very inception, arguably being one of the most important technological devices in Popular Culture today.

With this prominence, the continued efforts to drive innovation in both software and hardware to meet the rise of ever-more demanding software requirements, with higher resolutions, more crisp graphical depictions of environments and even superior audio quality to their predecessors, even as the latest generation of consoles is being announced, such as the latest iteration of the *PlayStation* games console being hinted for a 2020 release, with speculation of its design and capabilities being covered in the more mainstream publications not traditionally associated with reporting upon video game related news, such as the *Mirror* in its own piece on the speculation. (Best, 2019). The sheer amount of interest behind just how future generations of Consoles and Games will even appear that it would be covered in a mainstream media publication, points to the just how large and influential the video game has become in tech circles.

Even the history of the development of the video game came with a large grasp of the players and casual onlookers alike. As the Video game medium developed, from the simple Raster and Vector graphics of the 1970's and early 1980's, such as the Raster graphics in *Pong* and even ambitious attempts to show detailed images such as in the *Star Wars* on-rail Arcade shooter, it wasn't until the

'Bits', referred to the Central Processing Units or CPUs size, being the primary, proverbial battleground for the merits of both manufacturers consoles, always vying to usurp the others technological lead with better graphics quality and capture the largest share of the market from their competitors, which Robert Workman writes about in *Prima Games* recounting of what they call the greatest moments from the so-called 'Console Wars', "Sega wasted no time in showing off its superiority in the tech department, with the 16-bit Genesis outperforming the 8-bit Nintendo Entertainment System (NES), and even claims that it destroyed the SNES. With one simple yet bold TV ad, it proclaimed, "Genesis does what Nintendon't" with a variety of examples, including sports and action games." This simple advert, which shows a collection of the *Genesis's* games library (Cody Nguyen, 2006), arguably is one of the more memorable phrases from the 'Bit Wars', with a catchy one liner to sum up the early advantages *Sega* had when opposing *Nintendo* in the market. This sparked rapid development of new consoles and new games, with increasing graphical prowess, such as the *Nintendo 64* and the *Sega Saturn*, all vying for dominance in the 'Console Wars'.

Figure 5 (*Genesis Does What Nintendon't multi-ad, 1990*)

However, as with any trend, the 'Bit Wars' ended, with an amicable peace, as explained by Workman "For Years, Sega and Nintendo were at each other's throats, but once Sega switched from hardware manufacturer to third-party software publisher, it knew that eventually, it would have to bury the hatchet. In the mid-2000s, it finally did by releasing games for Nintendo systems, beginning with Sonic Advance. ... If that wasn't glorious enough, what came next in 2007 was even more shocking – when Mario and Sonic together in a video game. Their two universes combined for Mario & Sonic at the Olympics, a successful sports endeavour for both the Wii and DS that would lead to a partnership that continues today." (Workman, 2014).

This can be seen as something of a success for Nintendo, but also the loss of another manufacturer, arguably decreasing the pool of available consoles, and by extension available games which players had access to. Later consoles would have similar competitions amongst each other, but none saw the same speed of innovation or sheer number of consoles that had been born in just the brief time period that was the 'Bit Wars', with the two primary competitors of *Sony* and *Microsoft* competing for a long period of time as the only two viable competitors in the market.

Far from stagnating however, the video game has continued to thrive, even without the benefit of such heated competition. With the rapid development of these new consoles, interest from designers, industry workers and even the general public has been to such an extent that these older consoles have been displayed at the Museum of Modern Arts *Applied Design* exhibition, displaying a selection of video games from across the years, with various classics such as *Pac-Man*, *Tetris* and *The Sims*, exploring the development of the ever-changing medium through the years. (Applied Design, 2013). Quoting Paolo Antonelli, Senior Curator of the Department of Architecture and Design and Director of R&D at the Museum of Modern Art "Design has spread to almost every facet of human activity, from science and education to politics and policymaking, for a simple reason: one of design's most fundamental tasks is to help people respond to change. A designer today can choose to focus on interactions, interfaces, the internet, visualisations, socially minded infrastructures and products"

Antonelli demonstrates an acknowledgement of the video game as a worthy artistic medium, shown by its being displayed alongside other pieces in a formal exhibition, and also infers how far the medium has advanced as players interest in the medium grew along with the science and the capabilities of the hardware and software, from the likes of *Pong* as the earliest attempt to capture a sport and depict it in a video game with simple paddle controls, to *Wii Sports* which allows the player to use a remote to simulate the act of swinging, throwing and catching with sensor technology, with a wide variety of sports.

Development in the industry continues to plough ahead, becoming more accommodating for players and casual players alike. In an exhibition in 2019 by the Smithsonian American Art Museum in its SAAM Arcade exhibit, displayed a variety of different games, with a general theme of breaking barriers, exercised by featuring games that had inclusive features such as colour-blind options and dyslexia-friendly fonts, as well as displaying the works of Indie developers to elicit and explore emotional responses to the various works displayed. (SAAM Arcade, 2019). The video game as a prominent piece of popular culture has broken far more boundaries than perhaps was initially envisioned for such humble origins, with its storied past and present of speculation about design, conflict and continued public attention, the video game can most certainly be considered a contender, as one of the most prominent technological devices, continuing on in strength from the innovations of the last 30 years.

Video Games in Education and Pop-Cultures impact on Video Games

The Video Game has secured its place as a popular medium of play, as an art form in some circles and as a cornerstone of popular culture, forging its fame over the years since its first introduction in Arcades worldwide. However, the Video game has also begun transitioning into another role on top of the many that its coat wraps tightly around; that being as a tool of education. Educational games are certainly nothing new, from the adaption of the *Mario* franchise into various educational games, one example being *Mario Teaches Typing*, unusually not developed or published by *Nintendo* but by *Interplay Productions*, which was perhaps more famous for its *Fallout* series than educational software. The basics of the simple game were a series of short tasks to teach children how to type on a computer keyboard, apparently proving successful enough to warrant a sequel, the very-originally titled *Mario Teaches Typing 2*. This novel little game isn't a taxing or particularly vexing title in the *Mario* series, but it served as an educational tool and arguably fulfilled that function to the best of its ability, despite being a relative footnote in educational software from the period, and certainly not the height of the *Mario* games series either.



Figure 6 (*Mario Teaches Typing 2*, 1997)

More recently, with the advent of more modern and accessible ways of learning new skills, applications for phones have come about to address fulfil the demand for this not-so-insignificant market, with some even being released for free to a global market. One such application is catered to those with an interest in bilingualism and multilingualism, wishing to expand their vocabulary outside of their own native tongue. Arguably the most prominent such app that caters to such interests and serves as an effective educational tool, is the *Duolingo* app. *Duolingo* being initially developed by Luis Von Ahn and Severin Hacker as a free educational tool, the app is now readily accessible on almost all mobile platforms, allowing users to select a language they wish to learn, proceeding on with a series of tasks and challenges for the user, such as repeating words in both native and the desired language, to help the user get the correct pronunciation, feminine and masculine nouns and build a grasp of sentence structure and word recognition with that language. The end goal being, with enough repetition and sessions, the user will be able to speak the language with a degree of competency.

In a review of *Duolingo* by written by Jill Duffy, a contributing editor for PC Magazine, the app is described in a brief snippet of Pros versus Cons of the app as a “Free way to learn a new language or several.”, added with “Very good instruction” and “Can practice by translating real-world text.”, with the two Cons listed being “Only ten language-learning programs fully supported at this time.” and “No live chat or spoken interaction with other students.” (Duffy, 2019). The simple breakdown of what the app can and cannot deliver for a user is pretty cut-and-dry for anyone using the app, which almost anyone has the ability access the app due to it being free to download and use, with the option for a paid membership with a monthly fee, coming with some content and features that are unavailable in the free download version of *Duolingo*, without locking core features of the apps educational merit behind a paywall.

Even the paywall subscription fee, an often-used method of monetisation itself, is a common element in some video games, such as Massively Multiplayer Online Role Playing Game, abbreviated as MMORPG, feature a subscription service for access to more sophisticated features and content of the

game, almost identical to the method employed by *Duolingo* for its monetisation, though this can come in many forms, as illustrated by Scott Rogers, as he notes a selection of models of monetisation “Trial – A free version is severely limited in scope – it’s usually just a few levels – just enough to give players a taste of the game in the hopes that they buy the ‘premium’ version.” As well as the more common method for MMORPGs and similar games “Subscription – Subscriptions ask for a regular payment – usually month-to-month. The challenge to the subscription model is to make sure you continue to add content so players feel as though they are paying for something worthwhile. *World of Warcraft* is one of the largest subscription games.” (Rogers, 2014). This model being the most prolific in the industry, as Scott Rogers’s notes when mentioning *World of Warcraft* as the primary example for that model of monetisation. The similarities between both educational app and video game not simply being limited to gameplay components and challenge alike, even being comparable in the path of profit and methods of sustainability.

The little challenges present in *Duolingo* forming the primary gameplay that makes the app a functional training tool, having most of the hallmarks of any traditional video game, such as a score system as well as a feedback system for the individual player, present in prominent, older games, such as *Pac Man*, *Tetris* or *Galaga*. This play has a clear purpose, known as meaningful play, defined and with relevance to design explained by Salen and Zimmerman in *Rules of Play Game Design Fundamentals* and “In the game of Pong, for example, the meaning of the interaction between player and game is mediated by play, the play of pixels representing the ball, to the play of the mechanical knobs controlling the digital paddles, to the competitive social force of play between opponents. It is for these reasons, and many others, that game designers should care about the relationship between meaning and play.” (Salen & Zimmerman, 2004), introducing these simple core mechanics, present in video games since the earliest days of the video games existence, has formed the centrepiece of the *Duolingo* app, and other apps with a meaningful purpose to their gameplay has broadened the avenues through which educational material can be delivered to a user.

When elaborating further upon the app functionality of the app, and how useful it is, Duffy explains in her review that “Duolingo is highly organized and structured. The app’s home screen displays a list of modules in order. Every module has a topic, whether it’s grammatical (Reflexives, Imperfect tense) or thematic (Art, Sports). Each module contains multiple lessons. You have to pass a certain number of lessons to unlock the modules that follow. On average, each lesson takes me three or four minutes to complete.” (Duffy, 2019). Another common set of feature in most video games that is heavily sought for in most development, the easy to navigate interface and arranged topics for easy navigation, but on top of that it continues with the use of meaningful play, one of the centre pieces of any good video game, as Salen and Zimmerman explain “Learning to create great game experiences for players – experiences that have meaning and are meaningful – is one of the goals of successful game design, perhaps the most important one. We call this goal the design of meaningful play.” (Salen & Zimmerman, 2004).

The addition of these methods of play can lend weight to the educational focus of the app, giving it an interactive element that can lend itself to an educational role, providing the user with a clear set of challenges, an achievable goal and an ending point to the each individual challenge, not unlike the Video games typical layout, consisting of a set of levels, achievable goals and an ending to each individual level. The only difference in the two is the perception of one versus the other, one being seen as a purely educational tool and the other as a purely fun distraction, one that can easily be broken down to show just how the video game has influenced the development of a number of educational tools.

Video Games haven’t simply influenced popular culture when it comes to adaptations in various media, such as Film, Television or Comics, however. The video game, as it’s become a more recognised and prolific media, has also in turn been influenced by popular culture as the video game evolves. Cultural reference points towards video games have been forged as Video games come into a wider market, receiving a wider audience. An example of this, is video games being adapted from films or television.

A recent example of this, is *Star Wars Jedi: Fallen Order*, the most recent addition to the *Star Wars* franchises numerous exploits in video game media. Though *Star Wars* has quite a storied history of video game success, such as *Star Wars: Shadows of the Empire*, *Star Wars Jedi Knight: Jedi Academy* and *Star Wars: Republic Commando*, attempts to bring *Star Wars* to video gaming, and expand the universe with new characters, factions and adventures, brining fans both old and new to the *Star Wars* franchise.



Figure 7 (*Star Wars: Shadows of the Empire*, 1996)

In a recent review by Tom Senior for *PC Gamer* of *Fallen Order*, he opens the review with a broad overview of the content and story of the game, the story being arguably the most important element of the game, as he introduces the character and the mechanics “You are Cal Kestis, a bland-faced scrapper with too-clean hair and an inexplicable love for ponchos. You are also probably the deadliest person in the universe. Though you spend your days cutting crashed Star Destroyers open for parts, within your cloak you hide the true star of Jedi: Fallen Order – a blue lightsaber that you will use to strike down hundreds of stormtroopers across the course of the game. If you concentrate on main story missions, this is about a 20-hour adventure set across a cluster of themed planets.” (Senior, 2019). Outside of the quality of the game, the impact upon the self-contained universe of *Star Wars* being seen from the new stories and characters introduced to the franchise, with as Senior observes

20 hours of story with which to further flesh out the universe, carrying with it the potential of bringing new fans to the wider franchise and it's other media, such as comics, films or physical merchandise.

Whilst *Star Wars* isn't the only such franchise that Video Games have tried to encapsulate and present in video game form, its prominence and long history makes it just one of the many prominent franchises that have been explored by video game developers and publishers, finding various ways to adapt stories and expand the reach of their franchises in to further media, which with the video games reach, gives the video game one of the most extensive reaches available, allowing for various creative and unique adaptations of pre-existing media in to video games that might not be possible otherwise.

Conclusion

Video Games' significant impact upon Popular Culture has grown to the extent where even members of the general public have a general understanding of what a video game is. The video game finds itself in large media publications, in exhibitions and in the homes of people all across the world; a far cry from its earliest origins in the arcade and is arguably the most prolific form of widely accessible home entertainment outside of the television.

With merchandise bearing references to various video game series that have emerged over the years and the introduction of video games represented as full feature films franchises, the sheer scale and volume of the output of the video game industry certainly has a comprehensive reach through popular culture. This is evidenced by the sources provided in the body of the dissertation, showing the popular consumption of the video game across all walks of life in various forms and adaptations mentioned previously, with modern releases coming regularly, displaying just how formative a media the video game has been upon popular culture, as it stretches across separate media.

The video game has been one of the most influential media icons with an appeal and reach that, since its inception, has continued to grow and expand, progressively becoming a centre-piece of cultural reference points in entertainment media, from film and television, to merchandise in retail chains.

Further Work

If further research were conducted to expand upon the impact of video games in popular culture, a study focusing on the general impact of video games upon the more general public via polling or questionnaire may be a good measurement of the public's awareness of video games outside of more accepted audiences for video games, such as older individuals being aware of video game mascots from various franchises, or being aware of phrases and quotes from video games, without necessarily ever having come in to direct contact with video games.

Research in to how much traffic dedicated video game websites, such as review sites, dedicated video game franchise websites and fan run websites receive to determine the impact of the video game upon the face of the internet could also be conducted. From whatever data is collected as a result of the research, conclusions can be made about how significant or insignificant the video game is in internet social circles, as well as possibly shedding light upon changes in how significant or insignificant the video game as a social tool is.

Additional Research could be attempted in to how fans have expanded the medium, such as through podcasts, videos or otherwise, and what significance their contributions have had upon bringing video game series and franchises in to a wider public awareness and how significant this awareness has been when expanding the video games popularity as a cultural pastime.

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