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Introduction:

In this essay I will be exploring the keywords 'Evolution of gaming', '70's and 80's' and 'Music'. I've been interested in looking at how graphic design has evolved in video games. Not only that but how video games have evolved in general. For the keyword 70's and 80's, I want to look at how these certain eras have had an influence on our videogames today, specifically the 'golden era' of arcade games. The keyword 'Music' is another aspect of video game evolution I would like to look at. Not only that, but I want to look at how music is used in movies and how it can affect people, making them feel more immersed.

Keyword 1: 'Evolution of gaming'

Graphics in video games are everything that the player sees. This means, the whole environment, surroundings and characters. Lighting is also a part of how the game looks and feels (*What makes a Good Video Game?* 2014).

We have come a long way since the very start of video games. It can be interesting looking through the evolution of different consoles that have been created over the years, and the development of visual graphics along with them.

The very first commercial console to be created was called the Magnavox Odyssey, which came out in 1972. The Magnavox only had limited graphics capabilities and was only able to display small squares and lines on the screen (*Magnavox Odyssey* 2020). The Magnavox was not a commercial success, people seemed to believe because of poor marketing (*Magnavox Odyssey* 2020). Even though it wasn't very successful, it marked the beginning of console gaming.

The next big thing after the Magnavox was the Atari 2600, which came out in 1977 (*Viktor* 2020). Atari is a company who started the 8 bit series, which is also known as pixel art. Going into the 80's is when video games started to use bits to measure graphics. This meant that the more bits a console had, the better the graphics would be (*Viktor* 2020). When we think of 8 bit graphics nowadays, we think of low resolution graphics. But in the 80's they were only capable of storing 8 bits per data block (PIXEL ART/8BIT GRAPHICS). Games like *Pokemon* in *Terraria* are a couple of examples of games that have an 8 bit graphic style. 8 bits is a graphic style that has started to become quite popular again in recent years. Some game developers are even using this style in their games to give them a more retro feeling. This can give players a sense of nostalgia when playing which is a very powerful feeling to evoke.

In the 90's, as game companies kept trying to improve their graphics, a new and improved version of bit graphics came about. This was called 16-bit. Even though we can look back on this graphic style now and think it still isn't that great, it was a big

step up from the previous era of 8 bit graphics. This goes to show how much technology and graphics can evolve in just a few years.

16 bit was of much higher quality, and it meant that consoles could more bits per data block. 16 bit gave game developers the chance to start creating 3D art, from manipulating 2D objects (The Logo Creative 2020).

During this era many more iconic games were created such as Donkey Kong Country, Street Fighter 2 and Sonic the Hedgehog.

After 16 bit, there were two more bit graphics eras. 16 bit graphics became fairly outdated quite quickly (The Logo Creative 2020). So after that came 32 bit. 32 bit became very popular with the console Playstation. They started to make CD's as the main medium for their games, this meant that more data could be stored onto them (The Logo Creative 2020). The 32 bit era led to game developers being able to create even more detailed 3D scenery and graphics art.

The final bit era was 64 bit. And again, this meant that consoles could hold more bits which led to an even higher level of detail with their graphics. Even though these graphics still weren't realistic, they were a big step up from previous years.

This then leads us to modern day graphics in the 21st century. This is when a whole new generation of consoles started to come out such as the Playstation series, the Xbox series, Nintendo Wii and the Nintendo Switch.

The advancement of technology in recent years has caused game developers to focus more on realism within their games, making their game worlds more visually impressive and immersive to the players (Nestorova 2020). With technology advancing this makes it a lot easier for even smaller indie games to become way more realistic, visually (Nestorova 2020).

Although realism in a lot of games can enhance the players experience and make them feel more immersed, this doesn't necessarily mean that every successful game has to have good graphics.

For instance, the video game called Overwatch, doesn't have 'realistic' looking graphics, but was still able to become a huge success a few years ago. This goes for many other games as well.

Higher quality, and more realistic graphics can definitely improve a lot of players' experience with a game. Especially with games such as Call of Duty. This is an example of a series of games which players expect to have more realistic looking graphics as more games are released.

Although, many players seem to enjoy stylised graphics more since they can be more appealing to the eye. Stylised graphics tend to look more cartoony, and exaggerate certain objects in a game, which is the opposite to what realism is.



Figure 1

An example of a game that uses stylised graphics is the game called Okami. One of the artists responsible for designing the art for this game is called Takeyasu Sawaki. He has created one of the most unique and beautiful looking stylised art concepts in my opinion. The game's graphic style was inspired by 'Ukiyo-e style' which is a Japanese art style used with watercolour and wood carving (Jones n.d). This art form is popular in East Asia.

Keyword 2: '70's and 80's'

The 70's and 80's were a golden era for arcade games. This era saw the release of games like Pong and Pac Man. This era was the First generation of video games.

The Atari was a company that created a whole new industry for arcade gaming, and in 1973 they began to sell the first electronic video game Pong (Chikhani 2015). This led to arcade machines being placed around in many different places such as bowling alleys and bars (Chikhani 2015).

In the late 70's many chain restaurants in the U.S started incorporating more arcade games into their businesses. One of many players' favourite parts about these arcade games was that they could record high scores on the machines. This sparked competition amongst players. This was really the start of multiplayer gaming (Chikhani 2015). Even if there were games that were single player, everyone could still record their high scores and compare them with others which acted as a multiplayer competition.

Even though arcade games are nowhere near as popular as they used to be, they have still had a big impact on pop culture today. This can be seen with one of the most successful and popular arcade games ever created, Pacman.

Pacman was a game that brought everyone together to go play, whether they were men or women. Since most arcades at the time were typically filled with mostly teenage boys and adult males, Pacman changed the social contract that was made of arcades (Champagne 2013)

Pacman changed the way many people and game designers looked at video games, from its more abstract style that both men and women could play (Champagne 2013) Pacman had an influence on many other games after that, and even modern games, today.

Even today, you can find so many different Pacman related merchandise that lots of people will still buy. Not only that, but everyone can remember the main song from Pacman, showing that it has had a really big influence on pop culture today.

Pacman was the first game to create a mascot that would become the face of the game. Even though there were other games that had examples of playable characters, they weren't popular like Pacman was (Klinefelter 2018).

Not only did the mascot Pacman himself stay around for all of these years, but also other aspects of the game have been used ever since Pacman was created.

For example, Powerups. Pacman was the first ever game to include powerups.

When he would eat a power pellet, all of the ghosts on the screen would turn blue and you would be able to eat them. Lots of games nowadays use some form of powerups, such as weapon upgrades or medkits. These are all thanks to Pacman (Klinefelter 2018).

Another example would be 'stealth play' which means that instead of trying to kill the enemy, you would instead avoid them. This was very different compared to a lot of the arcade games that existed around that time. They would mostly consist of the players having to shoot the enemies, such as Space Invaders. Many games since Pacman was created have utilised this type of gameplay, where you sneak around, avoiding conflict instead of killing the enemies. One example is Metal Gear Solid (Klinefelter 2018).



Figure 2

Pacman's visual style was very different from a lot of other arcade games that were around at that time. The game's Designer was a man named Toru Iwatani. Apparently Pacman himself is modelled after a pie with a piece missing (Cain 2017). One of the things that Toru wanted to do when designing this game was for it to appeal to both male and a female audience. He did this by creating a pastel coloured palette for the game (Cain 2017). Since most of the games at the time were focused around violence and war, they were only really popular with male players. When this game was released, it wasn't a big success in Japan, because the male audience didn't know what to think of it, whereas in the U.S it was an instant hit (Cain 2017). Even though Pacman was extremely popular in the U.S pretty much instantly, it still took a long time for it to be accepted by art institutions. Only in recent years have video games been able to exist in museums (Cain 2017). It took a lot of convincing for staff to understand that video games are a form of art that are worthy of being exhibited. In the end, they allowed an Exhibition to be created called 'The art of video games', where Pacman is now in (Cain 2017).

Keyword 3: Music

Music is a powerful tool that can be used to influence people's emotions and make them feel a certain way. Whether it's in movies or video games it's always something that is used to help create atmosphere.

The emotions evoked with music can either be positive or negative. Although, positive experiences with music seem to dominate over all (Heshmat 2019). Of course the soundtrack choice in movies and games is very important depending on which sort of emotions they want to bring out in the viewers. Music can have complete control over the meaning of the scene and how the audience will understand the scene.

A great example of music being used in film to make the audience feel a certain way is the film Psycho which was made in 1960. A man named Bernard Herrmann was the composer for this movie. He had worked with Alfred Hitchcock (who was the director) on a few films prior to Psycho (Pearson n.d). He was an independent composer, meaning he was able to always orchestrate his own music (Pearson n.d). When Hitchcock was working with Herrmann he acknowledged that a lot of the effect of Psycho is due to Herrmann's music (Pearson n.d).



Figure 3

Throughout the whole film Psycho, Herrmann uses scores consisting of orchestral strings, without the use of any contrasting instruments. Another decision he made for the music was for the instruments to play 'muted', except for in the shower scene (Pearson n.d). The shower scene is an iconic scene from the film, where the main

character gets murdered. Without the muted instruments playing this makes the chords more piercing and gives them more power. The violin sounds in this scene, correlate with the stabbing that is happening, which can make people feel more uneasy. This gives more of an impact for the audience that is watching. What makes this scene even more impactful, is that right before the woman is murdered there is no music used at all.

This can be another way for composers and movie directors to make viewers evoke certain emotions, by using no music at all.

With the advancement of technology, composers can literally write a whole soundtrack for a movie, or game inside of their own homes. So even though Herrman created all of his own work, there are a lot of people who do this at home, without actually using real instruments.

Non Diegetic and Diegetic sounds are another example of how sound can be used in film or video games. Non diegetic sound refers to sounds, or music that the character within the movie/game can't hear. Whereas, diegetic sounds refers to music and sounds that can be heard by the character. Diegetic sounds are often used to make the scene seem more realistic, such as fight scenes where the audience can interpret the different sounds (Nick 2016).

What I was talking about previously with the music Herrman made for Psycho, we would refer to that as Non-diegetic because the characters can't hear it.

Some movies, more than others, tend to use more Diegetic sounds throughout. An example of a film that does this would be Jurassic Park.

There are few moments of silence throughout the movie where all you can hear are the rustling of bushes or footsteps of a dinosaur approaching. From the characters' reactions to these noises, we as the viewers can also interpret that the characters themselves can hear it. These are all examples of Diegetic sounds that evoke a feeling of suspense within the viewers.

Along with films, music is also used all of the time in video games. With videogames music is more so used to evoke intense feelings within the players (Bélteky 2019).

Since videogames are an interactive form of media, this can act as a challenge to try and use sound and music for an emotional reaction (Bélteky 2019).

There is a theory called The Appraisal theory which shows that there are two different emotions in film. One is empathetic, which is when the viewers can feel empathetic towards the characters. And the non-empathetic are the sensory reactions the viewers have (Bélteky 2019).

Emotions in video games are different. In movies sound is used to help and make things seem more real, whereas with games they are used to help the player along and progress with their goals (Bélteky 2019).

Conclusion

After researching the three keywords that I have chosen I have gotten a much better understanding of each of the areas. This has led me to some ideas for questions I could write about next year.

One of the main areas I really enjoyed exploring throughout this research was the realism vs stylised graphics in video games. I enjoyed reading through different articles and websites with different peoples opinions. I was surprised to find that most people seemed to prefer a more stylised look to games, rather than realistic looking graphics. I guess it's because I thought that realism could help immerse you more into the game, but at the end of the day it really depends on the genre and context of the game.

I also found it very interesting looking at how music can affect people mentally, whether it's in a positive way or a negative way. Learning about the Appraisal theory and how sound has to be used in a different way to affect the audience's emotions in film and video games was enjoyable to research.

Since I looked at the past and present of graphics in video games, I would like to try and find out what graphics could possibly look like in the future. Maybe even how technology could advance even further. I think that Virtual Reality could possibly become even bigger than it is now and way more advanced. I want to look at both the positives, and the negatives sides of these advancements.

This has finally led to the question, 'What does the future of technology look like? And how will this affect the world?'

References:

Levi, L. (2015) *THE EFFECTS OF BACKGROUND MUSIC ON VIDEO GAME PLAY PERFORMANCE, BEHAVIOR, AND EXPERIENCE IN EXTRAVERTS AND INTROVERTS*. Available at:

<<https://smartech.gatech.edu/bitstream/handle/1853/54462/LEVY-THESIS-2015.pdf>>

Wolf, M 2017, *VIDEO GAMES AS AMERICAN POPULAR CULTURE*, Concordia University, Wisconsin, viewed 3 May 2022,

<<https://core.ac.uk/download/pdf/85208317.pdf>>

Wirtz, B 2022, *Video Game Graphics Through The Years*, viewed 3 May 2022,

<<https://www.gamedesigning.org/gaming/video-game-graphics/>>

Bibliography:

What makes a Good Video Game? Key Elements 2014, Pluralsight, viewed 3 May 2022,

<<https://www.pluralsight.com/blog/film-games/what-makes-a-great-game-the-key-elements-of-successful-games>>

Nestorova, V 2020, *Video Game Graphics and Players' Perception of Subjective Realism*, Ma thesis, Bournemouth University, viewed 3 May 2022,

<http://eprints.bournemouth.ac.uk/35717/8/NESTOROVA%2C%20Viktoria_M.Res._2020.pdf>

Magnavox Odyssey Video Game Unit, 1972 2020, viewed 3 May 2022,

<https://americanhistory.si.edu/collections/search/object/nmah_1302004>

Viktor, 2020, *Are good video game graphics important?*, viewed 3 May 2022,

<<https://www.viki.si/good-game-graphics/>>

Chikhani, R 2015, *The History Of Gaming: An Evolving Community*, viewed 3 May 2022,

<https://techcrunch.com/2015/10/31/the-history-of-gaming-an-evolving-community/?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xILmNvbS8&guce_referrer_sig=AQAAACggHi4IShr8Qkxnltp6v2S6jgESIfAzT5woK3WDroWlzQ0SKiXczUyhveJ62C0vbGoefdqZ4yZ-CEwOjBNLNFT8AJSjKXbegz2obeRmCe3t0Vyisi-igEbvHLPL0LeY0R8kbHFD9zZshDRI3VD2X1WOYY8qArv2IAIR_VXvWEe->

PIXEL ART/8BIT GRAPHICS-STYLE USE IN MODERN GAMES - RISING TRENDS, viewed 3 May 2022,

<<https://logicsimplified.com/newgames/rising-trend-of-pixel-art8-bit-graphic-style-use-in-modern-games/#:~:text=8%2Dbit%20graphics%20refers%20to,34%20bit%20means%2016%2C777%2C215%20colors>>

The Logo Creative 2020, *The Evolution of Video Game Graphics*, viewed 3 May 2022,

<<https://thelogocreative.medium.com/the-evolution-of-video-game-graphics-1263684f0e38>>

Jones. S., *Okami HD - Traditional art graphics in a modern game*, viewed 3 May 2022,

<<https://www.fanatical.com/en/blog/okami-hd-traditional-art-graphics-in-a-modern-game#:~:text=What%20is%20the%20artwork%20used,work%20in%20the%20Edo%20period.>>

CHAMPAGNE, C 2013, *How “Pac-Man” Changed Games And Culture*, viewed 3 May 2022,

<<https://www.fastcompany.com/1683023/how-pac-man-changed-games-and-culture>>

Heshmat, S 2019, *Music, Emotion, and Well-Being How does music affect the way we think, feel, and behave?*, viewed 3 May 2022,

<<https://www.psychologytoday.com/gb/blog/science-choice/201908/music-emotion-and-well-being>>

Pearson, no date, *Bernard Herrmann: Psycho – ‘Prelude’, ‘The City’, ‘Marion’, ‘The Murder (Shower Scene)’, ‘The Toys’, ‘The Cellar’, ‘Discovery’, ‘Finale’ (for component 3: Appraising)*, viewed 3 May 2022,

<https://qualifications.pearson.com/content/dam/pdf/A%20Level/Music/2016/teaching-and-learning-materials/A_level_Herrmann_Psycho_set_work_support_guide.pdf>

Nick, 2016, *Importance of Diegetic and Non-Diegetic Sounds in Film*, viewed 3 May 2022,

<<https://the-artifice.com/importance-of-diegetic-and-non-diegetic-sounds-in-film/>>

Bélteky, M 2019, *Emotion in video game audio*, Ba thesis, Luleå University of Technology, viewed May 3 2022,

<https://www.diva-portal.org/smash/get/diva2:1319772/FULLTEXT01.pdf>

Klinefelter, D 2018, *5 Ways 'Pac-Man' Influenced Modern Video Games*, viewed May 3 2022, <https://www.fandom.com/articles/pac-man-influence-video-games>

Cain, A 2017, *How Pac-Man Went from Arcade to Art Gallery*, viewed May 3 2022, <https://www.artsy.net/article/artsy-editorial-pac-man-arcade-art-gallery>

Figure references:

Fig 1- Sawaki, T, *Seeking the Celestial Brush Gods* [fine art print]. THE OFFICIAL OKAMI ART PRINT COLLECTION [online]. Available at <https://www.cookandbecker.com/en/artwork/754/seeking-the-celestial-brush-gods-okami-capcom.html#:~:text=Seeking%20the%20Celestial%20Brush%20Gods%20is%20a%20limited%20Dedition%20fine.embossed%20with%20the%20Capcom%20logo>.

Fig 2- Namco. *Ghosts in the machine ... Pac-Man*. [online]. Namco. Available from: <https://www.theguardian.com/games/2020/may/22/pac-man-video-game-40-years-old>

Fig 3- Paramount Pictures, 1960. *Shower Killer In 'Psycho'* [online]. Paramount Pictures. Available from: <https://www.gettyimages.co.uk/detail/news-photo/view-of-a-silhouetted-figure-holding-a-knife-in-the-famous-news-photo/51044764?adppopup=true>

