

Robert Bunting
Jessica O'Hara
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Interactions with Video Games

Playing games, whether electronic or physical, have been popular in our everyday lives for decades. Recently, video games have become the most relevant entertainment for all ages with 164 million adults in the United States being reported to have played a game (Koss). Over the past year, the video game industry has grossed over \$120 billion in revenue. Researchers expect this number to increase dramatically within the next two years (2019 Essential). These overwhelming statistics are possible due to the popularity of arcades beginning over fifty years ago. These video arcades began to flourish in the late 1970s and early 1980s. During this time, video games became very popular with youth around the world. Before that, people gravitated around to play mechanical type games such as pinball machines. Next, companies began to develop home consoles. Due to the rapid advancement of these gaming devices, newer and improved consoles quickly replaced older ones. The evident paradigm shift between older and newer generation consoles provoked consumers to turn away from traditional in-person contact with friends to playing games online with others across the world. As the progression of technological advancements continues to accelerate, the way people interact with each other will continue to evolve and change with each major paradigm shift.

Ralph H. Baer, along with his associates at his company, Sanders, wished to develop a device that permitted multiplayer gameplay that allowed interactive play. Baer invented the first known home-based gaming console. His goal was to license his technology to businesses for profit. In 1967, Baer released the "Brown Box" which included two attached controllers to a brown wooden box. This brown box could later be connected to household televisions and

featured six playable games: ping-pong, tennis, handball, volleyball, chase, and light-gun. After testing the original game, ping-pong, he knew the product had a future with consumers. This console would be nicknamed “The Father of Video Games” and serve as a template for all future generation consoles (The Brown Box). As planned, Baer was able to lease his technology to competitors. In 1972, Magnavox released their home game console named the Magnavox Odyssey. The Odyssey featured non-electronic accessories such as dice, decks of cards, play money, and poker chips. Odyssey wished to target generations who enjoyed the physical games while attempting to transition users to digital gaming. In terms of commercial success, the Odyssey was deemed a failure. Only 350,000 units were sold, and the device was left in the shadow of Atari’s PONG (Magnavox).

In these early days, the developers were still figuring out how to engage players considering the limits of the technology. Nolan Bushnell purchased licensing fees for the Brown Box for a flat fee of \$700,000. As part of the agreement, he would never have to pay royalties to Baer for using his equipment and could alter the technology in any way he pleased. Unfortunately, Magnavox owned a separate patent and had to pay thousands in legal fees anytime a competitor infringed on their technology. Atari continued developing their system while Magnavox fought many battles in the courts (Video Game). However, Magnavox would make more crucial mistakes before Atari was even able to manufacture their gaming system. First, Magnavox denied retail and chain stores from selling their products. If a consumer wished to buy the Odyssey, they would have to purchase the device through Odyssey dealers (The Rise). In addition, Magnavox advertised that their console would only be supported by Magnavox televisions. This campaign was not true, but Magnavox hoped their efforts would increase sales on their other products (Hazard). In reality, consumers ended up not purchasing the console

because they believed they would have to spend so much more of their income. Magnavox was not able to achieve complete dominance which opened the door for the introduction of competitive offering from companies like Atari.

Originally, Atari sold their product to local arcades where people would congregate to entertain themselves. During the 1970s, a typical pinball machine could earn \$50 a week. In the same area, Atari's machines earned nearly six times that amount. Atari sold nearly 8,000 units to arcades compared to the 2,500 pinballs sold during the time. Due to the rising popularity of the device, Atari decided to market their product as a home console. In 1975, Atari released the Atari 2600 which could be purchased at any major retail store. In the first season, Atari sold 150,000 consoles. Additionally, Bushnell introduced game cartridges to his device. The company could earn money by developing new games which would be compatible with their gaming system (The Rise). Magnavox Odyssey attempted to match their competition by releasing two improved variations of their original console. Each version included slight graphical updates; however, Magnavox was never able to create more than a spin-off replica of the Atari system.

The popularity of the Atari and Odyssey drew in multiple competitors who sought to offer similar products aimed at increased gaming interaction between individuals. The creation of more consoles and games led to North America experiencing a major video game crash. Beginning in 1983, consumers became unhappy with the saturated, overhyped, and low-quality games. Multiple publishers credit Atari's E.T. The Extraterrestrial game offering as being one of the worst games ever created. Atari spent a significant amount of money on the development and marketing of the game that was expected to dominate the marketplace. Instead, unfortunately, the game produced lackluster financial results and was not successful (The Rise). As a consequence, numerous console manufactures went bankrupt and the leftover video game cartridges were left

in landfills. Instead of utilizing these devices, disillusioned consumers turned back to more traditional entertainment experiences like bowling and roller-skating. Bowling brought together as many as 8 people playing, while roller-skating had dozens of participants in the rink (Oxford). Both of these activities brought teenage kids back together in a social environment where they could strengthen their interpersonal relationships. It was very common to plan a trip to one of these venues on a weekend night to enjoy recreation time with your friends. Their parents were equally enthused to see the kids turn away from the video screen and resurrect a renewed focus on maintaining social interactions. Many people and industry analysts predicted that the video game industry was dead and would never return to the prominence that it once enjoyed.

Aside from consumer's unhappiness in older generation devices, competition from home computer-based gaming fueled the video game crash. Many thought that home computer systems would lead the way into the future and that home video game consoles were lost forever. That gloomy outlook created an impression that lasted for only about 2 years. After the success of the gaming system, Famicom, in Japan, Nintendo decided to globally release a totally revamped and redesigned version into the marketplace. Nintendo spent the next few years attempting to engineer solutions to the "Video Game Crash of 1983" (Video Game). Management believed that the North American market reception would still be extremely wary and concerned about a repeat of the crash just a few years earlier. In order to help offset this hesitation, Nintendo agreed to purchase all unsold consoles from retail stores, so they were not liable for the new devices in case they failed to gain traction with consumers. In 1985, Nintendo filled the absence in the marketplace and released the Nintendo Entertainment System or NES (Peters).

Just as Nintendo was forming their own plans to players back together, competitors again followed and flooded the scene. We began to see some familiar names jump back into action

with Atari and Sega Master System products. Unfortunately, many of these competitors were not as well equipped as Nintendo to handle the rapidly evolving market. Nintendo pioneered a new model of interaction with their games. Atari, once the fastest growing companies in history, experienced plummeting revenues as the industry contracted by close to 97% (Chetrafilov). Nolan Bushnell was ousted from his company during a power struggle with Warner Communications. To make matters worse, Atari's once innovative programmers became unsettled and moved onto different opportunities. As Atari continued to earn millions of dollars, programmers only received \$30,000 a year. Warner did not share or disclose sales figures to his employees. In addition, the top programmers received no name recognition for any of their developments. Warner feared competitors would hire his programmers for a larger salary. As a result, Atari's best programmers all quit and formed their own company called Activision. Activision began creating better games than Atari. Atari's recent marketing strategy of selling a cheap console and high-priced games failed since the games were no longer entertaining. However, Atari was given a lifeline to revive its company. Before Nintendo announced the release of the brand-new gaming system, they offered Atari a license to sell the system under the Atari brand. Atari declined and Nintendo's rise to power was solidified (The Rise). Following the failure of the Atari Jaguar in 1993, Atari was downgraded to a small player in the overall industry (Gailloro). Likewise, the Sega Master System was released in 1986. While it featured a device with a superior processor that provided better graphics and audio than the competition, it could not sustain a push to overtake the NES globally (Peters).

Nintendo designed their product to look nothing like the systems of the past and positioned the new system as a unit that would shatter many preconceived notions. Unlike previous systems, Nintendo's new controllers were not wired into the device. It enabled the users

to have increased flexibility and mobility while eliminating the reliance on a wired connection. The Nintendo Entertainment System was designed to look sophisticated and focused on a higher level of interactive gameplay. Furthermore, Nintendo avoided the term “video game” in all marketing aspects. The product was advertised as a toy and included a toy gun and robot in the box (Vega). In particular, the Nintendo Entertainment System presented two iconic characters that would completely alter the landscape from that point forward. The consuming population was introduced to two brothers named Mario and Luigi. This was the start of the Super Mario Bros. franchise that showcased cartoon looking characters and followed their adventures. Additional pop culture favorites such as The Legend of Zelda and Metroid, Square’s Final Fantasy, and Capcom’s Megaman became instant hits (Poh). Nobody however would capture the pure excitement and fascination as the Super Mario Bros. To this day, Mario has sold over forty million copies achieving the second-best selling game of all time (Peters). Mario and Luigi single handedly brought video games back from an early retirement and into the spotlight.

Much of the Nintendo success at this time was contributed to a focus on younger kids. Before the Nintendo, video games were historically aimed at early teens. Nintendo expanded that to include even younger generations with their cartoon characters and ease of play. They concentrated on creating more simplistic and easier to play games that would appeal to a larger audience base. Once again, people were playing video games at home on their consoles. The difference now being that entire families became engaged in the game play. Older siblings would play and be entertained with their younger siblings due to the expanded appeal of the products. Likewise, it was not uncommon to witness entire families congregating around the devices while playing the games as a family unit. In this way, the NES was a driver that helped bring together households and institute a change in recreational behaviors. The universal charm of the product

and their associated mix of unforgettable characters forever engrained the Nintendo name into popular culture. And it all started with those two brothers, Mario and Luigi! Collectively, they helped breathe life back into a dormant industry that many observers had written off as expired.

Nintendo capitalized on the traditional perspectives of the era. During the 1970s and 1980s, most forms of entertainment were in person at a physical place. If you wanted to play, you would either have to go over someone's house or meet up at a public location. The logistics dictated the necessity for face-to-face communication, which in turn helped to develop crucial personal and social skills for children and adults. Research has proven that engaging in live interactions allow people to pick up on subtle visual cues. From an early age, children recognize facial expressions, eye contact, tone of voice, and posture. A recent study performed by the Upper Hudson Library System (Uhls) put a group of five children into a camp without any Internet or online screen access. After the five days of in-person interaction, all participants made significant progress in the development of their social skills compared to the control group where children stayed at their households with their electronic devices (Fuller). Therefore, fostering in person relationships was found to be beneficiary to the maturity of core social interactions. In addition, frequent in-person conversations allow for the creation of stronger interpersonal relationships. Basic in-person contact with individuals allows you to broaden your experiences and enable you to learn more about individuals in your community. It is important to nurture these abilities at an early age as they will prove to be essential later on in life while participating in the workplace to communicate efficiently and easily collaborate with peers and coworkers.

During the beginning of the 1990s, technology facilitated the largest transition to modern-day online gaming. In 1994, Sony entered the console war upon releasing the PlayStation. This device featured a CD based format that allowed for the creation of more

sophisticated games with 3D capability. Their console featured updated controllers with more buttons which allowed game developers more flexibility in the programs they created. The PlayStation was the first ever console to sell over 100 million units worldwide. Pushing further, Sony would also release their second generation of the device with numerous graphical and audio enhancements a full year before Microsoft came into the mix (PlayStation). In 2001, Microsoft released the DirectX Box. This console included the first built-in hard drive. A year later, Microsoft would introduce Xbox Live, an online multiplayer gaming service that was supported by their broadband high tier servers. This technology platform would be leveraged in all future systems. Four years later, Microsoft released the well-known Xbox 360 that offered the Kinect attachment. The Kinect allowed the player to act as the controller while it detected your voice and gestures. This was a significant step forward in the progression of a fully physically interactive experience. Both these devices have established themselves as dominant forces in the industry and have shaped the future direction in the marketplace as they continue to drive more graphical advancements and gameplay experiences. As an example, the new Microsoft Xbox Series X supports up to 120fps and 4K rendering for selected games (Yoshimura).

Another contender has arisen in the form of the gaming personal computer (PC) that also attempts to change the landscape. Unlike the PlayStation and Xbox based consoles that have computer like components embedded into their design, gaming personal computer are custom built to achieve maximum gaming proficiencies. PC gaming typically involves a single player sitting at a computer terminal. Computers tend to boast substantial upgrades such as increased resolution and greater fps (frames per second). With computer hardware outperforming that of consoles, those setups tend to be more expensive versus their console counterparts. PC based games often cost way less than the typical \$60 base price for a console game. In addition,

consoles require user to subscribe and pay for multiplayer services. Computer gaming has no restrictions. Stereotypically, consoles are marketed towards the casual couch gamers and computers are geared more for competitive and experienced gamers. The personal gaming computer has even brought about the creation of an entire eSports industry that is dedicated to competitive play. The rise of eSports was bolstered by the desire for fierce competitors to play on the best system available to them (Villas-Boas).

Additionally, computer gaming supported VR (virtual reality) that reimagines how people intermingle with a game. The original VR model was designed by Sir Charles Wheatstone in 1838. The modern day success of interactive devices like the Kinect has led to the revival of the product. The beginning of the 2010s witnessed multiple competitors produce VR based headsets. Oculus, Valve, PlayStation, Google, Microsoft, and Samsung all designed their own version. Virtual-reality gaming applies a three dimensional environment onto the screen in front of you. Using hand gripped controllers, your movement is recorded, and the user is provided direct feedback via the headset that fits over the user's eyes and immediately immerses players in another virtual world (Barnard).

While these advancements in technology have been exciting to witness, there are some potential concerns and implications related to its usage. In particular, the development of social interaction skills and physical health has been two key areas for apprehension. Many young people have become addicted to playing these games and no longer leave their house and enjoy activities away from the devices. In person social interactions between people have suffered and been minimized. Instead of going over another person's house to enjoy a game, children are playing with users across the world. Kids know nothing about this individual and this individual knows nothing about you. These circumstances contribute to the weak formation of interpersonal

relationships. These relationships and social skills could also prove to be a vital asset to people later in their life and professional careers.

Staying indoors tethered to a gaming device all day reduces an individual's physical activity. Gamers are sitting on their couches gaming until 3AM in the morning. This potentially limits the facilitation of an overall healthy lifestyle. In his article, Rick Nauert writes about the positive role that a small amount of physical activity each week plays in the maturity of leadership skills and empathy. Participating in some sort of physical activity on a routine basis can directly influence increased overall good body health, mental health, focus, energy, and performance. The research also points towards the adoption of better motor skills, problem solving, and learning proficiencies (Nauert). So, while there is no doubt that gaming will continued to be enjoyed by many, it is like anything else in that we need to remain measured in the balance of these activities in order to ensure proper maturity in areas of social and physical progression.

The growth of technology helped fuel how we interact with gaming devices and others around us. There was a shift in participation from being concentrated in a public arcade room to being directly delivered into your own living room via home based video game consoles. This change brought about a movement away from interpersonal relationships and now centered on virtual interaction done remotely using technology. The way that players socialize and communicate with each other has been dramatically changed with the onset of these innovations. As newer technology continues to reshape the industry, we will experience further paradigm shifts that will influence our collective collaborations with one another. Who knows what the future holds? It will be exciting to witness the transformation!

Works Cited

- Barnard, Dom. "History of VR - Timeline of Events and Tech Development." *VirtualSpeech*, VirtualSpeech, 6 Aug. 2019, virtualspeech.com/blog/history-of-vr.
- Chetrafilov, Duncan. "How E.T. The Extra-Terrestrial's Failure Changed Games Forever." *ScreenRant*, 20 July 2020, screenrant.com/atari-et-extra-terrestrial-game-industry-crash-landfill/.
- "2019 Essential Facts About the Computer and Video Game Industry." *Entertainment Software Association*, 28 Oct. 2020, www.theesa.com/esa-research/2019-essential-facts-about-the-computer-and-video-game-industry/.
- "Magnavox Odyssey Video Game Unit, 1972." *National Museum of American History*, americanhistory.si.edu/collections/search/object/nmah_1302004.
- "PlayStation through the Years." *Playstation*, 2020, www.playstation.com/en-gb/explore/ps4/playstation-through-the-years/.
- "The Brown Box, 1967–68." *National Museum of American History*, americanhistory.si.edu/collections/search/object/nmah_1301997.
- "The Rise and Fall of Atari." *Neatorama*, 5 May 2008, 2:03 AM, www.neatorama.com/2008/05/05/the-rise-and-fall-of-atari/.
- Fuller, Ryan J. "The Impact of Social Media Use on Social Skills." *New York Behavioral Health*, 17 Sept. 2020, newyorkbehavioralhealth.com/the-impact-of-social-media-use-on-social-skills/.
- Gailloreto, Coleman. "The Great Video Game Crash of 1983: What Caused the Console-Pocalypse?" *ScreenRant*, 8 Mar. 2020, screenrant.com/video-game-market-crash-1980s-why-how-details/.

Hazard, Marco. "8 Facts About the Magnavox Odyssey, the World's First Home Video Game System." *Mental Floss*, 19 Mar. 2020, www.mentalfloss.com/article/620204/magnavox-odyssey-facts.

Koss, Hal. "What Does the Future of the Gaming Industry Look Like?" *Built In*, 2020, builtin.com/media-gaming/future-of-gaming.

Nauert, Rick. "Physical Activity Helps Improve Social Skills." *Psych Central*, 15 June 2019, psychcentral.com/news/2018/03/15/physical-activity-helps-improve-social-skills/12120.html.

Oxford, Nadia. "Ten Facts about the Great Video Game Crash of '83." *IGN*, IGN, 18 Jan. 2012, www.ign.com/articles/2011/09/21/ten-facts-about-the-great-video-game-crash-of-83.

Peters, Bruce. "The History of the NES: Nintendo Entertainment System: by Entertainment Center Spot." *Sofas and Sectionals*, 2018, www.sofasandsectionals.com/history-of-nintendo-entertainment-system.

Poh, Michael. "Evolution of Home Video Game Consoles: 1967 - 2011." *Hongkiat*, 23 June 2020, www.hongkiat.com/blog/evolution-of-home-video-game-consoles-1967-2011/.

Vega, Israel. "Nintendo and the Video Game Crash of 1983 - 'Now You're Playing With Power.'" *IV*, IV, 30 Oct. 2019, www.isaelvega.com/blog-1/2019/7/30/nintendo-and-the-video-game-crash-of-1983-now-youre-playing-with-power.

"Video Game History." Edited by History.com Editors, *History.com*, A&E Television Networks, 1 Sept. 2017, www.history.com/topics/inventions/history-of-video-games.

Villas-Boas, Antonio. "12 Reasons Why Gaming on a PC Is Better than Game Consoles." *Business Insider*, Business Insider, 2 Aug. 2017, www.businessinsider.com/reasons-why-gaming-on-pc-still-better-than-game-consoles-2017-7.

Yoshimura, Andrew. "Your Turn: A Brief History of Microsoft and the Xbox." *The Sydney Morning Herald*, The Sydney Morning Herald, 20 Nov. 2013, www.smh.com.au/technology/your-turn-a-brief-history-of-microsoft-and-the-xbox-20131113-2xeyx.html.