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The Militarization of Video Games

By

Casandra Sholy

A Major Research Paper
Submitted to the Faculty of Graduate Studies
through the Department of Political Science
in Partial Fulfillment of the Requirements for
the Degree of Master of Arts
at the University of Windsor

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The Militarization of Video Games

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ABSTRACT

The militarization of video games is a topic that has not previously received a lot of attention despite being a controversial and important topic to discuss as it pertains to the future of society's youth, advancement of military technology, and the military's economic relationships. Previous research on the topic had not explored the relationship between the military and the video game industry in depth. In using studies from different areas, such as the impact that video games have on individuals, the use of technology in the military, and economic relationships that the military has, this paper seeks to explore the relationship between the gaming industry and the military. While there is not a lot of concrete evidence to claim that the military is directly benefitting from young people playing video games, there certainly appears to be a link. In researching this topic, it is obvious that the relationship between the military and the video game industry is only going to grow closer and stronger.

DEDICATION

This work is dedicated to my parents, but especially my mother, who I could not have done this without. Thank you.

ACKNOWLEDGEMENTS

First and foremost, thanks be to God for His blessings during my educational career and throughout my life. The Lord has truly blessed me by providing me strength, opportunity, and ability. I thank God for being the a constant and reliable source in my life who supplied me with all that I need.

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CHAPTER 1
INTRODUCTION

The well-known Chinese military general and strategist, Sun Tzu, often described war as a game of strategy. Some of the oldest games known to humanity are war-based strategy games such as Backgammon, Checkers, Chess, and Go. In the contemporary world, video games have largely superseded these strategic board games. Many video games are still war-based and a majority of video games have some component of strategy required if they are not entirely strategy games. Not only are video games inspired by war, but many simulate war either by allowing the player to play through a first-person perspective in the role of a soldier in a historic war or by creating new war experiences. This proves to be an effective way to spark interest in young people in the military, war, and combat. The United States Military understands this and has created its own video games, e-sports teams, and funded entertainment such as video games and movies in order to recruit new soldiers. This paper will be a discussion on the militarization of video games, it will go into detail about the military entertainment complex, the history of video games in regard to the growing militarization of video games, as well as how significant the militarization of video games is. The intention of the discussion of these topics is to ultimately come to a conclusion on the level of influence that the military has in the video game industry as well as whether video games are an effective tool of the military. With the amount of war-based video games, it seems as though the military has a strong influence within the industry.

CHAPTER 2

THE IMPACT OF VIDEO GAMES

Before discussing how the military and video games are connected, it is important to recognize the impact that video games have on people, especially adolescents and young adults. The effects of violent video games on young people's behavior and inclination to aggressive or violent behavior has been discussed at length in the media, especially in relation to gun violence in the United States. Some studies suggest that exposure to violence, such as video games, is only one of many risk factors for aggressive behavior (Anderson et al., 2007). Anderson et al. (2007), argue that video games do not cause violent behavior because specific cultures, such as Japan, have high amounts of media violence but contrarily have low levels of crime. However, a three-year study across three demographics (children, teenagers, and adults), found that exposure to violence in video games was linked to a direct finding of direct aggressive behavior as well as hostile attribution bias which resulted in more aggressive behavior over long periods of time (Gentile, 2008). Hopf et al. (2008) demonstrate through a longitudinal study on adolescents that exposure to violent video games was the "strongest risk factor for violent criminality and antisocial behavior." One of the reasons for this may be due to the structure of violent video games.

Learning & Rewarding Aggression

Some researchers have stated that the structure of violent video games can be correlated with optimal learning environments (McLean, 2013). Optimal learning environments are that in which an individual is able to progress on to the next or a new level based on the skill they have depicted in the previous level. In the same way, a

student cannot progress to the next school grade or level without the foundational knowledge from the previous grade or level, a gamer cannot progress to the next level without completing the previous level. This may be one of the key factors as to why there is an attraction to and the maintenance of gaming behavior—it also explains how video games are able to affect individuals. The phrase "gaming behaviour" refers to the way in which games are played with respect to how video games are normally structured. This can be further explained by understanding the typical structure of video games and the reason why they are so well-received. This positive reception has been attributed to the established principles in gambling. In many games, there is a progression of levels and problem-solving strategies that give the player a chance to transfer their skills to a new setting (Swing, 2008). Specifically, the progression of levels has been compared to the manner by which an individual learns to read: first, the individual learns sounds and letters, then simple words, and so on; the progression of the game starts with the tutorial or instructions, then a simple level and the difficulty increases with each new level. This structure also lends itself well to the development of gaming addictions; the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) notes that gambling and gaming are two behavioral addictions (Parekh, 2018). Other researchers conducted research in order to explore what the effects would be of rewarding violent actions within video games. They believed that rewarding violent actions resulted in increased aggression due to the incentivization of increasing violent thoughts (Carnagey, 2 005). Through this research, they were able to rule out competitiveness as a variable for aggressive behavior caused by video games. A Similar study found that the presence of blood and gore also impacted participants. Having blood in the video game predicted an increase in physical aggression

in the adults who were part of the research; blood predicted more physically aggressive behavior in the adults participating (Farrar, 2007). The same study also found that blood in video games also led to an increase in "participant hostility and physiological arousal" (Farrar, 2007). Ultimately, exposure to violence is an effective avenue through which one can change to become more aggressive.

Violence

An individual's personal characteristics have a significant role to play in whether that individual will be negatively affected by playing violent video games. Many different researchers have different theories as to what kind of person will be affected by violent video games. Slater et al. (2003) believe that the games will reinforce aggressive tendencies that the individual already holds, while Sigurdsson et al. (2006) believe that the games will have negative effects on individuals who already have higher levels of psychoticism. Ultimately, the majority of the researchers found that younger gamers were more likely to be influenced by video games than older gamers. While commercial games have audience ratings to inform consumers of whether the game is suitable for younger audiences or not, more than half of surveyed parents allow their children to play video games that are intended for adult audiences without supervision (childcare.co.uk, 2019). Some researchers have explained that this is due to the development of one's identity in adolescence; media role models, including video game characters, allow adolescents to experience new potential selves (Griffiths et al., 2003). The reason why some violent video game characters may be a central part of this stage of development is that the characters are usually in control which may be an attractive attribute to young people trying to find their own sense of self (McLean, 2013). Another reason why violent video

games might be attractive to young people is because of the aggression and sensation-seeking trait that is strongest during adolescence; video games offer a risk-free way for adolescents to experience the thrills of risk-taking (Slater et al., 2003). Games like Grand Theft Auto allow players to commit crimes such as (but not limited to) grand theft auto, murder, armed robbery, use of prostitution, arson, and weapons smuggling. It is important to ask how exposure to these crimes in video games and the ability to commit them without risk will affect youth.

Unfortunately, while violent video games allow adolescents to experience risk-free sensation or novelty-seeking behaviour, frequent use of violent video games in early adolescence can be "directly related to later violence and delinquency at the age of 14 years" (McLean, 2013; Hopf et al., 2008). A different study by Ferguson, San Miguel, and Hartley (2009), argues a contrasting idea that exposure to violent media is not the sole predictor of violence or aggression in adolescents. It is much more likely that there are multiple factors in a young person's life that will influence their behaviour and whether they are aggressive or not. An interesting finding that these researchers found was that video game exposure, paired with exposure to family conflict, abuse, negative relationships with adults, and depression were good predictors that the young person would become a bully. However, "bullying behaviour was best predicted by antisocial personality traits and delinquent peers, with videogame exposure as less significant" (McLean, Griffiths, 2013). Other researchers have put forward evidence that long-term effects of exposure to media violence may be stronger in children whereas short-term effects are stronger in adults (Bushman, Huesmann, 2006). This may be because children are still learning about the world around them and how to behave based on observing

others—this includes the violent behaviours portrayed by characters in games. Children are more vulnerable to being influenced by people and media. Video games might even have stronger influences in causing aggressive behaviour because they are interactive (Anderson et al., 2007); unlike movies or television, the individual has to control their character to commit violent acts in the video game. This is the case with first-person shooter (FPS) games and some simulation or story-based games. While motion controls were not found to have an influence on the intensity of aggression that violent video games might cause, more frequent play time would increase the level of presence the player felt. Higher levels of presence were found to cause more physically aggressive behaviour in study participants as well as verbal aggression and general hostility (Nowak, Krcmar, Farrar, 2008). The ability to personalize characters in video games such as the *Grand Theft Auto (GTA)* franchise may also create another level of identification with the character committing violent actions. Research by Fischer, Kastenmuller, and Greitemeyer (2010) concluded that individuals who played with personalized characters in aggressive games were more likely to have aggressive behaviours compared to those who used default characters.

Aggressive Personalities in the Military

While it is not solely video games that cause an individual to become aggressive or violent, they surely are influential—especially in those who have been playing them since childhood. There is not a lot of research on this particular subject, but there is one study that discusses whether the military influences character development or if the individual's character development leads them to the military. The author states that through their research, there is a relatively small influence that the military has on

influencing political attitudes and values (Jackson et al., 2012). This means that it is far more likely that the individual already has personality traits or character development that lead them to join the military. “In the United States, individuals who have a lower socio-economic status and IQ, come from rural versus urban areas, are minorities, and associate with deviant peers are more likely to join the military than individuals who remain civilians” (Jackson et al., 2012). These characteristics may be associated with higher levels of aggression. Low IQ and its relationship with more aggressive behaviour have been studied by some over the years. One study, by Huesmann et al. (1987) hypothesized that lower levels of intelligence may make it more likely that an individual will learn aggressive responses at an early age which would make future intellectual development more difficult for that individual. This leads back to the discussion that aggressive behaviour is learned; Eron et al. (1972) conducted an experiment in which they found that children who preferred to watch violent television were also rated more aggressive than their peers who did not watch violent television. Many studies indicate that children learn their aggressive behaviour from their interactions with their environment (Eron et al., 1987). If this can be said about the impact television or other environmental factors have on a child, it can also be said that video games have some influence on the development of a child’s mind, especially if they have lower levels of intelligence.

While there are very few studies on what kinds of personalities or temperaments are more likely to enlist in the military, there are still a few that speculate and have conducted tests to answer this question. Jackson et al., (2012) tested to see if personality traits that were assessed of high school students would be able to predict who eventually decided to join the military. The same study also tested to see if military training would

have any impact or cause a change in personality traits. The tests were conducted in Germany because it proved to be the ideal setting because all able-bodied men are drafted into joining the military but they can consciously object and instead choose to participate in civilian community service (Jackson et al., 2012). In this way, those who choose to participate in civilian community service act as the control group. The study measured personality traits through The Big Five model. The Big Five refers to the Big Five personality traits, a suggested grouping of personality traits that were developed in the 1980s (Rothman, Coetzer, 2003). The five traits are openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. According to Jorden Cummings, an associate professor in the department of psychology at the University of Saskatchewan, and Lee Sanders, a sessional lecturer in the department of psychology at the University of Saskatchewan, the five traits are defined as the following: Openness to experience is the inclination to appreciate new art, feelings, values, ideas, and behaviours; Conscientiousness is the inclination to follow the rules, be hardworking, be on time, and be careful; Extraversion is the inclination to be sociable, talkative, enjoy others company, and to have a dominant style; Agreeableness is the inclination to go along with the opinions and choices of others rather than asserting one's own opinions or choices; Neuroticism is the inclination to commonly experience negative emotions like worry, anger, and sadness, "as well as being interpersonally sensitive" (2019).

Big 5 Trait	Example Behavior for LOW Scorers	Example Behavior for HIGH Scorers
Openness	Prefers not to be exposed to alternative moral systems; narrow interests; inartistic; not analytical; down-to-earth	Enjoys seeing people with new types of haircuts and body piercing; curious; imaginative; untraditional
Conscientiousness	Prefers spur-of-the-moment action to planning; unreliable; hedonistic; careless; lax	Never late for a date; organized; hardworking; neat; persevering; punctual; self-disciplined
Extraversion	Preferring a quiet evening reading to a loud party; sober; aloof; unenthusiastic	Being the life of the party; active; optimistic; fun-loving; affectionate
Agreeableness	Quickly and confidently asserts own rights; irritable; manipulative; uncooperative; rude	Agrees with others about political opinions; good-natured; forgiving; gullible; helpful; forgiving
Neuroticism	Not getting irritated by small annoyances; calm, unemotional; hardy; secure; self-satisfied	Constantly worrying about little things; insecure; hypochondriacal; feeling inadequate

source: Diener et al., n.d.

The results of these tests showed that those who joined the military were ranked as being less agreeable and less neurotic than their peers who chose to reject military service (Jackson et al., 2012). The results suggest that an individual's personality traits play somewhat of a significant role in the decision-making process of whether to join the military or chose civilian community service. As for the effects that military service has on individuals who choose that route, the study shows that after completing military training, the military recruits have: lower levels of agreeableness, lower levels of neuroticism, lower levels of openness to experience, higher levels of extraversion and higher levels of conscientiousness than their peers who chose civilian community service (Jackson et al., 2012). Between the first test, which was conducted with the participants still in high school, to the final test which was conducted six years later, those who chose civilian community service showed a dramatic increase in agreeableness; those who

chose military service also showed an increase but it is so small that it is negligible (Jackson et al., 2012).

CHAPTER 3

THE MILITARY & VIDEO GAMES

Adopting Games in Military Training

The wired generation came as a result of the rise in the use of technology on a day-to-day basis. With the inception of the internet and web browsers, along with the growth and popularity of video games—both on console and on the computer—the newer generation of soldiers entering the United States military have a unique set of skills and attitudes that set them apart from the generations before them. These characteristics are multiprocessing, which is the ability to perform more than two tasks at one time; fast context switching; the ability to navigate information in the form of text, images, and multimedia; learning through "discovery-based experiential and example-based learning"; concrete reasoning, organizing information in easily accessible databases; and sharing tasks of tacit and explicit knowledge (Macedonia, 2002). The use of video games in American military training has been in use for the past few decades. The United States military has been interested in the use of commercial games in military training since about the 1970s. *Mech War '77*, a tactical combat simulation board game was introduced to the Army War College in the late 1970s by James Dunnigan (Macedonia, 2002).

The United States military has incorporated war and simulation games—both physical and digital—into their war colleges as well as into the combat use of its soldiers (Macedonia, 2002). It is very evident to the United States military that adapting to the realities of the 21st century is essential in training competent and prepared soldiers. In

2000, 73 percent of teenagers used the internet on a weekly basis, by 2007 the percentage of teenagers using the internet on a weekly basis shot up to 93 percent (Am, Lenhart, & Madden, 2007). In 2018, another study found that 95 percent of teenagers have access to a smartphone, and 45 percent state that they are on their smartphones "constantly" (Anderson, M., & Jiang, 2018). Technology has evolved significantly in the past few decades, so much so that modern smartphones' capabilities exceed the capabilities of the supercomputers of the 20th century. The United States military has had to make significant changes over the years in order to keep up with these technological advancements.

In 2001, Microsoft invested over $2 billion (USD) for the development of the X-Box, which exceeded the $1.6 billion that the United States Army budgeted for science and technology in the same year (Macedonia, 2002). It is important to focus on the early 2000s as this was the beginning of the significant adoption of commercial video games in military curriculum and training. Furthermore, the armed services invested around this time in research "to add new capabilities to these simulations" including commercial platforms like Sony's Playstation 2, in order to create more realistic simulations (Macedonia, 2002). It is important to note that other countries were also participating in the same investments for their militaries; the Canadian Armed Forces used a portion of their budget in order to obtain software from the video game industry that would meet the "special needs of the military training market" (Roman, Brown, 2008). It would not be surprising if, during this time of acquiring commercial gaming consoles, the recruitment officers would have used it as a selling point to recruit young people.

Gamification & Games in Education

The term "gamification" is an important term to note in the discussion of the use of games in educational spaces. According to Haahtela et al. (2015), gamification is a very recent and broad term that does not have any standard definition. In a general sense, McCormick (2014) claims that gamification is the utilization of game thinking and game mechanics in an attempt to absorb users with different tasks that can range from business to education to solving global or national issues. In the context of education, gamification can be defined as the use of games or "game-like elements such as score, challenge, and achievement in order to improve communication, learning, and motivation" (Haahtela, 2015; Bansfield, 2014). Around the world, gamification is a rapidly growing method of training. M2—a strategy and consulting firm with a focus on gaming, artificial intelligence, augmented reality, virtual reality, and mixed reality—research corroborates this statement with their research. M2 Insights describes itself as being able to "track market and technology trends and provide sector-specific business intelligence that is commercially actionable" (M2, n.d.); the M2 tagline is "business intelligence for digital innovators". The global market was estimated to expand from $240 million to $2.6 billion in 2016 according to research by M2 on gamification technology (McCormick, 2014). In 2014 it was estimated that 70 percent of Forbes Global 2000 companies were using, at minimum, one gamified application in their training or work processes (Haahtela, 2015).

One very significant case of a company using games in an educational capacity is the United States' leading defense contractor, Lockheed Martin. Lockheed Martin is of the mindset that flying an aircraft can be taught through video games; the company

acquired *Microsoft Flight Simulator* and redeveloped the game into what is now called *Prepar3d*— a serious educational tool used in training pilots (Haahtela, 2015). Lockheed Martin is now licensing *Prepar3d* as a recognized educational software for flight training (Lockheed Martin, n.d.). Outside of the military lens, Washington University's Center for Game Science has been successful in implementing gaming in AIDS research (Khatib et al., 2011). Users with no background or prior knowledge in biochemistry were encouraged to solve complex protein-structure prediction problems in the game, *Foldit*. *Foldit* describes itself as a "revolutionary crowdsourcing computer game enabling you to contribute to scientific research" (Foldit, n.d.). It is a free-to-play game and the discoveries made through the game are published in peer-reviewed research journals with Foldit players being credited with their contributions to advanced research on human health. The game is still open to new users with the ability to be displayed on the homepage of the website on a leaderboard as a soloist or a team. The goal of the game is for users to attain the lowest-energy proteins by cooperating with other users through online teamwork. The long-standing protein crystal structure problem was solved in only three weeks by over 240,000 players participating in playing *Foldit*. This was a huge leap in the medical field for finding a cure for retroviral diseases like AIDS. Most recently, the game provided an update allowing players to try and design a small molecule in an attempt to stop the SARS-CoV-2 helicase enzyme, otherwise known as COVID-19 (Foldit, n.d.).

Gamification was studied in undergraduate courses and the study found that there was very little human interaction in the classroom which is said to have negative effects on motivation and self-efficacy (Banfield et al. 2014). Banfield states that motivation in

the academic setting is largely extrinsic. What this refers to is that motivation in the classroom is mostly based on receiving a good grade, or more simply, completing an educational task. Ideally, motivation—especially in an academic setting—should be intrinsic; what this would mean is that the student would be motivated by the contentment of finishing an educational task. The role of games in the classroom would be to attain the intrinsic motivation mentioned here. The study found that teaching methods that included the involvement of game-like characteristics had substantial positive effects on intrinsic motivation in all areas of the curriculum (Banfield, 2014).

The instructor's creativity is the only limiting factor when it comes to ways to incorporate gamification in education. Gamification has proven itself to be an engaging and efficient way to engage students in many different fields of study. As one can see, positive results are clearly attainable through this method of teaching, so it is evident that the use of games in an educational setting should be explored more as a potential tool for teaching or training. One of the clear advantages is the significant increase it provides in intrinsic motivation in students. Games provide students with a thorough yet simplified perspective of reality to students with the opportunity for a hands-on method of problem-solving (Haahtela et al. 2015). They also provide students with the opportunity to be competitive and see the outcome of their choices in real-time, which further strengthens the intrinsic motivation to learn. Until there is space in the gaming industry for games that are made for educational purposes, games that are already published can be redeveloped or modified for educational purposes like in the aforementioned case of Lockheed Martin and other examples. These modifications would be to highlight the "progress of learning and focus on theory" (Haahtela et al., 2015).

Games in Military Education

Jane's Fleet Command is a combat simulation game released in 1999 (IGN, n.d.). The game is described by its developers as "a sophisticated game that utilizes artificial intelligence in the execution of platform tactics and the development of intuitive scenarios" (IGN, n.d.). The game was developed by Sonalysts, which is a defense contractor, Sonalysts specializes in simulation, training systems, software and systems engineering, as well as operations and analysis research (sonalysts.com, n.d.). The American Naval War College has implemented *Jane's Fleet Command* into its curriculum; the British Royal Navy has also asked for a license to adapt the game for "operational planning" (Macedonia, 2002). Another game, *TACOPS*, was licensed at the Armor Center in Fort Knox, and a turn-based strategy game titled *Decisive Action* was used by the USA Command and General Staff College (Macedonia, 2002). The United States Army was beginning to increasingly use video game technology to replace less flexible and far more expensive forms of training and technologies of the past (Brown and Roman, 2008).

The use of games in military training had become so popular at this time that Air Command and Staff Colleges' Colonel Warden and the United States Air Force Colonel Matt McCaffrey put on a conference called "Connections" in order to facilitate connections between war game developers and the American military (McCaffrey, 1992). One example of the facilitation of a connection between the military and game developers is the Serious Games Showcase and Challenge was also established around this time at the Interservice/Industry Training, Simulation and Education (I/ITSEC) Conference to "appreciate the broad scope of potential applications for military training"

(Brown and Roman, 2008). The I/ITSEC even held a special event in 2007 titled "DoD Training—Impact of Gaming Technologies" which had the goal of assisting the Department of Defence in determining where game technology could fill specific training needs (Brown and Roman, 2008). These training needs can range from flight training for pilots through flight simulator games, urban combat training through FPS games, and cultural sensitivity or communication training through dialogue-based games. All of these training needs can be met through the development of new games or the acquisition and modification of existing games.

By 2017, sailors in the United States Navy were using Xbox controllers to operate the Navy's newest submarines (CCA, 2021). According to officials, the use of Xbox controllers provided three major advantages: compared to the previously used $38,000 "helicopter-style sticks," the $30 commercial controllers are more ergonomic, significantly more cost-saving, and training was far easier as most crew members had already grown up using the controllers to play video games (CCA, 2021). Other armed services have also implemented the use of Xbox controllers in the operation of machinery, vehicles, robots, and other military technology. R-gator, a military transportation robot, is an unmanned vehicle used on the ground during battle; the robot is controlled by a remote operator with an Xbox 360 console controller (Taraila and Piskun, 2016). It is important to note that it is not that the controller is easy to use, it has two pressure-sensitive analog sticks, two analog triggers, six pressure-sensitive buttons, four digital buttons, and a digital directional pad (d-pad). The military is not implementing these devices due to their simplicity, rather the devices are intuitive for soldiers to use because many have spent hundreds of hours mastering their use of the controller as children while

playing video games (Hambling, 2021). A spokesperson from an American defence system manufacturer, Raytheon, is quoted as saying “we feel we have to take advantage of the fact that all the kids are growing up with video games” while another spokesperson from the same article stated, “if you can use an Xbox, you can use this” (Brignull, 2010). The aforementioned assumed familiarity with the Xbox controller is one of the serious reasons why the United States military continues to adopt these controllers into military operations and training. Boeing, one of the largest defense contractors, has chosen to use Xbox controllers for its High Energy Laser Mobile Demonstrator (Schultz, 2014). The game controller is a tool that soldiers do not need to take lessons to learn, it is a tool that many soldiers already know how to use as the controls are the same as video game controls. According to the *Shooter Box* exhibition curator, Rachel Berger, “the military has deliberately blurred the lines between toys and weapons” (Hambling, 2021).

Military-Influence in Games

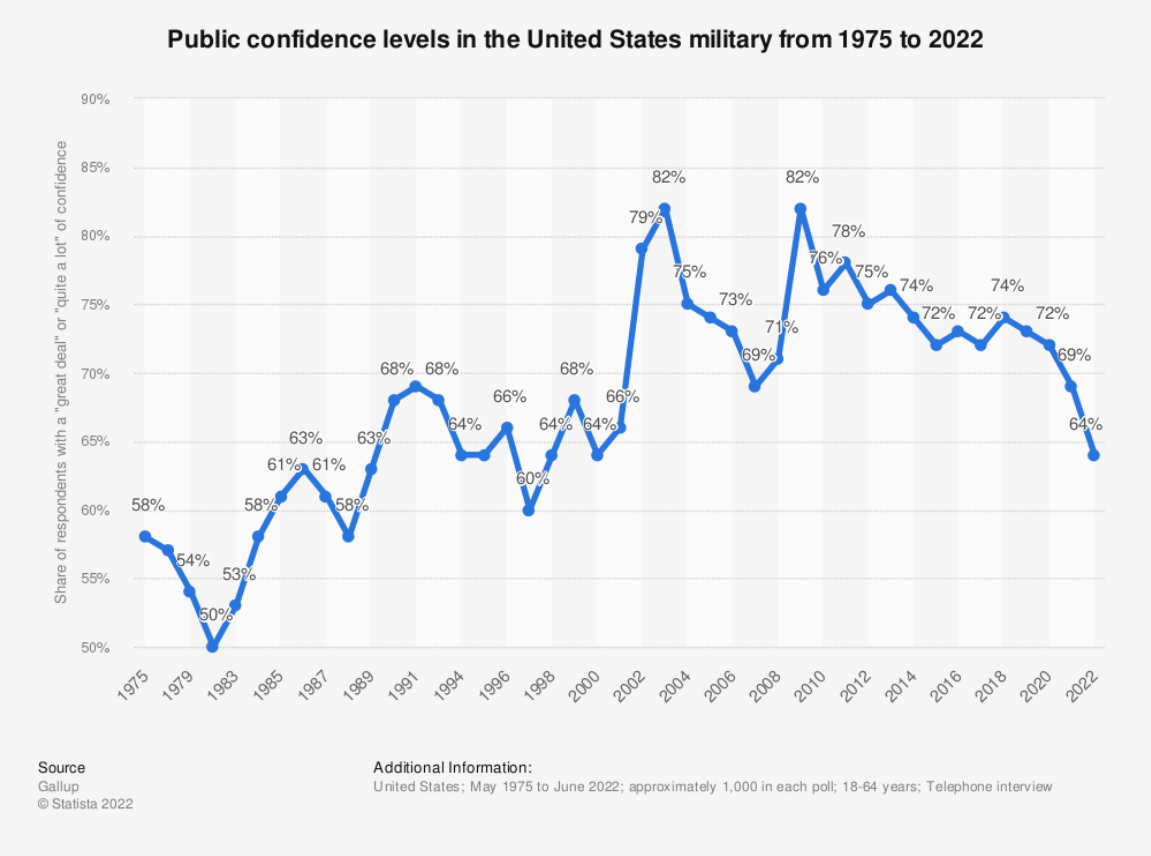
There are many different types of video games, but when looking at the ‘Top Sellers’ on Steam, one can see that military-inspired games are among the most popular. *Call of Duty* and *Halo* are consistently among the top five games (Steam Search, 2022) despite being released in 2009 and 2001 respectively. Both *Call of Duty* and *Halo* are action-based first-person shooters. Where *Call of Duty* takes place on Earth, *Halo* takes place in space, but both games are war games in which the objective is to eliminate enemies and complete missions. There is no debate that the United States military and government have some pull or influence in the creation of war games. Through the Modeling and Simulation Coordination Office (M&S CO), the Department of Defense (DoD) underwrites the research and development of many war games (Mirrlees, 2019).

The DoD has been a significant player in supporting the development and innovation of digital games. The DoD allocates a notable amount of public dollars to the research and development of simulation technology for the purposes of war as well as for war games (Mirrlees, 2019) which act as a form of recruitment and help manufacture consent for future wars. The United States relies on war for cultural-ideological, economic, and geopolitical expansion of the 'American Empire' (Bacevich, 2010; Terse, 2010). With this in mind, it is understandable why the DoD would rely on entertainment such as video games to create and retain public support or confidence for real wars. Permanent war—what is required for the 'American Empire' to continue expanding—requires a recruitment campaign that is continuous (Mirrlees, 2019); this is done through the creation and support of military games such as *America's Army*, *Tom Clancy's Rainbow Six: Rogue Spear*, and the *Call of Duty* franchise.

Military-Created Games & Training

America's Army is a series of FPS video games that were created by the United States Army with the purpose of recruiting new soldiers. The first game in the series was developed and published in the early 2000s, with the most recent addition being *America's Army: Proving Grounds* in 2015 (Steam, n.d.). In an announcement on America's Army forums, an announcement of the game being shut down stated that the "free-to-play America's Army PC Game represented the first large-scale use of game technology by the U.S. government as a platform for strategic communication and recruitment, and the first use of game technology in support of U.S. Army recruiting" (Knoop, 2022). While the game series was recently shut down in 2022 for no clear reason, some speculate that it is due to the waning public support for the military. The America's

Army development team released a statement saying it will "shift [their] focus to other new and innovative ways to assist the Army with comms and recruitment" paired with a suggestion that the game might return in some manner in the future (Knoop, 2022). Some games in the series are still available to play for free through Steam. *America's Army: Proving Grounds* has mostly positive reviews on Steam, the game description describes playing as an "11B Infantryman practicing combat maneuvers at… a military operation on urban terrain environment" (Steam, n.d.). This theme of creating games to prepare or train soldiers to fight or perform their duties in urban settings is present in other games as well, such as *Tom Clancy's Rainbow Six Rogue Spear*, as aforementioned. Although there are many games geared toward recruiting gamers into becoming soldiers, public trust and confidence in the U.S. Military are waning. In the past decade, public confidence has dropped from 75 percent in 2012 to 64 percent in 2022 (Gallup, 2022).



In an interview with the Chief Technology Officer for the United States Army Program Executive Office for Simulation, Training, and Instrumentation (PEO-STRI), Roger Smith, Atkinson-Bonasio (2008) was able to provide insight into the use of video games in military training. According to Smith, games are the most useful in teaching cognitive and team-oriented skills; they allow soldiers to "spend more time on cognitive tasks without the limitation imposed in the physical world (Atkinson-Bonasio, 2008). The use of video games to develop or improve skills in the training of soldiers is not a new concept, the DoD has been using commercial games as early as the 1980s, to advance individual and collective skills. The Atari game, *Battlezone*, was introduced into military training in the 1980s as a way to potentially improve soldiers' hand-eye coordination (Macedonia, 2002). According to Macedonia (2002):

> *Marine Doom was probably the first 3d video game to be used for collective training. The commercial version of Doom was adapted using editing tools to create an environment akin to an urban combat scenario. Non-player characters—the artificial intelligence bad guys—were transformed from monsters to opposing forces. Marine Doom was a project of the Marine Corps Modeling and Simulation Management Office (MCMSMO). In 1996, MCMSMO adapted the game Doom II for training four-man fire teams in concepts such as mutual fire team support, protection of the automatic rifleman, proper sequencing of an attack, ammunition discipline, and succession of command.*

The United States military has been adopting commercial games and then modifying them to fit the military's needs, or hiring contracted developers to create games for years. The PEO-STRI is, according to Smith, an acquisition organization; the purpose of the PEO-STRI is to manage funding, contracts with companies, and guide development that will meet the Army's requirements while also managing the deployment of training systems (Atkinson-Bonasio, 2008). In 2008, the PEO-STRI spent over three billion dollars on the acquisition of products and services for training—a large portion of the budget was used to contract with commercial companies (Atkinson-Bonasio, 2008).

A military-based training simulation, *DARWARS Ambush!*, was developed by the United States Defense Advanced Research Projects Agency (DARPA) in 2003 to train soldiers on the rules of engagement (CDGR, n.d.). Part of this project uses the "Operation Flashpoint game as a tool to teach teams of people to perform specific missions." It trains on infantry tactics, route clearing, search and rescue, and interrogation techniques among several other skills. (Atkinson-Bonasio, 2008). *DARWARS Ambush!* was distributed to American training bases worldwide. Another simulation trainer, *Bilateral Engagement Trainer* (BiLat), developed by the Institute for Creative Technology was also created in the early 2000s. *BiLat* is built on the Unreal 2.0 engine (Atkinson-Bonasio, 2008), which is a 3D graphics game engine that was developed in the late 1990s by Epic Games, a

game development studio. The purpose of *BiLat* was to teach the foundational principles of how to prepare for, meet, and negotiate with foreign actors with the cultural context in mind (CTI, n.d.). Cultural context refers to the information that one might need to know before entering an unfamiliar scenario. For instance, understanding the basic customs of the individual with whom the American military will come into contact. In the game, players are required to build relationships with non-playable characters (NPCs), as the player organizes and catalogs information and disinformation gathered throughout the game (CTL, n.d.). To clarify, a non-playable character (NPC) is an in-game character that is controlled by the game program; they might have pre-scripted lines and are often used to assist the storyline of the game or assist the playable characters (those which are controlled by humans) in some way. These games might allow the player to engage with the NPC within a dialogue tree which would train the player how to engage in specific scenarios. In the discussion of training soldiers on the rules of engagement through video games, it is also important to take note of the ways in which training soldiers on the rules of engagement should include some form of human rights training. Usually, action war video games do not even include civilians in the game (Sisler, 2009) (Leonard, 2004). These games typically rarely feature civilians, women, or children and more often focus on men or male soldiers with some justification for the violence being portrayed in the game (Hartmann, Krakowiak, Tsay-Vogel, 2014). This is an area in which more innovation can be done in order to better train soldiers for real-world applications

The introduction of first-person shooter games to military training provided a potential opportunity to help soldiers build better hand-eye coordination skills. In 1996, the commercial video game, *Doom*, was adapted by the Marine Corps Modeling and

Simulation Management Office (MCMSMO); the adapted version was called *Marine Doom* (Serious Game Classifications, n.d.). The purpose of *Marine Doom*, the first 3D video game used for collective training, was to train "four-man fire teams in concepts such as mutual fire team support, protection of the automatic rifleman, proper sequencing of an attack, ammunition discipline, and succession of command" (Macedonia, 2002). In the implementation of games like *Marine Doom*, and the adaptation of *Delta Force 2* to military training, the Army is able to evaluate whether realistic games can in fact improve soldier performance. This experimentation with whether games help in military training also helps determine the most effective ways to use "game technology in support of military tactical training" (Brown and Roman, 2008). Major game developers such as Ubi Soft Entertainment have also developed relationships with the United States military through which they have adapted games such as *Red Storm* and *Tom Clancy's Rainbow Six Rogue Spear* to train military personnel in urban terrain (Macedonia, 2002). According to Pringle (2007), the ability to blend technologies in a manner that maximizes training benefits will determine whether serious games will play an increasing role in military training or not. Serious games have been increasingly used for serious purposes. Brown and Roman (2008) state that there is an expanding body of evidence that supports serious games being effective tools.

The effectiveness of video games or computer simulations to train soldiers has been a significant topic of discussion with the growing prevalence of games in training. One study on the effects of video game experience in combat identification tests video game experience and stereoscopic training. The study presented twelve combat vehicles to individuals through either a "non-stereoscopic or active stereoscopic display using

NVIDIA's GeForce shutter glass technology" (Keebler, Jentsch, Schuster, 2014). The conclusion suggests that in video game experience, individual differences may support the enhancement of performances in combat identification (CID) tasks (Keebler, Jentsch, Schuster, 2014). For any training system, whether it is a game or not, there are three primary points to determine how effective something is at training: first, the program created to train; second, the circumstantial context in which the training is happening; and third, the individual being trained (Orvis et al, 2010). On a similar note, Young et al. (1997) found that those who had played more video games and had more experience with video games scored higher on PC-based work sample tests. It was also found that other training outcomes were also influenced by having a greater degree of prior video game experiences such as time on task, training motivation, and satisfaction. According to Orvis, Horn, and Belanich (2009), only 40 percent of U.S. Military Academy cadets play a moderate to a heavy amount of video games and less than 43 percent of more than 10,000 soldiers play video games on a weekly basis. Based on this information, it would be incorrect to assume that most young adults are gamers and therefore it may not be beneficial to rely on games for instructional purposes. An individual's success in training will not be dependent on whether they are familiar with the medium the training is delivered through.

By understanding the significance of training-focused video games like *DARWARS Ambush!* and *BiLat*, one can see the roots of video games embedding themselves in the training of military personnel at a rapid rate in the 1990s and early 2000s. With this in mind, the expected trajectory is that video games will only become more significant in the training of military personnel as time continues. Roger Smith

states that he believes gaming technologies will become more important and significant across society in the same way the adoption of personal computers grew in impotence within society (Atkinson-Bonasio, 2008). Video games will obviously not be used in all areas of training, but as research continues, and based on the research aforementioned, it appears as though video games may continue to be used in areas such as (but not limited to) team-building and combat identification.

Gaming & PTSD

One may come to the conclusion that because military personnel is using devices such as Xbox controllers to operate military drones and vehicles, there may be a disconnect between the individual and the action they are committing. The belief may be that due to the familiarity of the gaming controller, that by using it in a military setting it might help the soldier separate themselves from the acts they are carrying out through the controller. Many also believe that by using drones, it allows people to blame the robot rather than a human for the violence inflicted on others during remote drone strikes. For the purposes of this discussion, the focus will be on drones and drone operators. According to Dave Phillipps (2022), drone crews in the military have "launched more missiles and killed more people than nearly anyone else in the military in the past decade." Combat stress can be accentuated for remote drone operators steering armed drones from the United States; the contrast between their work and their pleasant surroundings can make it difficult to keep their work in perspective (Axe, 2012). One former drone developer and pilot explains that as a drone pilot, one can shoot a missile and terminate several human lives, and then return home—there is a disconnect (Axe, 2012). Interestingly, drone crews are not regarded as combat troops, rather, they are treated as

office workers which means they rarely get the same recovery periods or mental health screenings that combat troops receive (Phillipps, 2022). Unfortunately, these drone crew members are not considered as having participated in combat service. According to one retired master sergeant, Neal Scheuneman, fighter jets might view a target for only 20 minutes, while a drone operator may observe the target for as long as months; they see the target play with their children and engage with their family—they then have to execute the drone strike and watch the death of this person (Phillipps, 2022). Scheuneman states that "people often think that this job is going to be like a video game, and I have to warn them, there is no reset button" (Phillipps, 2022). This opens the discussion of Post Traumatic Stress Disorder (PTSD) in soldiers, especially those who may not be considered as having trauma due to the nature of their work.

Post Traumatic Stress Disorder is a serious battle for many soldiers. In a longitudinal study of PTSD and Depression in soldiers, after seven months 78.8 percent of soldiers displayed positive attributes for PTSD or depression despite displaying negative after one month of deployment (Grieger et al., 2006). What this means is that a majority of soldiers do not meet the criteria for PTSD or depression early on, rather, both PTSD and depression are issues that may develop over time or take time to fully display in an individual. Treatment for PTSD after deployment is low, with many soldiers not receiving proper treatment or not having access to treatment (Hoge et al., 2014). One instance studied on this topic reports that after returning from Afghanistan, 2,230 soldiers were diagnosed with PTSD within three months—22 percent, or 490 soldiers, attended one mental health care visit, and 41 percent, or 914 soldiers, received "minimally adequate care" which is defined as eight or more treatment sessions within a year (Hoge

et al., 2014). Many soldiers reported their reasons for withdrawing from treatment as being due to feelings of being able to manage problems on their own, stigma, ineffectiveness of treatment, insufficient time with professionals, interference with work, concerns over confidentiality, and uncomfortable interactions with professionals (Hoge et al., 2014).

While traditional therapy has been used and implemented in the treatment of PTSD in soldiers, new methods of therapy through the use of video games have also been explored. Some researchers have found that veterans are able to use games in a number of ways as an aid to their mental health; "whether it's through connecting with others, coping with symptoms of PTSD, suicidality, or substance cravings, or creating meaningful leadership roles or even jobs through gaming" (Richman, 2019). Veterans are able to connect with friends from their personal life or from around the world through online cooperative video games (co-op games). Video games, most prominently roleplaying games (games that allow the user to take on the role of a character), offer players the chance to escape the stress from their lives and cope with their stressors (Prinsen, Schofield, 2021). They also allow players to take on leadership roles since many games are both team-based and strategy-heavy; this often means that at least one player on the team needs to take on the leadership role in order to guide the team to victory. Video games also offer the potential for jobs for players who might choose to share their gameplay on live streaming platforms such as Twitch, or in video format on sites like YouTube, and increasingly on TikTok.

More research on the topic suggests that prolonged exposure therapy and cognitive processing therapy have been proven to be significantly beneficial to veterans

(Miller, 2020). Prolonged exposure therapy is the process by which an individual will practice thinking about the traumatic event(s) that they have been through so that they will eventually come to the realization that their memories are not harmful. Cognitive processing therapy is the process by which the patient is taught to assess the thoughts they have had since the traumatic experiences and focus on trying to change their negative perceptions of the world and themselves. SoldierStrong, a public charity organization, has developed virtual reality technology in order to help veterans recover from PTSD. SoldierStrong states that their program, BraveMind, is a revolutionary virtual reality therapy program that "leverages cutting-edge technology to make therapy more effective and more appealing to younger generations" (SoldierStrong, n.d.). The director of Medical Virtual Reality at the Institute for Creative Technologies at the University of Southern California, Albert Rizzo, Ph.D., states that veterans often do not want to talk about their problems or admit that they have any (SoldierStrong, n.d.). The Institute for Creative Technologies "brings film and game industry artists together with computer and social scientists to study and develop immersive media for military training, health therapies, education, and more" (USC, n.d.). The Institute's research projects are aimed at exploring and broadening how individuals become involved with simulated scenarios, virtual characters, and video games. Their prototypes supply absorbing experiences for users to improve their skills in "decision making, cultural awareness, leadership, and coping" among other things (USC, n.d.). Veterans are able to use the application to speak to an interactive virtual coach online and anonymously; this coach is able to remotely recognize signs of PTSD, depression, and suicide risk. Virtual reality therapy is a technology that BraveMind uses which offers an original alternative to the

typical treatment methods of PTSD. BraveMind's virtual reality software has 14 unique worlds such as a remote Afghan village, a crowded Iraqi marketplace, or a checkpoint in the desert (SoldierStrong, n.d.); all of which are meant to place the veteran back—virtually— to the moment of their traumatic experience. With the increasing popularity of virtual reality games, virtual reality therapy is a much more appealing option for veterans who may not be comfortable discussing their trauma in a traditional method of therapy. This process is found to have helped veterans suffering from PTSD to begin the healing process.

Military Entertainment Complex & The DoD's Influence on Video Games: History & Context

The empire of the United States of America is closely tied to war; since World War I, the American military has collaborated with entertainment industries on a regular basis to influence and mold public opinion on war (Mirrlees, 2019). It is widely accepted that the term "military-industrial complex" has been coined by former United States President Dwight D. Eisenhower in his Farewell Address in 1961. When President Eisenhower used the term, he was referring to the relationship between the military and the defense industry which allows for the economy to increasingly be geared towards militarism, and how this relationship impacts public policy. The term "military entertainment complex" derives from the military-industrial complex, the phrase is similar in that it refers to the mutually beneficial relationship between the military and the entertainment industry. This phrase has previously been frequently used to describe the relationship between the Pentagon and Hollywood—which can also be more generally understood as the link between the American military and movies. For the purposes of

this paper, the military entertainment complex will be used to refer to the relationship between the military and the video game industry.

Recruitment

Military recruitment is low and has been on a downward trend for several years (Long, 2019). The United States Recruiting Command's official website has published it's recruiting challenges as being the following: labour market, is stated as the "most challenging labor market since the inception of the all-volunteer force"; awareness, "50% of youth admit they know little to nothing about military service"; qualified youth, "71% of youth do not qualify for military service because of obesity, drugs, physical and mental health problems, misconduct, and aptitude"; family business, "79% of recruits have a relative who served"; and disconnect with society, "Only 1% of the population currently serves; veteran population is declining" (U.S. Recruiting Command, 2021). For this reason, the military has begun trying to recruit new soldiers through means of other media such as video games.

In the general population, for those under the age of thirty, seventy-two percent of men and forty-nine percent of women play video games on a regular basis (Brown, 2017). As aforementioned, less than 43 percent of 10,000 soldiers play video games weekly. Since the beginning of the COVID-19 pandemic, the esports audience has doubled on Twitch (Insider News, 2021) and the audience for esports is only expected to grow and rival the NFL by reaching about 300 million viewers by 2022 (Goldman Sachs, n.d.). The pool of potential military recruits is, according to Insider News (2021), growing exponentially. Recruiters for the U.S. Army have been tasked with the challenge of appealing to the 'Generation Z' demographic; in order to do this, new methods need to be

adopted. The latest recruitment tool that the United States Army is using is the U.S. Army Esports Team (Insider News, 2021). The U.S. Army Esports Team travels across the country to high schools, colleges, and gaming events in order to attempt to meet its recruitment goal of 66,000 soldiers (Insider News, 2021). The program began in 2018 after the Army didn't reach its recruitment goals for the first time since 2005; this may be due to the strong economy at the time, or the collapse of traditional methods like cold calls (CBS, 2019). Lt. Col. Kirk Duncan states that he believes the U.S. Army Esports Team is a good opportunity to engage soldiers in a platform that they're using on a daily basis (2021). He goes on to explain that gamers have valuable skills in the military: communication, problem-solving, discipline, and desire. Another source also claims that the U.S. Army is interested in recruiting gamers because they have good decision-making skills, the ability to absorb a lot of information in a short amount of time, and the ability to work in a team (CBS, 2019). While this may be exciting and convincing to some individuals, the team is open about the fact that around 7000 soldiers are competing for only 30 full-time esports gaming positions they have for the U.S. Army Esports Team (CBS, 2019). A lot of the recruitment that comes from this program is actually done in voice channels within the games themselves by the 30 or so soldiers on the Team. These soldiers are tasked with explaining that being in the army is not just fighting gruesome wars. The main objective of this recruitment technique is to present the benefits that a military career would provide to young people between 17 and 34 years old (Insider News, 2021).

This program seems to be meeting its goals, allowing the Army to meet recruitment numbers as well as allowing the world to see soldiers as individuals through

their opportunity to live-stream their gameplay on sites like Twitch. Despite this, there are people pushing against it, like United States Representative, Alexandria Ocasio-Cortez. Ocasio-Cortez, a gamer herself, has said that it is wrong for the U.S. Military to recruit using video games because children around the ages of 12 or 13 years old on Twitch are being targeted for recruitment (Duhaime-Ross, 2020). Ocasio-Cortez drafted an amendment in 2020 to the House of Appropriations which would prevent the United States military from using money taken from the bill in order to "maintain a presence on Twitch.com or any video game, esports, or live-streaming platform (Gault, 2020). She goes on to discuss the extent of how inappropriate this is for the government to allow; she states that "War is not a game," (Gault, 2020). This is not the only issue that the U.S. Army Esports Team or military has experienced; in 2020, Lawyers began demanding that the U.S. Army stop violating the right to freedom of speech on Twitch (Browning, Lorenz, 2020). The Army and Navy gaming channels on Twitch had been banning viewers from the military esports live streams when viewers would ask about war crimes. This resulted in the Army stating that they would refrain from streaming video games on Twitch after being accused of censorship.

CHAPTER 4

CONTROVERSIES

Technology & the Military

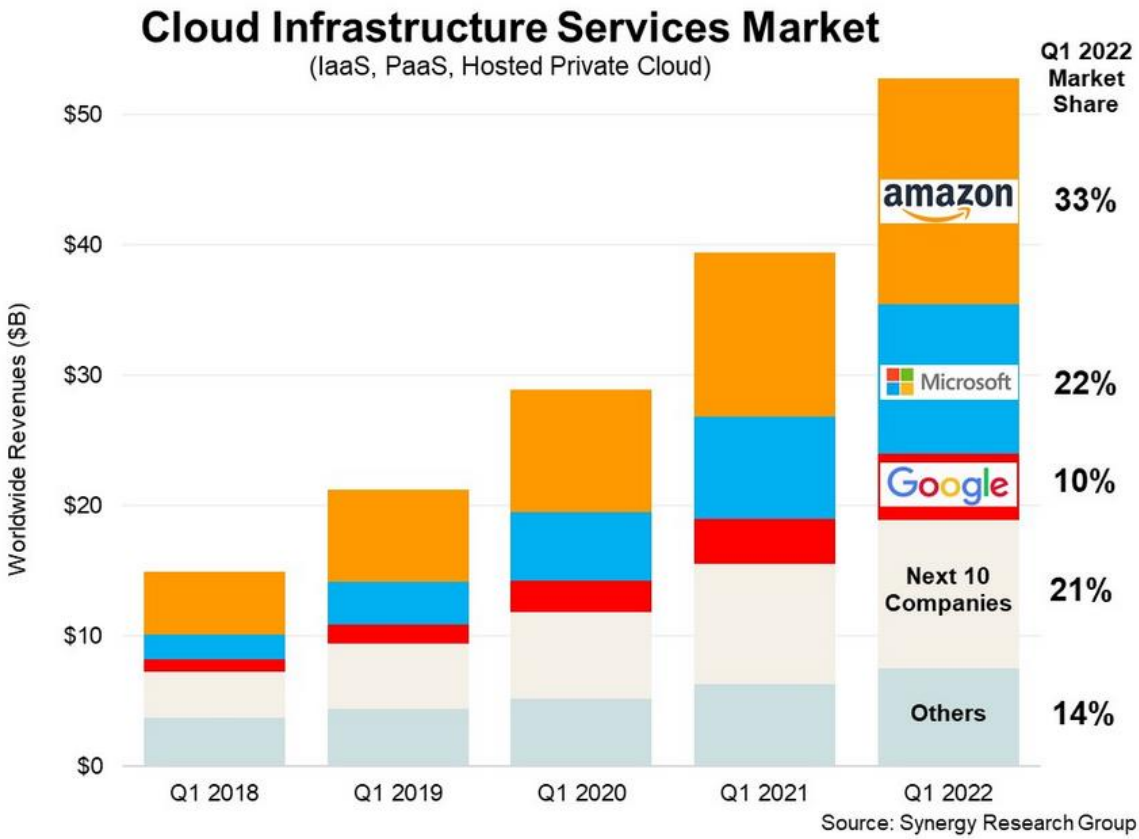
Microsoft has been at the center of some debates in the technology industry in regard to how or when technology companies should work with the government and if they should be supplying the military with digital technology (Smith, 2018). In a question and answer session, the world's largest vendor of computer software (Patrizio, 2022),

Microsoft, stated that its work as a company is based on three convictions: first, that the company believes in the strong defence of the United States of America and that it wants the people who defend the nation to have access to the best technology, including technology from Microsoft; second, it appreciates the ethical and policy issues that artificial intelligence is producing for weapons and warfare and it wants to provide its knowledge to address those issues in a responsible way; and third, the company understands that not everyone working for them is American or supports America and will provide those people the flexibility to work on different tasks or projects (Smith, 2018).

The company went on to discuss the significance of artificial intelligence and augmented reality, stating that these technologies create new significant issues such as the ability of these technologies to start wars (Smith, 2018). New developments in technology cannot be addressed if the individuals in the tech sector, who have the most knowledge on the topic, withdraw from the discussion. This means that it is critical that companies like Microsoft support the nations that they are in to secure a peaceful and free future; "as a company, Microsoft was founded and is headquartered in the United States, and it has prospered throughout its 43 years from the many benefits that the country offers… when it comes to the U.S. military, as a company, Microsoft will be engaged" (Smith, 2018). All of this comes as a response to the Joint Enterprise Defense Infrastructure (JEDI) contract that the Pentagon announced a request for bids for.

Jeff Bezos, billionaire, and Amazon CEO, whose company was viewed as being the JEDI contract's frontrunner, made similar comments to those of Microsoft's Vice Chair and President, Brad Smith. Bezos stated at the Wired25 summit, "If big tech

companies are going to turn their back on the US Department of Defense, this country is going to be in trouble… We are going to continue to support the DoD and I think we should" (Moss, 2018). It is speculated that this is Bezos' attempt to deepen the relationship that he has with the United States government as Amazon is already involved with Rekognition—an artificial intelligence software that allows one to "recognize objects and scenes, similar to services already available from Google, Microsoft, and others" (Lardinois, 2016)—which was sold to and is used by several United States government agencies such as United States Immigration and Customs Enforcement (ICE). Amazon also has a contract with the United States Central Intelligence Agency (CIA) to host their cloud service (Sverdlik, 2013; Moss, 2018). Amazon is known to dominate the Cloud Infrastructure Services market share since at least 2017 (Miller, 2018).



In response to Bezos' attempts to secure a relationship with the United States government, an anonymous Amazon Employee has published an open letter protesting against the company supporting the government by providing technology that would be dangerous to marginalized groups. The anonymous employee writes "The current political environment makes the idea of selling facial recognition products to the government even more objectionable. Police have stepped up spying on black activists, and the Trump administration is continuing its all-out assault on immigrants. Supercharging surveillance is not something we want to contribute to in any way" (Moss, 2018). A Google spokesperson explained that the company would not be bidding on the JEDI contract because there are no assurances that the project would align with Google's artificial intelligence principles (Nix, 2018). This comes after one of Google's secret products for the United States military was made public; Project Maven, a secret Google Cloud product made to use Google's image recognition smarts for the Department of Defense's drones was meant to improve drone strikes in the battlefield (Frisk, 2018). Like with Amazon's anonymous employee, an open letter was published by Google employees in a petition stating that they "believe that Google should not be in the business of war" (Frisk, 2018) the petition continues "We can no longer ignore our industry's and our technologies' harmful biases, large-scale breaches of trust, and lack of ethical safeguards… these are life and death stakes" (Conger, 2018). This brings into question the ethical debate of technology-based companies working with the United States military. Is it ethical to allow the military to use video games, esports teams, and movies as tools of propaganda?

The Ethics of Video Games as Propaganda

With the discussion of the use of video games for military benefit, the topic of ethics is important. The United States Military has been involved with the video game industry for a few decades. Colonel Casey Wardynski, the army's chief economist and professor at the United States Military Academy, and the man behind the idea for America's Army has been quoted as saying the aim for the America's Army video game was to "use computer game technology to provide the public a virtual soldier experience that was engaging, informative and entertaining" (McMahon, 2018). The relationship between the video game industry and the military is being strengthened as time goes on; very few discuss the fact that creators of FPS games are often paying a licensing fee to weapons manufacturers in order to use the weaponry in the video games (McMahon, 2018). The military is fully aware that there is no transferable skill from video games to the ability to perform in the military but that is not what the military is counting on. According to Monash University ethicist, Professor Rob Sparrow, as cited by McMahon (2018), "If you're fantasising about this stuff, it might seem plausible that you would be willing to do it in real life. The military is also aware that gaming is one of the main forms of media consumed by young people."

Countries around the world have begun to use video games as a form of recruitment for new soldiers. In 2016, the Australian Defence Force implemented a playable virtual experience on its website which allowed site visitors to "experience what it's like to work in the Navy, Army or air force as an engineer" (Whigham, 2018). The site is no longer accessible, a spokesperson from the Australian Defence Force claims that it was removed because it was not achieving the goals that the site was expected to

receive. A former writer of Call of Duty, one of the most popular FPS games in the world, Dave Anthony, was invited to Washington DC to discuss with a number of experts on the topic of the future of warfare. Former Pentagon official, Steven Grundman, coordinated the discussion and extended an invitation to Dave Anthony after witnessing his own son play Call of Duty: Black Ops 2 (Grundman, Anthony, 2014). Grundman went on to say that the game's ability to portray war realistically and authentically impressed him and allowed him to realize that the perspective of artists is compelling (Grundman, 2014). Researchers at Monash University, including Professor Robert Sparrow, explore the contradiction between those who defend violent video games, claiming that they are harmless, and the usefulness of violent video games in military training (Whigham, 2018). The research states that if the contradiction cannot be settled then there will have to be a choice made between "admitting that video games do shape the dispositions of those who play them or that the claims made for their utility in military training are widely exaggerated" (Sparrow et al., 2015).

Based on the aforementioned research in the previous sections on the impact of video games and video games in military training, it is likely that video games do have an effect on certain personalities; there is not enough data on the effectiveness of video games in military training to be able to state whether it is effective or not. However, if one is to concede that video games do have an effect on certain individuals, especially children, it brings into question the ethics of allowing children to be exposed to violent video games that act as propaganda for the military. While most war-based games are rated for adults (18+, 'M' for mature, or 'R' for restricted), it would be ignorant to assume that children are not playing these games. Nevertheless, there are games like

Fortnite and Overwatch—rated 'T' for teens, meaning the minimum age recommended to play is 13 years old—which have target audiences that are children. Fortnite is notorious for advertising its game to children even younger than 13 years old by using fun characters such as personified bananas, sparkling llamas, and colourful character customization options. Overwatch is also guilty of targetting a younger demographic with characters such as a talking gorilla, and a hamster capable of operating a quadrupedal robot mecha. Although neither of these games portrays a realistic warzone, they are games that allow children to become accustomed to the use of FPS mechanics, open opportunities for children to play realistic war-based games eventually, and desensitize children to the idea of "eliminating" enemy targets. The celebration of war or violence in video games can impact an individual's ability or willingness to enlist in conflict. In some cases, "the culture of militarism that is spread by video games does make it easier to kill" (Sparrow et al., 2015).

While there are rules and regulations when it comes to advertising to children, especially those under the age of 13, there does not seem to be a way to hold companies like Epic Games or Blizzard Entertainment—developers of Fortnite and Overwatch respectively—when they rated their games for ages 13 and up. In understanding the consequences of exposure to video games on young minds, it does seem like an ethical issue that needs to be considered further.

CHAPTER 5

SUMMARY & CONCLUSION

In the discussion of the relationship between video games and the United States military, one can see that there are significant points of interest and consideration. The

ways in which video games impact individuals inform that violent video games do result in more aggressive behaviour in some individuals, especially young people exposed to dysfunctional adult relationships. This leads to the assumption that video games can lead to more aggressive behaviours which have been shown to also correlate with the fact that individuals who are more likely to be aggressive or less agreeable are more likely to enlist in the military. However, video games have also been proven to be optimal tools for learning. The level-progression model that most video games have, ensures that an individual is sufficiently prepared before moving on to the next level. Virtual reality and other related technological advancements have been used to create simulation games. These simulation games provide an unrivaled alternative for training new soldiers and pilots; Lockheed Martin has been using programs such as a modified version of Microsoft Flight Simulator—Prepar3d—to train pilots, and the military has been using modified versions of commercial video games to train soldiers on cultural sensitivity, urban combat, and even in the treatment of PTSD.

The fact of the matter is that the number of individuals who play video games is growing and the United States military is taking advantage of this fact. The U.S. military has implemented the U.S. Army Esports team as a recruitment method. This resulted in some controversy which caused the U.S. Army Esports team to reconsider streaming on Twitch, a live streaming platform. Other controversies have also arisen from the relationships between technology-focused companies like Google or Amazon and the United States Military. Employees of these companies have stepped forward to express their concerns about the ethical issues and consequences of the growing relationship between tech giants and the military. This brings into question the ethics of the military-

industrial complex and the ways in which militarism is celebrated in video games and other media. It is undeniable that the relationship between the military and the video game industry is growing and will only become stronger. It is a mutually beneficial relationship for both parties, as the military gains the technology and innovative training methods from the video game and tech industry while the latter party gains contracts and capital from the United States military.

Ultimately, the relationship between the military and the tech or video game industry does not seem to have any end in the near future. With the use of Xbox controllers to direct drones, and video games to train soldiers, the military is intentionally making the border between toys and weapons indiscernible.

CHAPTER 6

DEFINITIONS

In order to effectively discuss the topic of the militarization of video games, some terms need to be defined for clarity:

America's Army: This term does not describe the literal United States of America's Army. This term is the title of a military-created game. This game is a first-person shooter (fps) that was released in the early 2000s. The purpose of this game was to recruit new soldiers.

Console: An electronic machine that is used to play a video game. These machines are typically connected to a television. It is also typical that these machines come with handheld controllers through which the individual can play the game. These machines are usually meant to be placed and left in one location within a house, but, handheld consoles also exist, allowing the individual to play video games in any location. Nintendo is an

example of a company that produces consoles such as the Nintendo 64, the Gameboy, the Wii, and the Switch.

Controller: A device used with a console, similar to a remote for a television. It allows the individual to control or interact with their character in the game or the environment within the game.

Electronic Sports (E-Sports/Esports): A term used to describe the competitions that are held using video games. Often manifesting as organized, multiplayer or online multiplayer video game competitions. Teams of gamers will often compete against other teams of gamers to win a prize.

First-Person Shooter (FPS): A sub-genre of the video game genre of shooter games. This sub-genre is focused on the first-person perspective as the player plays through in a three-dimensional environment within the game, shooting enemies or targets.

Gamer: A term used to describe an individual who plays video games on the computer or on a console, usually for long periods of time.

Joint Enterprise Defense Infrastructure (JEDI) cloud contract: "An agreement between the United States Department of Defense (DoD) and a major cloud provider that will house 80 percent of all DoD data" (Craven, 2020).

Military-Created Games: This term refers to video games that were funded, developed, and/or published by the military.

Military Entertainment Complex: The mutually beneficial relationship between the military and the entertainment industry. This is often seen in the field of filmmaking but also exists in other spaces such as video games and virtual reality.

Militarization: The process by which the characteristics of the military are imposed on or accepted by an individual, object, or anything capable of taking on new characteristics.

Multiplayer: A game feature, capability, or mode that allows for more than one individual player to play in the same game together, typically on the same console or device.

NPC: A Non-Playable/Player Character. This is a character in a game that is not played by any individual, rather it is a character that is preprogrammed to behave in a certain manner or deliver specific voice lines.

Online Multiplayer: A game feature, capability, or mode that allows for more than one individual player to play in the same game together without the requirement to be on the same console or the same continent, in some cases.

Steam: A digital video game storefront, and library owned by Valve Corporation. Valve is a video game developing and publishing company based in the United States.

Twitch: A live-streaming website primarily for playing games, but increasingly for every facet of life.

U.S. Army ESports: The official esports team of the United States of America's Army. This e-sports team consists of several American Army Soldiers who participate in competitive gaming tournaments. The soldiers are not permanent, there is a rotation of which soldiers are on the team.

Video Game: A game typically played on a console or on a computer. The player is able to control their character or the game by using a hand-held controller or keyboard buttons. These are typically viewed through a television screen, computer screen, or the screen available on hand-held consoles.

Wired Generation: The generation of people who have not experienced or do not remember a time before the World Wide Web.

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