Blaming Halo

The Effects of Violent Video Games and What Should Be Done About Them

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Abstract

In the wake of such incidents as the Newtown, Connecticut; and Aurora, Colorado, shootings, much scrutiny has been applied to the topic of violent video games, because there appears to be a link between school shooters and video games that contain gratuitous violence. This paper examines the alleged link between video game violence and real-world violence.

Copious amounts of research have been dedicated to this topic. Although many researchers conclude that violent video games lead to increases in aggression, a causal link between violent video games and real-life acts of violence remains unseen. This paper explores the origins of this controversy, and then seeks to find a solution to the problem of children playing video games that they should not. Additionally, this paper strives to dispel certain erroneous beliefs that many people have about violent video games.

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Introduction

The morning of December 14, 2012 began like any other morning for the residents of Newtown, a quiet, peaceful Connecticut city. Adults sipped coffee on their way to work. Children fidgeted restlessly in classrooms. And 20-year-old Adam Lanza shot and killed his mother. After grabbing more guns and ammunition, Lanza drove to Sandy Hook Elementary School, where around seven hundred students were anxiously waiting for winter break (CNN, 2013). Lanza forced his way inside and, for reasons that will probably never be explained, began stalking through the classrooms, opening fire on students, teachers, and custodial workers alike. When Lanza finally turned one of his guns on himself, twenty children and six adults were either dead or fatally injured.

In the aftermath of the horrific shooting, details began to emerge about the personality of a young man who could murder elementary school children in cold blood. Few were surprised when it was revealed that Lanza was an avid—or, more accurately, *obsessive*—player of violent video games. In one such game, *Combat Arms*, Lanza logged a staggering total of 4,901 matches, racking up a morbidly impressive score of 83,496 kills—all without the use of cheat codes (Bates & Pow, 2013). According to the *New York Daily News*, authorities also uncovered a massive 7 foot by 4 foot spreadsheet, tallying up the number of kills from mass murders in the past—a video game-style scoreboard that was anything but make-believe (Sandoval, Friedman, & Hutchinson, 2013).

And it is not hard to imagine that Lanza would have had a substantial amount of data. Five months prior to the Sandy Hook tragedy, James Holmes opened fire on a packed movie theater during a midnight screening of *The Dark Knight Rises*, killing 12. In 2011, Anders Breivik slaughtered 77, including children, at a summer camp in Norway. Major Nidal Malik Hasan gunned down 13 at Fort Hood, Texas, in 2009. Sueng-Hui Cho massacred 32 at Virginia Tech in 2007. Columbine. West Paducah. Jonesboro. The names of the incidents are forever etched in our minds, even as their terrible frequency seems to make us numb.

What once was beyond belief appears to be quickly becoming commonplace. As this nation continues to reel from such horrendous acts, some familiar questions rear their heads: what is the cause? Who is to blame? How can it be stopped? Finger-pointing is inevitable in the wake of such gruesome tragedies, and several culprits are always named. Perhaps at the top of the list of the usual suspects are violent video games. The argument is so familiar that it almost seems like fact—if children play too many violent video games for too long, then they will commit acts of violence. Shooters like Adam Lanza become so disturbingly obsessed with gruesome, ultra-violent video games like *Grand Theft Auto*, *Left 4 Dead*, and *Gears of War* that they lose track of reality and shooting living, breathing people becomes indistinguishable from picking off pixels on a screen.

An extensive amount of research has been performed in an attempt to address this issue. Yet a definitive answer as to whether or not violent video games lead to violent behavior has, thus far, eluded researchers, and it seems likely that this will continue to be the case for the foreseeable future. Currently, the body of literature indicates that playing violent video games leads to higher levels of aggression, though this claim is hotly

disputed. Such research, of course, is utterly useless if it is not ultimately applied to everyday situations. Thus, the question remains: what should be done about violent video games? Despite numerous attempts to legislate and regulate the video game industry, the responsibility for effectively navigating the potentially dangerous world of violent video games—and all media, for that matter—lies with parents and individuals.

A Brief History Lesson

Pre-historic Times

Video games, in their current form, are a relatively recent phenomenon. Anyone over the age of 50 can recall, often whimsically, a simpler time before the advent of video games. However, the inception of video games dates back to shortly after the Second World War. In 1947, Thomas Goldsmith and Estle Mann created the oldest precursor to modern video games, a contraption known as the Cathode-Ray Tube Amusement Device which allowed players to manipulate a beam of light to aim it at a target (Milian & Chan, 2012). Light-years away from *Halo 4*, to be sure, but it was a start nonetheless.

As nascent computer technology progressed, so did the ancestors of the video game. Alexander Douglas, a Ph.D. student at the University of Cambridge, developed the first ever programmed computer game in 1952, which he titled *Noughts and Crosses* (Dillon, 2011). It was a form of tic-tac-toe, and it paved the way for generations of office workers to one day waste company time by playing Solitaire. Another early forerunner, and perhaps the grandparent of the video arcade, was Manhattan Project alum William Higinbotham's *Tennis for Two* in 1958 (Brookhaven National Laboratory). It featured a 2-D tennis court with a dot moving from side to side, which players hit using a rudimentary controller with a button and a dial to change direction (Brookhaven National

Laboratory). Considering that the goal of the contraption was to make science more engaging at Brookhaven National Laboratories in New York, Higinbotham's project was a smashing success, as crowds would line up every day to play the game (Dillon, 2011). Little did Higinbotham and his engineers know that their modest little game would help spawn an industry that would take the world by storm in just a few decades.

In the 1960s, the world of video games continued to mature. In the early part of the decade, three engineers at the Massachusetts Institute of Technology—Steven Russell, Wayne Wittanen, and J.M. Graetz—were given a task similar to Higinbotham's: build an attraction to increase the number of visitors to the lab (Egenfeldt-Nielsen, Smith, & Tosca, 2013). The fruit of their labor was *Spacewar!*, a groundbreaking computer game that featured two spaceships locked in battle with each other (Egenfeldt-Nielsen, et al., 2013). After *Spacewar!* video games began to creep toward the edge of the free market.

The men who helped take it over that edge were Nolan Bushnell and Ted Dabney. In 1971 Bushnell and Dabney, building on the work of the MIT engineers, created the world's first coin-operated video game, *Computer Space*, in which, for a quarter, players got one hundred seconds to shoot down a flying saucer as many times as they could (Dillon, 2011). Despite its innovation, however, *Computer Space* failed to achieve the commercial success Bushnell and Dabney desired, mostly because the game was simply too difficult to learn (Egenfeldt-Nielsen et al., 2013). But the industry had not yet seen the last of Bushnell and Dabney.

Adolescence

The 1970s was the decade where video games moved out of the laboratory and into the hands of the general public. This started with the release of the Odyssey Home Entertainment System by Magnavox, the world's first home gaming console (Dillon, 2011). The Odyssey was developed by Ralph Baer, who worked at the engineering firm of Sanders Associates; Baer licensed his *Brown Box*, as he called it, to Magnavox, who changed the name (Smithsonian Institute). It is worth noting that Baer's Brown Box featured a light gun that players could point at the screen (Massachusetts Institute of Technology), a precursor to generations of games featuring weapons.

The Odyssey was soon eclipsed by the return of Bushnell and Dabney. That same year, the duo, under their new company which they named *Atari*, released another coin-operated game called *Pong* (Dillon, 2011). The game, which was simply an electronic version of table tennis (reminiscent of Higinbotham's *Tennis for Two*) was met with wild success. Other companies soon followed Atari's lead, and video game arcades began to sprout up seemingly overnight across America. The industry continued to grow at an astounding rate until it abruptly crashed in the early 1980s (Egenfeldt-Nielsen et al., 2013).

The Debate Begins

There were a multitude of factors for this industry crash. However, in addition to such reasons as an overly saturated market filled with games of poor quality, one of the main causes of the crash was the shifting public perception of video games (Dillon, 2011). Video games may have started harmlessly enough with bouncing blips on screens, but they were quickly sailing into waters that many felt were far less innocent. For

instance, the Japanese game *Space Invaders*, which exploded worldwide in 1978, allowed players to gun down an approaching horde of extraterrestrials (Dillon, 2011). In addition to the game's rabid popularity, it also influenced game design during the era and continues to do so to this day (Betters, 2013). Though calling it *violent* seems ridiculous by today's standards, *Space Invaders* and the games it inspired managed to stir up controversy in the late '70s and early '80s, launching the debate over whether or not video games are detrimental to those who play them.

The debate graduated from a fringe of concerned individuals to a mainstream news topic in the 1990s. Advances in technology continued to make all elements of gameplay, especially violence, more life-like. In 1992, the original first-person shooter, a computer game called *Wolfenstein 3D*, hit store shelves to great success, followed a year later by the similar, even more popular title *Doom* (Egenfeldt-Nielsen et al., 2013). These games shocked the world with levels of violence that had never been seen before in video games. As violent video games flooded the market, outrage continued to mount, until the Entertainment Software Rating Board (ESRB) was formed (Egenfeldt-Nielsen et al., 2013). Ever since, video games have been rated in a fashion similar to films in an attempt to keep children from playing games that are not appropriate for them.

The debate over whether playing violent video games lead to violence finally exploded in 1999, when two high-school students, Dylan Klebold and Eric Harris, attacked Columbine High School, killing 13 before committing suicide. In the resulting investigation, it was revealed that Klebold and Harris were avid players of *Doom* (Anderson & Dill, 2000). As a result, serious research began to be conducted concerning the effects of violent video games.

The Current State

Video games have come a long way from collecting quarters in video arcades. Today, video games are a cornerstone of the entertainment industry. According to the Entertainment Software Association (ESA), sales of video games and their physical accoutrements totaled $20.77 billion in 2012 (theesa.com). For the same year, the overall global market, including online gaming, reached a staggering $67 billion, which is forecast to mushroom to $82 billion by 2017 (Gaudiosi, 2012). In September 2013, Rockstar Games released the hotly-anticipated *Grand Theft Auto 5*, the latest entry in a franchise of extremely violent games that, among other things, lets players steal cars, murder civilians, and pick up prostitutes. In the first three days of its release, *GTA 5* earned over $1 billion (Bleeker, 2013). To put that astronomical figure into perspective, *Gone with the Wind*, since it was released in 1939, has grossed a little under $1.7 billion, adjusted for inflation (Box Office Mojo). Furthermore, the entire gross domestic product for the African nation of Liberia was $1.734 billion for 2012 (The World Bank, 2014).

As evidenced by the runaway success of the *Grand Theft Auto* franchise, violence is a crucial aspect of the video game industry. Although only 9% of video games received a *Mature* (M) rating in 2012 (ESRB, Rating Category), five out of the top ten best-selling video games for that year were rated M, three of which (*Assassins Creed III*, *Halo 4*, and *Call of Duty: Black Ops II*) were in the top five (Guarini, 2013). In 2013, the number of M-rated games in the top ten crept to six (The Fiscal Times, 2013). What can be seen, then, is that, even though the market is saturated with games containing mild to no violence—45% were rated *Everyone* (E) in 2012 (ESRB, Rating Category)—consumers choose to seek out the minority of ultra-violent games.

So who are these people who collectively spend billions of dollars every year on video games? It is mostly teenagers, right? According to the ESRB, that is not the case. The organization's website reports that the average age of a gamer is 34 years old, with the largest demographic of gamers being males aged 18-49. Women, however, do play a substantial role in the market. The ESA notes that 31 percent of video game players are female (theesa.com). And teenage boys? Only 19 percent of gamers are males under the age of 17 (theesa.com). These demographics seem to be at odds with the common perception of video game players, especially when it comes to the discussion of whether or not violent video games are harmful. As Egenfeldt-Nielsen et al. point out, "Women players and older players are ignored by the media, so that the media picture of a gamer is still tied to the negative image of the male antisocial teenager" (2013, pg. 165). It is a fascinating point—one that will be discussed in more detail later in this paper.

Why People Play Video Games

Figuring out why people consume the media they do has been the focus of a vast amount of research over the years. Given the highly interactive nature of video games, the uses and gratifications theory of mass communication is especially useful in determining the motive behind the choices of gamers. The uses and gratifications model essentially states that society, as well as basic human psychology, creates needs that individuals try to satisfy through the consumption of media (Katz, Blumler & Gurevitch, 1974). Such media consumption does not always lead to the fulfillment of those needs (Krcmar & Kean, 2005), but that does not stop people from trying. In the uses and gratifications model, mass media can often—though not always—be thought of as a carrot on a digital stick.

Uses and gratifications (U&G) posits that the audience, not the media themselves, is the determining factor in what gets watched, read, or, in this case, played. The theory has been criticized in the past for granting too much power to the audience (Sundar & Limperos, 2013), but that is because it has typically been applied to such media as television. Whereas television audiences passively sit and watch content (although this is changing, thanks to the Internet via sites like Netflix and Hulu), video game audiences must go to a store, purchase a game, bring it home, and play it. Even online games like *League of Legends* require the gamer to actively seek them out. Because such activity is required, scholars prefer to utilize the term *user* rather than *audience* (Sundar & Limperos, 2013). With this framework, it is easier to see why some people are willing to wait outside GameStop for hours on end, rain or shine, for the release of the sequel to their favorite game.

Working from a U&G basis has led to some keen insight as to why people choose to play video games, especially ones that are violent. Such games are fun because they gratify desires for superiority, excitement, and adventure (Hartmann & Vorderer, 2010). Chory and Goodboy (2011) found that gamers play violent video games for a number of reasons, including "arousal, challenge, competition, diversion, fantasy, and social interaction" (p. 192). Obviously, some of these needs—such as competition and social interaction—are desires that cannot be met with more traditional mass media. Furthermore, Chory and Goodboy's (2011) study found that personality traits played a key role in determining how much and how often a person plays violent video games. People who were extroverted and more open to new experiences were found to be more likely to play violent video games than their introverted counterparts.

The reasoning behind this, Chory and Goodboy (2011) argue, is that extroverts have a predisposition to seek out stimulation from their environment. Additionally, those who are more open to new experiences possibly play violent video games because of the imaginative, fantastic worlds offered by many of those games. Similarly, Teng (2008) also notes that extroverts are drawn to the social aspect of online games. Nowadays, some of the games with the biggest online communities (the *Halo* and *Call of Duty* franchises come to mind) are extremely violent. Thus, it would seem that violence is often a key ingredient for a rewarding, communal online experience.

These findings stand hand-in-hand with the demographic information presented earlier in that they run contrary to the general perception of gamers. The image of a pasty, pimple-faced teenage boy playing video games alone for hours with very few friends is an image—or, more accurately, a *stereotype*—of an introvert. This is just another example of how the gaming world is often misunderstood by those outside of it.

One thing that those unfamiliar with violent video games sometimes wonder is how it can be fun to shoot other human beings, even if it is just a game. For an avid gamer, such a question sounds like nonsense. Those are not people being killed in *Medal of Honor*; they are just pixels on a screen. Some psychologists, however, say otherwise. When people play video games, they perceive the characters as persons because certain stimuli (such as voices and facial expressions) automatically lead to such a perception (Hartmann & Vorderer, 2010). Thus, humans, by default, tend to approach entertainment as if it was real, and constantly telling oneself that it is all fake leads to "emotional detachment" (Hartmann & Vorderer, 2010, p. 96). Such detachment kills all the fun.

Watching *Toy Story* is not nearly as enjoyable if you are constantly reminding yourself that all you are seeing is just computer animation with celebrity voice-overs.

Thus, some sort of disconnect must occur for gamers to enjoy something that they inherently should not. Hartmann & Vorderer (2010) call this "moral disengagement" (p. 98). They insist that video games come with "moral disengagement cues" (p. 99)—such as fighting for a just cause against an evil enemy—that make violence right and fun. The context of violence is crucial. For many games wearing the M label, violence is not the point of the game. For instance, in the popular *Splinter Cell* franchise, the goal is not to rack up as many kills as possible; rather, it is quite the opposite—players must navigate the levels without being detected. On some levels, killing an onscreen character will result in mission failure. It is entirely possible to consume violent media without enjoying the violence (Krcmar & Kean, 2005). Players can play a game like *Splinter Cell* for the immensely gratifying feelings of autonomy and competence that make violent video games enjoyable (Ryan, Rigby, & Przbylski, 2006), without necessarily enjoying the more bloody parts of the game—just like someone can enjoy the witty dialogue and noteworthy acting of *Pulp Fiction* without enjoying the torture scene.

The Debate

The debate over the effects of violent video games centers on aggression. Dozens of studies have been conducted on this topic. Most of these studies use the following hypothesis for the basis of their research: playing violent video games leads to more aggressive thoughts and behavior. The results of these studies have been varied, and, in the absence of a conclusive answer, two schools of thought have emerged. The first faction claims that the central hypothesis has been validated, and that violent video games

are harmful to youngsters because they lead to increases in aggression. The second faction, however, contends that the hypothesis has not been verified, and that, even if it were to be verified, the fact that kids might exhibit a little more aggression does not mean they will become Adam Lanza. Evidence for both sides is compelling, leading to both confusion and controversy.

As previously noted, the school shootings of the 1990s prompted a large amount of research concerning the effects of violent video games. One such study was a two-part (correlational and experimental) study on the effects of violent video games by Anderson and Dill in 2000, just a year after the Columbine shootings. In the correlational part of the study, a six-part, self-report questionnaire was administered to college freshmen and sophomores that ranked irritability, trait aggression, delinquency, video game preferences, world view, and academic achievement. The questionnaire revealed a positive correlation between violent video game exposure and delinquent behavior, both aggressive and non-aggressive. The experimental part of the study reinforced these findings. Participants played video games (both violent and non-violent), then set the level of a noise blast that would be administered to an opponent if the participant won a game. The study showed that participants who played violent video games set the level of the noise blast higher than those who played non-violent video games, suggesting that violent video games led to increases in aggressive behavior.

However, the conclusions of the Anderson and Dill (2000) study are tenuous, at best. For the correlational part of the study, the authors admitted that determining a causal relationship from the results was shaky. A mantra of academic research is that correlation does not equal causation. It is entirely possible that aggressive individuals choose to play

violent video games because they are already aggressive individuals. Furthermore, the findings of the study can be called into question because of its participants. Participants for the experiment were college students, as before, but they were chosen based on an irritability questionnaire. Students with the highest irritability scores were chosen to participate. Thus, the authors were basing their conclusions on a set of people who were already more irritable, and thus already more prone to aggression. The sample was not representative of the entire population. Ferguson (2008) points out that this is a common problem in such studies. Participants are typically students who are at very little risk of becoming violent, which limits the ability of the findings to be generalized to a greater population.

Other studies offer stronger evidence for the link between violent video games and aggression. Möller and Krehé (2009) conducted a longitudinal study of German adolescents. At the beginning of the study (T1), the participants were all around the age of 13. They were given a questionnaire that measured their exposure to violent video games, as well as their thoughts on aggressive behavior. Thirty months later, at the end of the study (T2), a similar questionnaire was given. The results showed that, after being exposed to violent video games for more than two years, adolescents were more likely to accept the idea that violence is a viable answer to settling conflicts. Also, no evidence was found for the idea that aggressive individuals choose to play violent video games. However, the study failed to show a longitudinal correlation between exposure to violence and actual violent behavior.

In another study, participants played violent video games while in a Functional Magnetic Resonance Imaging (fMRI) machine (Weber, Ritterfeld, & Mathiak, 2006).

Afterwards, the participants' gameplay was compared to their brain scans, and the results were quite revealing. The brain scans indicated that playing the violent game ignited the neural patterns that are associated with aggression. This study is remarkable because it breaks the mold of standard video game research (i.e., questionnaires and other aggression measurements) by looking at the participants' actual brain activity. However, it is worth noting that the sample size of the study was very small (only thirteen), and two of the participants did not show the same response. Furthermore, all the participants were male. Thus, this study suffers from the same issues as that of Anderson and Dill (2000) in that it uses a sample that should not be generalized to the entire population.

Given that a significant sector of the gaming world is female, several studies have revealed interesting phenomena regarding girls and video games. While one study demonstrated a strong correlation between M-rated video game play and engaging in acts of bullying for children across the board, the findings were especially strong for girls, even though boys were more likely to play violent video games in the first place (Olsen, Kutner, Baer, Beresin, Warner & Nicholi, 2009). In a study whose only participants were female college students, playing a violent video game led women to deliver more loud noise blasts to an unseen person than those who played a nonviolent game (Anderson & Murphy, 2003). The authors contend that these results mean that violent video game play causes short term increases in aggression.

Some participants in the debate over violent video games—and all violent media, for that matter—adamantly insist that there is no debate. They claim that the discussion is moot. In the introduction to her book *Viewing Violence* (1996), psychologist Madeline Levine boldly asserts the idea that violent media are absolutely harmful:

> The debate is over. Violence on television and in the movies is damaging to children. Forty years of research conclude that repeated exposure to high levels of media violence teaches some children and adolescents to settle interpersonal differences with violence, while teaching many more to be indifferent to this solution. (p. 3)

In their book *Stop Teaching Our Kids to Kill* (1999), Grossman and DeGaetano border on fear-mongering as they insist that media violence leads to real life violence, claiming that the research "couldn't make clearer the deadly link between this kind of graphic imagery and the escalating incidence of youth violence" (p. 5). While the points such authors are making are indeed important, their slant toward sensationalism severely weakens their credibility.

While aggression has been the focus of most of the studies on this topic, several have dealt with other concerns related to violent video games. Arriaga, Monteiro, and Esteves (2011) conducted a study of Portuguese college students using questionnaires, skin conductance sensors, and the ubiquitous noise blast machine. The results of this integrated approach showed that, after playing violent video games, people feel fewer feelings of displeasure when violent images are shown to them, suggesting that violent video games lead to emotional desensitization. In their exploration of the concept of gamers feeling guilty for killing video game characters, Hartmann & Vorderer (2010) discovered that players who had played the violent game *Half Life 2* in their experiment longer felt less guilty and enjoyed the game more, reinforcing the idea of desensitization to violence.

Since the number of studies on the topic of video games is so vast, it is helpful to look at meta-analyses of the available data. One such meta-analysis was conducted by Anderson, Shibuya, Ihori, Swing, Bushman, Sakamoto, A, & Saleem (2010). The authors concluded that most studies, regardless of design, found a significant link between violent video games and higher levels of aggressive behavior. Additionally, they state: "[As] expected, VGV [video game violence] exposure was related to desensitization and lack of empathy and to lack of prosocial behavior" (p. 167). Interestingly, the analysis also revealed that culture plays a substantial role in aggression. Japan has high levels of violent media, yet low levels of actual violence, forcing the authors to admit that there is more at play when it comes to real-world violence than mere media consumption.

Anderson's name comes up quite a bit in this discussion. Dr. Craig Anderson is a professor and director of the psychology department at Iowa State University (iastate.edu), and over the last couple of decades has published a multitude of studies, all claiming that video games lead to aggressive behavior in children. In fact, his research is often the foundation on which many studies on this topic are based; nearly every peer-reviewed journal article referenced in this thesis cites one of his many studies at least once. A quick search in a journal database, such as EbscoHost's *Academic Search Complete*, of the words "Anderson" and "video games" will reveal results for almost every year since 2000.

However, Anderson's research has received criticism over the years. Most of his designs involve college students who play a violent or non-violent game and then do some task which is supposed to show increases in aggression, a category which Ferguson (2008) criticizes for being too detached from reality. So what if a college student's

questionnaire answers show signs of aggressive affect after playing *Street Fighter*? Fifteen minutes of being stuck in traffic could produce more aggressive affect than that. The U.S. Supreme Court, in the decision for *Brown v. Entertainment Merchants Association* (2011), expressed marked disdain for Anderson's research:

> These studies [by Anderson and a few others] have been rejected by every court to consider them, and with good reason: They do not prove that violent video games cause minors to act aggressively (which would at least be a beginning)... They show at best some correlation between exposure to violent entertainment and minuscule real-world effects, such as children's feeling more aggressive or making louder noises in the few minutes after playing a violent game than after playing a nonviolent game. (pp. 12-13)

Christopher Ferguson (2008), the de facto leader of the faction that believes video games are not that harmful, notes that one reason Anderson and his like-minded colleagues keep obsessing over the idea that violent video games cause aggression is that this is the issue on which they have built their career. If such researchers and activists were to back down now and admit that there are still some gray areas, it would be a career-damaging move.

Some studies indicate that video game violence does not lead to violent behavior. For instance, a longitudinal study of Hispanic adolescents was conducted (Ferguson, 2011), in which the author hypothesized that exposure to violent video games at T1 would predict serious aggressive behavior at T2. The results of the study failed to support this hypothesis. At T2, though their exposure to video game violence remained relatively steady, the children were not committing serious acts of aggression or violence. What sets this study apart from similar studies that have found slight increases in aggression is

that this study focused on serious acts rather than subjective states of mind. However, this study also noted a link between violent media consumption and children with antisocial traits.

Krcmar and Lachlan (2009) revealed an issue that is often overlooked in experimental studies of the link between violent video games and aggression. For many studies, participants play a violent video game for a relatively short amount of time, typically 10-15 minutes. For this study, Krcmar and Lachlan (2009) had their participants play for longer periods of time—up to 30 minutes for one group—then measured their physical and verbal aggression, as well as their aggressive cognitions. What the authors discovered was that, although physical and verbal aggression increased initially with game play, those traits began to drop off the longer the participants played.

The reason for this phenomenon, Krcmar and Lachlan (2009) argue, is that the initial aggression that results from playing a violent video game is due to arousal. It is the fight-or-flight instinct that kicks in when one finds oneself in danger. As the initial arousal brought about by the violent video game wears off, aggression returns toward a more normal level. Because most studies do not let participants play games long enough for their arousal to die down, it is possible that they have gotten skewed results. However, with that being said, another finding of the Krcmar and Lachlan (2009) study was that, regardless of how long participants play the game, their levels of aggressive cognitions did not decrease, suggesting the possibility that violent video games might lead to more aggressive thought patterns.

Aggressive thought patterns, however, are not really the focus of this debate. The general public does not care if subjects in a laboratory issue a louder-than-normal white

noise burst to an unseen person after playing a video game. The general public wants to know if *Doom* made Klebold and Harris shoot up Columbine. They want to know if M-rated video games are responsible for the deaths of twenty children in Newtown, Connecticut. So what does the research have to say about all of these school shooters?

In 2002, the U.S. Department of Education and the U.S. Secret Service issued a joint report that focused on 37 school shooting incidents over three decades. The report, which was commissioned in the wake of the Columbine massacre, examined the social, mental, and emotional states of the 41 young men who committed these acts. The earliest incident the report investigated occurred in 1974, when a student activated a fire alarm at his school and shot at custodial and emergency workers who arrived shortly thereafter.

The report delved into the media habits of the perpetrators and uncovered some fascinating facts about their media habits. Only 27% showed an abnormal interest in violent movies, and 24% showed an interest in violent books. How many of these school shooters exhibited an interest in violent video games? Only 12% (United States Secret Service and United States Department of Education, 2002).

Of course, because the scope of the study stretched back into the days of *Pong* and *Space Invaders*, not all of these killers would have had access to what would considered violent video games today. Nevertheless, as Ferguson (2008) notes, if one disregards the killers who had little to no access to violent video games, the percentage of shooters who showed an interest in violent video games rises to a mere 15%.

Despite their media habits, the shooters did have several characteristics in common. Nearly three-quarters of the killers had been the victims of bullying or persecution in the past. Thirty-seven percent of them displayed a preoccupation with

violence in their own personal writings—a trait they shared with Adam Lanza, whose creative writing assignments, a teacher reported, were "so graphic they could not be shared" (Sanchez, 2013, para. 14). The greatest unifying factor (40 out of 41) the government study discovered was that the attackers had recently experienced "some major loss prior to the attack" (p. 23). Thus, it appears that an inability to cope with failure is one of the most crucial factors in the mix regarding school shooters. However, the report ultimately concluded that "there is no accurate or useful 'profile' of students who engaged in targeted school violence" (p. 11). Sadly, this is why so few school shootings are prevented, despite hindsight cries as to why no one ever connected the dots.

Another shooter who had difficulty coping with failure was Sueng-Hui Cho, the Virginia Tech shooter. According to the official report to the governor (Virginia Tech Review Panel, 2007), Cho had been rejected by publishers for a book he was trying to write, a fact which seemed to crush him. Like many of the school shooters examined in the United States Secret Service and United States Department of Education (2002) study, Cho's writings were disturbingly violent. Furthermore, Cho, the man behind the biggest mass shooting in U.S. history, was not a video game player. According to the Virginia Tech Review Panel, Cho did not play violent video games as a child, and his roommate while he lived on campus "never saw him play video games" (p. 42).

So what should be made of all this information? Critics notwithstanding, the body of research on the subject does indicate that playing violent video games leads to aggression and desensitization to violence. But the causal link between violent video games and acts of real-world violence like school shootings is nowhere to be seen. In fact, youth violence has been steadily declining since the early 1990s (ChildStats, 2013),

despite the exponential growth of video games during that time. With this information in mind, Ferguson (2008) makes an argument that brilliantly integrates these two phenomena:

> It could reasonably be argued that school shooters present a particular "at risk" subgroup of individuals (primarily males) for whom violent video games may increase aggression, even if violent video games do not increase aggression in 'normal' populations. (p. 27)

Levine (1996), although believing violent media are an important factor in the causation of crime, concedes that there is always more at play than just media habits: "Violence is most frequently the endpoint of a confluence of personal, social, and environmental factors" (p. 6). Youths who commit acts of violence are already in a bad place, regardless of the movies they watch, the music they listen to, or the video games they play.

Hysteria

So if video games only play a minor, supporting role in the makings of school shooters, then why are news broadcasts often peppered with apocalyptic sound bites from journalists and politicians ranting against the evils of violent video games? Why does there seem to be a general panic among parents that children—not their own, of course, but *someone's* children—will suddenly lose track of reality and think that the local shopping mall is a level in *Halo*?

The hysteria often begins with the news. News outlets, though they may serve the public and strive to uphold truth and justice, also have an obligation to make money. Unfortunately, sensational stories, such as school shootings, tend to draw higher ratings for television broadcasts. According to an article on pbs.org, "Advertisers have conducted

research that indicates crime-related stories are interesting to viewers, which increases pressure on news operations to add more of those stories to their nightly lineups" (para. 11). In the days and weeks that follow such tragedies, news outlets also tend to fill their time and pages by asking the question on everyone's mind: why did this happen? Enter psychologists, politicians, and social commentators—some of whom place part of the blame on violent video games.

Ferguson (2008) argues that the reason violent video games get blamed for these tragedies is not really because articles in academic journals report a correlation between violent video games and aggression, but rather because such games are an easier target than problems like genetics, mental health, family abuse, and poverty. When politicians get on CNN and vow to crack down on these heinous, disgusting games young people are playing, they earn bonus points with voters without the fear of a backlash by the opposition, because who is going to argue in favor of *Grand Theft Auto* a week after the Aurora massacre? Thus, blaming video games affords leaders an opportunity to capitalize off of a tragedy, while obscuring the deeper issues lurking beneath the surface of this issue.

What Should Be Done?

But what about all that research linking violent video games and aggression? It would be intellectually dishonest to just shrug this information off and say that it does not matter. Although it can be blown out of proportion, the correlational evidence cannot be denied, regardless of where one stands on the issue. What remains, then, is the question of what should be done with violent video games. Should they be outlawed? Should they be more heavily regulated? Should they be left the way they are? To answer these

questions, one must dig past the fear, rhetoric, and pop psychology that have muddied the waters and figure out what is really at the heart of this debate.

First of all, mental health is sorely neglected in the United States. According to the Department of Education and Secret Service report on school shooters, only 34% of the attackers had ever received a mental health evaluation, even though 78% of them had tried to commit suicide or had exhibited suicidal thoughts. Numbers like that are tragic but not surprising. There is a certain stigma regarding mental health. People always encourage those who are depressed to seek help, but few ever actually seek it. According to Shrivasta, Bureau, Rewari, & Johnston (2013), the stigma associated with mental illness causes people suffering from suicidal thoughts and behavior to delay seeking treatment, which leads to a dangerous cycle of increased suicide attempts and avoidance of treatment. Until this stigma is dissolved, severe mental disorders that lead to violence will continue to go unnoticed and untreated.

Secondly, legislation seems to be an ineffective response. Attempts to legislate video games have already failed, mostly because a causal relationship between violent video games and actual violence has not been established (Collier, Liddell, & Liddell, 2008). But imagine, for a moment, that this elusive causal relationship is discovered, and violent video games are subsequently banned in the United States. Would school shootings immediately cease? Of course not. Charles Whitman gunned down 16 and wounded more than 30 from his sniper's perch at the University of Texas (Ferguson, Coulson, & Barnett, 2011). That was in 1966, five years before Bushnell and Dabney invented *Computer Space*. As has already been noted, several of the school shootings examined in the Department of Education and Secret Service report occurred before the

advent of violent video games. Video games had nothing to do with these tragedies. If violent video games were taken off the market, such atrocities would still occur, just as they did before video games were on the market.

These attacks will continue to happen, with or without violent video games, because human beings do bad things, plain and simple. Regardless of how many headshots Adam Lanza racked up in *Combat Arms*, or what undiagnosed mental disorder he suffered from, he did what he did on December 14, 2012, because he chose to pick up a gun and do it. The same goes for James Holmes, Anders Breivik, Sueng-Hui Cho, Dylan Harris, Eric Klebold, and whoever will be the next shooter to join their ranks. No amount of legislation, better education, or stricter video game ratings will change the fact that people always have the choice of doing good or doing evil, and sometimes they pick the latter.

There is no panacea for preventing tragedies like the Sandy Hook massacre. As has been demonstrated earlier, the factors that contribute to violent behaviors are nuanced and multi-faceted. In regards to the influence of violent video games on such behavior, however, the responsibility ultimately lies with the parents. Rather than passively allowing inappropriate television shows, movies, Internet sites, and video games into their household, parents need to take an active interest in their children's media diets. Parents are the ones who know whether or not certain video games are appropriate for their teenagers; and if those games are not appropriate, they must have the courage to say "No" when pressed for permission.

Pointing the finger at the entertainment industry will solve nothing. Video game companies are capitalist enterprises that respond to the demands of the market. If

consumers start demanding more family-friendly choices, the industry will eventually deliver. Legislation is not the answer. Banning violent video games—or any violent media—will not prevent acts of violence among young people. At the end of the day, this is a parenting issue. With the right information—information based on fact rather than fear—parents can make the right choices for their families when it comes to video games.

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