Guns and Games: On the Possibility of Using Video Games to Teach about Gun Safety and Trauma.

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Abstract

In this piece, de Luna explores the ways in which virtual violence in video games may be encouraging violent behavior and aggression among children and teenagers. After discussing the possible relationship between video games and physical acts of gun violence, he proposes that some of the unique characteristics of video games could be helpful in teaching gun safety.

Guns and Games: On the Possibility of Using Video Games to Teach about Gun Safety and Trauma

Christian de Luna

Video Games and Guns – two things feared by many a parent in the hands of a child. Much to the dismay of some parents, the division between the two has narrowed significantly over the past two decades. When one now speaks of video games, more often than not, talk of guns and violence is never too far away. The common fear holds that, through constant exposure to violent video games, players become desensitized to violence – and worse – become prone to acting violently in any given situation. The question of whether or not video games do promote aggression has been a subject of increased study over the past few years. To date, irrefutably conclusive results on the subject have yet to be produced. What we do know, however, is that video games have become a prevalent, if not the most prevalent, form of entertainment media in the United States.

A 2001 report by Kimberly M. Thompson and Kevin Haninger titled "Violence in E-Rated Video Games" noted that "70% of children (age 2-18 years) live in homes that have at least one video game console" (Thompson and Haninger 2001, 591). The 2011 Procon.org analysis "Do violent video games contribute to youth violence?" states that "97% of 12-17 year olds in the US played video games in 2008". The analysis then goes on to mention that in that same year, "10 of the top 20 best-selling video games in the US contained violence" and that a 2008 study titled "*Grand Theft Childhood* reported that 60% of middle school boys that played at least one Mature-rated game hit or beat up someone, compared to 39% of boys that did not play Mature-rated games" (Procong.org 2011). From this, one can infer that nearly all adolescents in the US have been exposed to violent video games and the gun violence they often entail – and

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that there is a potential correlation between in-game and real world violence. Rather than invoking these findings as a call to arms to eliminate all video games, this author proposes a potential alternative: the creation of violent video games designed for the purpose of teaching about gun safety and gun trauma.

The objective of most commercial video games, the types that have been mentioned in relation to school shootings and legislative scrutiny, is to allow maximum enjoyment for the player/consumer. That enjoyment is generated from the ability of a game to suspend one's disbelief in the content. This allows players to imagine that they are in a situation that is as close enough to real life as possible without it seeming too real. This same construction has been a subject of contention for most forms of entertainment media such as books and movies. Many feared that these media would encourage undesirable behaviors and instill poor morals and values in those reading or viewing them, as they are easily impressionable and would have trouble distinguishing fact from fiction. The debate on these effects, though not relegated to the shadows, has not been predominant in the public eye, due to a lack of concrete evidence either for or against the concept.

Video games, however, bring the subject to the forefront of discussion once again on account of their ability to immerse their users in their content more so than any other form of entertainment media has been able to do. Unlike books and movies which only offer passive experiences for their users, video games are inherently active experiences. As video game players decide how their characters should act in most games, the players themselves essentially become the characters in the game. This is where separating fantasy from reality becomes a disconcerting notion. If a game requires a player to constantly engage in thoughtless, insidious

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acts in order to proceed through it, then some believe that player may become desensitized to those acts and is more likely to act in a similar manner in real-life situations. [1]

Obviously, this differentiation between virtual and actual reality is a topic of great importance for society to consider. In the intermediate period now before games and violence become definitively correlated (if they ever will be), it is vital for society to use the resources and knowledge it currently has at its disposal to make whatever possible improvements. If it is proven true that playing a video game does influence a player to the point of modification of their beliefs, conceptions, and skills, then would it be not an effective strategy to start using that information advantageously to produce games that promote empathy and sensitization to violence or to train players to understand the mechanisms in a gun so that when they encounter an actual firearm they will have a better understanding of its function?

Background

Before delving into how one could potentially design such a game, a cursory overview on the subject will be provided to allow the reader an understanding of the problems such an endeavor would hope to alleviate. This overview will include a cursory history of violent video games, an analysis of current video games and the depiction of guns and gun violence found within them, and an examination of the shortcomings encountered in gun safety education programs. All of these subjects will help inform how video games can be used to teach about gun safety and gun trauma.

A Brief History of Violent Video Games[2]

When the first video game was created is a topic of contention; the span of potential creation dates covers a nearly 30-year period from 1947-1972. What is relatively less contentious

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[1] As mentioned, there is still no conclusive evidence either refuting or confirming this claim.

[2] The majority of this is history is drawn from the Procon.org article "Do violent video games contribute to youth violence?" unless otherwise noted.

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(chronologically, not socially) is the development of the first notably violent video games. In 1976, *Death Race*, a game in which players ran over "gremlins" which essentially were human-shaped stick figures, was released into arcades nationwide. Of particular note was the working title of the game during development—"Pedestrians". In 1992, the first recognized First-Person Shooter (FPS) game, *Wolfenstein 3D*, was released for the PC, becoming the archetype for the genre which now includes infamous titles including the *Call of Duty* and *Halo* series. In 1993, the violent content from games such as *Mortal Kombat, Lethal Enforcers*, *Doom*, and *Night Trap* prompted a Congressional hearing which threatened the game industry with federal regulation if they were unable to control the appropriate dissemination of content. This resulted in the creation of the Entertainment Software Rating Board (ESRB) which "assigns one of the following ratings: 'Early Childhood,' 'Everyone,' 'Everyone 10+,' 'Teen,' 'Mature,' or 'Adults Only' " based on a game's content.

In 1997, one of the first implications of video games as the impetus behind a criminal act was seen in Paducah, Texas. As James Garbarino, Catherine P. Bradshaw, and Joseph A. Vorrasi note in their article "Mitigating the Effects of Gun Violence on Children and Youth", "Fourteen-year-old Michael Carneal, who had only one day's practice with a stolen pistol, fired eight shots at a high school prayer group. He hit eight people, five in the head or upper torso." The authors go on to mention, "the families of the victims have filed a $130 million lawsuit against video game manufacturers whose first-person shooter games allegedly taught the boy to kill with the precision and efficiency of a well-trained soldier" (Garbarino et al., 2002, 80). Then on April 20, 1999, video games were incriminated in another tragedy—the Columbine Massacre committed by Eric Harris and Dylan Klebold in Columbine, Colorado. Avid players of FPS's, the two

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killers purportedly moved through the hallways of their high school in the same manner one would move through the hallways of games such as *Doom* and *Wolfenstein 3D*.

The controversy only increased during the ensuing years with 2005 becoming a watershed year for deliberations on the subject. In that year, a report released by the American Psychological Association called for "reduction in game violence to youths because of potential links between games and aggression". Additionally, on October 7th of that year the state of California passed legislation which "required violent video games to include an '18' label and criminalized the sale of these games to minors". This regulation, however, was overturned by the US Supreme Court on June 27, 2011 by a 7-2 margin with the majority citing "first amendment protection and non-proven correlation between violence in games and real-world violence" as grounds for reversal.

How Guns and Violence Are Actually Depicted in Games

Though all of the preceding information on reception and regulation of violent video games is important to understanding their growing influence on society, what are often lost in the debate are actual analyses of the games themselves. The majority of the literature on gun violence in video games refers more to the psychological and sociological implication of games with relatively less attention being allotted to investigations on how the contentious elements are actually represented. This research is important for the construction of games that better sensitize users to violence and that can teach gun recognition and safety. This analysis will include commentary on game gun design by a German game developer tasked specifically with designing guns for games and overviews of two "MA"-rated video games known for their violence and use of guns: *Call of Duty: Modern Warfare 2* and *Fallout 3*.[3]

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[3] Overviews will be based on the Xbox 360 versions of all games

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On July 21, 2010, *The Firearm Blog*, "a news site dedicated to all things firearms related"[4] featured a blog post by Pascal Eggert titled "On Guns in Video Games". Eggert is a graphic designer and firearms enthusiast who works for Crytek, a German game studio, where he designs video game guns. In the post, Eggert relates:

> Guns in games are like guns in movies: it is all about looks, sounds and clichés. Just like in the movies, games have established a certain perception of weapons in the mind of the public and just like in movies games get almost everything wrong. Many of us in the game industry know this. Because games are looking more realistic and appear to simulating reality better but the guns do not, a common misconception is that those of us in the game industry don't know anything about guns. The fact is that we are not trying to simulate reality but are creating products to provide entertainment (Eggert 2010).

As in most media industries, realism is not of utmost importance when designing games; rather, the entertainment value is what companies truly seek to emphasize. Whether a gun in a game looks like or reacts like a real gun is not their greatest concern; all that matters is that it does what it needs to do—shoot bullets and kill people.

Eggert also comments on how the design of the gun is actually chosen. Eggert comments that for virtual guns based off actual firearms "the game designer makes the decision on how the weapon will work (number of rounds, kills what with how many hit, takes this long to reload etc.)". Designers, however, are limited in their actual exposure to firearms. Eggert mentions that:

> Unfortunately 3D artists often only get access to the photos that Google Image Search comes up with if you enter "future assault rifle" or, even worse, pictures from other games and movies that also got it wrong. This may explain a lot of common visual mistakes in games, especially since guns are mostly photographed from the side and egoshooters show weapons from the first person view (Eggert 2011).

Eggert then makes a suggestion for game gun designers:

> You should hold a gun in your hands, fire it and reload it to understand what does what – and at that point you will realize, there is nothing on it that does not have a function - because guns are tools for professionals. Lots of weapon designers in the game industry get that wrong. They think of guns like products for consumers or magic devices that kill people at a distance when really it's just a simple and elegant mechanism that propels little pieces of metal (Eggert 2011).

Although Eggert comments primarily for the sake of realism and aesthetic reasons, his notions may prove beneficial in conceptualizing games that truly depict guns and their mechanisms. How

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[4] Author's emphasis

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such an attitude towards aesthetics can help improve gun games and promote gun safety will be revisited in a later section of this article.

Overview – **Call of Duty: Modern Warfare 2**

With that glimpse into a designer's perspective on game guns, we now move to a series of overviews of the violence and representation of guns in the aforementioned gun games. *Call of Duty: Modern Warfare 2* (*MW2*) was released on November 10, 2009 and as of August 2011, it has sold over 22 million copies worldwide with seven million copies sold on the first day, making it one of the best-selling games of all time. *MW2* is a FPS that features a single-player campaign (story mode), a co-operative mission mode, and multiplayer online play.

The single-player campaign follows the stories of three different individuals: PFC Joseph Allen, a US Ranger stationed in Afghanistan who goes undercover to infiltrate the ranks of a Russian terrorist organization; Pvt. James Ramirez, a US Ranger stationed in the United States who is part of the contingent defending the United States from the Russian invasion force; and Sergeant Gary "Roach" Sanderson who is part of a clandestine, international counter-terrorist group known as Task Force 141. Throughout the game the player switches among the three characters to engage in specific missions exclusive to each character's individual role in the game.

For example, as PFC Allen, you undergo the tutorial known as the Pit in which you learn basic gun and tactical operations. The Pit has you move through an enclosed environment filled with humanoid targets that pop up and the player must clear in order to complete the level. Players are encouraged to complete the course as fast they possibly can in order to achieve

Figure 1: "The Pit" from *Call of Duty: Modern Warfare 2*

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both in-game rewards and real-life bragging rights. The game creators, however, were sure to include obstacles that make the task challenging—the inclusion of civilian targets that when shot deduct from your total time. Through this, the game seeks to encourage quick thinking and reaction on the player's part but still hopes to discourage poorly thought actions.

MW2 then completely overturns the concept of target discretion in one of the next missions featuring PFC Allen. After infiltrating the Russian terrorist organization, Allen engages in a terrorist strike on a Russian airport, which requires him to eliminate the airport security and provides (the player) the option of brutally massacring hundreds of unarmed, innocent civilians. Within the context of the game, Allen's motivation to engage in the horrific act is an understandable one. In order to preserve his cover, he must act as if he is in-line with the motivations of the organization by whatever means necessary—even if it means murdering scores of people in cold blood.

Figure 2: The Controversial "Airport Mission" from *Call of Duty: Modern Warfare 2*

Where the matter gets complicated, however, is on the part of the player. When playing this mission, you, the player, are not required to shoot anyone. When I was first playing the mission, (either in repulsion, out of curiosity, or perhaps a bit of both) I did not fire unless I was fired upon. While my in-game "compatriots" were opening fire on the crowds, I simply walked along the directed pathway and only fired at the security guards who were attempting to take me down. My computer teammates were indifferent to my actions and the game did not punish me in any way for my lack of involvement. Though the scene in itself is a particularly gruesome and obviously controversial scene, the most intriguing observations are to be made about the player.

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An observation of players with different video game aptitudes playing this one mission and a recording of their reactions could prove to be an interesting and potentially telling study on video game desensitization.

The gameplay for both online and offline play are essentially the same. The depiction of guns In *MW2* strives for, at the very least, a degree of realism. Weapons are derived directly from real weapons such as the SCAR-H and AK-47 (rifles), RPD and MG4 (light machine guns), Intervention and Barrett .50cal (sniper rifles), M1014 and SPAS-12 (shotguns), and Desert Eagle and .44 Magnum (handguns). From an uninformed observer, they also look like their real-life counterparts as well.[5]

In terms of weapons function, recoil and reloading are two notable features included in the game. When firing a heavier long arm such as a rifle or a shotgun the recoil is perceptibly more significant than when compared to the recoil experienced with a hand gun.[6] In terms of weapons reload, the player simply presses the X button which automatically loads the gun after a certain time period (depending on the type of weapon). The player is allowed to reload so long as he has ammunition still on his person, but more often than not, the player finds a new gun or dies and receives a replenished stock of ammunition. In-game animations depict the process but the player does not need to do anything to make the act successful. Shooting can be done from both the hip or while sighting down either a scope or the barrel of the gun. The game also allows for other weapon attachments such as firmer grips, infrared vision, and red-dot sights. Some weapons, depending on classification, exhibit features that one may expect on them (i.e. fully automatic, semi-automatic, etc.). No weapon safety mechanisms, functions, or procedures were observed during analysis.

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[5] The scrutiny of a gun specialist would best confirm their aesthetic appearance.

[6] Whether or not the effects of recoil for these virtual guns are proportional to the effects experienced when handling their real world counterparts has not been ascertained by this current study.

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Death for an opponent features a flailing body and sometimes some blood splattering. The corpse eventually disappears after a given period of time. When the player is dying, the screen begins to get covered in "blood", obscuring the player's vision. The ability to maneuver

Figure 3: The Headshot - The Gold Standard of FPS Multiplayer Action

and fire is minimally impacted. When a player dies in single player mode, he automatically respawns (revives) from the last in-game check point. When a player dies in multiplayer mode, he is allowed to respawn at a location chosen from a list of designated spawn points on the map. He is, however, required to wait for a brief time period before his respawn is complete. The brevity in revival does not allow the player to consider his death for long before he is in the fray again, trivializing the act of dying.

The online and offline content begin to diverge in terms of play objectives. The campaign mode of *MW2* is certainly full of contentious material; however, the majority of the game's infamy comes from its online multiplayer gameplay. Without any overlying context or plot-line guiding the action, online play is essentially a thoughtless mass slaughter. (As some players say, "Nobody plays Call of Duty for the story."). ~~Gameplay~~Game play involves up to 16 players (~~8~~ eight per team) maneuvering a selected map with the goal ~~being to kill~~of killing as many opponents as quickly, as efficiently, and as brutally as possible. As with most FPS games the ideal way to instantly take down an opponent is with a headshot. Fortunately (or unfortunately), the depiction of such an act is downplayed in order to avoid a potentially controversial degree of realism.

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Overview – **Fallout 3**

Unlike *MW2*, *Fallout 3* is an offline single-player game. The game places the protagonist, a character designed completely at the discretion of the player in terms of race, gender, abilities, etc., in post-apocalyptic Washington D.C. in the year 2277. The majority of the weapons derive from a 1950s aesthetic fueled by Cold

Figure 5: Weapons Inventory Screen from *Fallout 3*

War paranoia that carried up to and beyond the cataclysmic nuclear world-leveling that occurred in 2077. There are a certain number of fantastical weapons such as the laser pistol, the plasma

rifle, and the mini-nuclear-warhead-launching Fat Man. The game does strive for a degree of realism, though, with weapons such as a 10mm Submachine Gun, a Chinese Assault Rifle, and a Combat Shotgun. Unlike *MW2, Fallout* requires players to find the appropriate ammunition type for a gun before he is able to use it. For

Figure 4: Ammo Inventory Screen from *Fallout 3*

example, the 10mm Submachine Gun requires 10mm rounds while the Chinese Assault Rifle requires 5.56mm bullets.

In terms of weapons function, *Fallout* provides for many of the same functions featured in *MW2*. In terms of reloading, the player simply presses the X button to initiate the process. The whole operation is automatic with the only responsibility attributed to the player ~~is making~~being to make sure that the character has the appropriate on-hand to load. Recoil is discernible but the

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differences are not as greatly noticed across weapon types.[7] Shooting can also be done from the

hip or while sighting though there is a slight

wobble while constantly sighting. No gun safety

functions or features were witnessed in

observation of game play. Additionally, the

game utilizes an automatic sighting system

known as the Vault-Tec Assisted Targeting

System (V.A.T.S.). This system allows the

player to specifically target specific parts of a character's body in order to cripple or dismember

it.

This option in game play is one of the

Figure 6: Using V.A.T.S. to target a character's head in *Fallout 3*

reasons why *Fallout* is notorious though the

actual depiction of the violence definitely well contributes to that reputation. As mentioned, the

player is able to cripple and dismember almost all the characters encountered in the game. When

defeated, blood and viscera spew forth from the carcass, leaving a mess of remains for players to

loot through for items. After a given period of time, the corpse eventually disappears. When

some characters are near death, they plead with the protagonist not to kill them though the option

rests on the player to allow them to escape or not.

Similarly, the player can also experience the same effects of being attacked. When

repeatedly shot in a certain body part, the limb

eventually becomes crippled resulting in sluggish

movement and decreased aiming focus for the player.

ould have reduced the effects of recoil

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Figure 7: The decapitation of an enemy in *Fallout 3*

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Additionally, the screen begins to turn redder the closer the character gets to dying though it does take a significantly longer time to die than in *MW2*. A player is also able to use recovery items to instantly heal his character's limbs and health whenever he desires.

One interesting mechanic built into *Fallout 3* is the Karma system which can either inhibit or encourage violent behavior by the player. In the game, the player is able to determine his character's temperament based on how he interacts with the world. For example, he can save a town by disarming the nuclear warhead situated in its center or he can blow up that same weapon, killing everyone in the town. Whatever action the character undertakes affects his total Karma level and influences how the characters in the world will interact with him. Essentially, if a player wants to play as a righteous character, he will never shoot an innocent person and will help those who ask for it. If a player wants to create an evil persona, then he may kill nearly every character he sees to do so.

The implications of this system could potentially be worth investigating. As with the airport level in *MW2*, I had trouble trying to create an evil character simply because of the acts that I would have to commit to do so. An investigation of how different players establish their persona could potentially yield interesting results.

Problems with Gun Education

With that, we conclude the section on violent video games and move onto the subject of gun education and the shortcomings it has experienced in the past. This section will particularly look at the Straight Talk About Risks (STAR) program and the results gathered by Marjorie S. Hardy in her 2002 article titled "Teaching Firearm Safety to Children: Failure of a Program". As Hardy mentions, the goal of the STARS program is to "incorporate rewards and incentives, behavioral rehearsal, modeling, and feedback to reinforce the message that guns are dangerous

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and to give children the opportunity to show and practice what they learn through the lessons"

(2002, 71). The program features 11 different modules for children which teach various morals

and behaviors, including: "making good decisions, understanding emotions that lead to conflict,

resisting peer pressure, and the ramifications of gun violence for victims and their families"

(Hardy, 2002, 71).

The experiment conducted by Hardy sampled 70 different children placed in one of three

day-care centers. The children were split between an experimental group which participated in

the STAR program and a control group which did not receive the lessons. These children were

then paired off in one of three groups: paired control, paired experimental, and mixed. These

pairs were then asked to play in a playroom while the researchers observed their actions. Placed

in the playroom were two guns, one real and one fake. The observers recorded that 37 children

played with the guns and that:

> …of the 37 children who played with the guns, the intervention had no effect on either negative gun-related behaviors or on aggressive behavior. The children in the experimental condition displayed shooting behavior in 7.5 of the 30 intervals (SD = 8.1), a value that was slightly lower than those in the control condition (M = 9.0, SD = 9.1)…Similarly, there was no difference in aggressive behavior between the two groups, t (35) = -.12, p = .91, with both groups displaying aggressive behavior in slightly over two of the intervals (M = 2.4, SD = 3.3 and M= 2.5, SD = 2.7 for the Experimental and Control Groups, respectively) (Hardy, 2002, 73).

Though there was a slightly lower number of calculated instances of aggressive behavior with

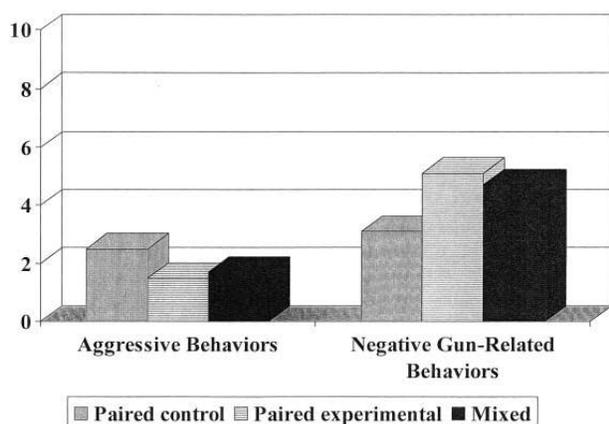the experimental group the results were not significant enough to conclusively confirm the

program's efficacy. Hardy concludes, "After a 5-day program, however, the children who received the instruction were just as likely to play with the firearms as the children who did not receive the instruction" (2002, 75).

After stating the results, Hardy offers a

Figure 8: Aggressive and negative gun-related behaviors among (Hardy, 2002, 74)

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number of reasons as to why the program might not have succeeded. For one, Hardy mentions that "children of this age may be too cognitively immature to comprehend the messages in these lessons…They have also been shown to be cognitively deficient in identifying dangerous situations and in generating preventative responses in such situations" (2002, 75). Essentially, children are not mentally developed enough to truly understand the subject of gun safety. In that regard, it seems like a moot point to discuss teaching children about gun safety, an unsettling notion.

Additionally, Hardy notes that "being told about a danger may not mean they'll be able to actually comprehend it in a situation. Curiosity, they found, often clouds a child's judgment about unsafe situations and makes it difficult for them to use already acquired strategies, even when they may have shown such strategies before in similar (laboratory) situations" (2002, 75). Even if a child were to comprehend the contents of a lesson, applying that knowledge to an unfamiliar situation would be a difficult task for the child to perform. Determining how a child would actually react in a real situation is a matter of uncertainty.

Lastly, Hardy mentions how gun safety programs may also prove detrimental to parental responsibility, giving parents "a false sense of security that their children know how to behave around guns" (2002, 75). Hardy offers the final conclusion that safer gun storage may most likely be the most effective option in keeping children safe.

All these points are important considerations in the production of video games that would be able to educate on gun safety and gun trauma. As children do not seem to understand the content of such lessons, it would seem foolhardy to then seek to develop games for children at too young of an age to comprehend the material. The procon.org article references other reasons as to why children may not also be emotionally capable of learning from video games. "Young

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children are more likely to confuse fantasy violence with real world violence, and without a framework for ethical decision making, they may mimic the actions they see in violent video games (Procon.org, "Do violent video games contribute to youth violence?" 2011). Therefore, any exposure to such an intervention for a child could leave them still incognizant of the content but potentially confused by any potentially realistic content. Though children may not be able to benefit from this type of program, the possibility still remains that adolescents, particularly those who could potentially most need education on gun safety and trauma, could still profit from the endeavor. This notion will be speculated upon in more depth at a later point in the article. For now, we now move onto the general problems that violent video purportedly impose on society.

The Purported Effects of Violent Video Games on Society

To date, the effects most often associated with violent video games are desensitization to violence and development of undesirable behaviors. Desensitization entails exposing a player to violence to such a degree that it becomes a norm, thereby diminishing the gravity of its consequences. The development of undesirable behaviors involves utilizing behavioral conditioning to instill reactions in a player which may not be healthy or safe for an average citizen to maintain. Karen Dill and Jody Dill outline a great number of these effects in their 1998 article "Video Game Violence: A Review of the Empirical Literature". In terms of desensitization towards violence, Dill and Dill discuss a number of notable topics including decreased empathy and "justified" aggression. Conceptions of the development of undesirable behaviors include: modeling and reinforcement, priming and elaboration, and valued murder. Additionally, this section will also discuss the similarities and differences between the simulation systems armed professionals such as soldiers use to train for confrontation.

Desensitization to Violence

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Decreased empathy from violent video game usage entails a diminished sense of compassion for other beings, whether real or virtual. The emphasis on decreased empathy towards real beings is obviously the more pressing concern of the matter though. Dill and Dill describe how this phenomena may occur: "If violent video-game play indeed depicts victims as deserving attacks, and if these video games tend to portray other humans as "targets," then reduced empathy is likely to be a consequence of violent video-game play" (1998, 410). Essentially, after numerous instances of firing at human-shaped targets, a player may impair his ability to attribute human qualities to a human form. An investigation of multiplayer matches in FPS games such as *MW2* could potentially provide evidence either confirming or refuting the notion.

The concept of ***"justified" aggression*** relates to the narrative capacity of games to tell stories. If a character commits violence for "noble" purposes, then the implications of the violent actions can be diminished and the impulse to act aggressively could be exacerbated in the player's mind. Dill and Dill write that "the literature on media violence clearly shows that violence that takes place in the context of a justifiable motive arouses more aggression than violence that takes place in the context of an unjustifiable motive" (1998, 410). Their study references the game *Mortal Kombat* which justifies the characters' violent actions in the context of saving the world from extra-dimensional invaders. Similarly, the terroristic actions of PFC Allen in *MW2* can be seen as another instance of "justified" aggression.

Development of Undesirable Behaviors

The concepts of ***modeling*** and ***reinforcement*** draw on the works of psychologist Albert Bandura who states that individuals "learn what behaviors are appropriate and rewarding in a given situation through observation and reinforcement". Dill and Dill go on to comment that

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"translated to violent video games "hitting or even shooting another person is the appropriate response in a conflict situation, and that this type of aggression is likely to be reinforced" (1998, 410). Through constant cycles of repetition and reward players are conditioned to react in ways that reward and normalize violent reactions. In *MW2*, the headshot gets you more points while defeated enemies in *Fallout 3* can yield items.

Priming and elaboration derives from Leonard Berkowitz's Cognitive Neoassociation Model of Aggression which states that "when people are repeatedly exposed to aggression, they create in their minds more detailed and interconnected aggressive thought networks…In the long term, this would mean that chronic exposure to violent video games would lead to increases in the tendency of an individual to act aggressively and this effect would be pervasive" (Dill and Dill, 1998, 410). In addition to becoming conditioned to react in aggressive ways, constant exposure to aggressive content could reformat a person's mind to think more aggressively in most situations.

Lastly, the concept of the *valued murder* entails exactly what it means—killing is good. As Dill and Dill succinctly state, "While in real life, murder is a crime, in a violent video game, murder is the most reinforced behavior". In their 1999 book *Stop Teaching Our Kids to Kill: A Call to Action Against TV, Movie & Video Game Violence,* Lt. Col. Dave Grossman and Gloria Degaetano state that "There is never an incentive not to shoot" while playing gun games (78). Before the Subcommittee on Telecommunications and Finance, Representative Tom Lantos (D-CA) declared that "the way many of these games are devised, you are rewarded the better sadist you are" *(Violence in Video Games: Hearing before the Subcommittee on Telecommunications and Finance,* 1994, 7).The number of individuals from various disciplines speaking out against this characteristic of violent video games is assuredly much higher than the three mentioned

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here. At the very least, the words of this group of individuals represent the widespread concern that violent video games has generated in society.

Professional Training

Though the actual effects of violent video games on the average player are still uncertain, observations of programs used to train armed professionals such as the army provide a potentially enlightening parallel for analysis. As Garbarino et al. mention, not much "is known about the link between playing violent video games and later perpetrating gun violence. However, the experience of the military suggests that video games are an effective tool for training people to use firearms" (Garbarino, 2002, 79). It is a long-held belief that commercial video games do espouse within their mechanics functions similar to those found in professional training modules. Grossman and Degaetano mention how, following the tragedy at Paducah, Kentucky, "the heads of several major national and international law enforcement training organizations have offered to testify that these video games are identical to law enforcement firearms training devices, except with the safety catch turned off" (1999, 75). And by no means are these claims unfounded in any regard.

The actual evidence of government involvement in the development of gun games is public information. "The US Marine Corps licensed *Doom II* in 1996 to create *Marine Doom* in order to train soldiers. In 2002, the US Army released first-person shooter *America's Army* to recruit soldiers and prepare recruits for the battlefield" ("Do violent video games contribute to youth violence?", 2011, Procon.org). A 2004 article from *The Economist* titled "Playing to win - Computing: How close is the relationship between real-world skills and video games, on playing fields and battlefields?" mentions that " 'Full Spectrum Warrior', a game which… was developed under the auspices of the Institute for Creative Technologies (ICT), a military-funded

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centre at the University of Southern California, is a 'first-person shooter' game which simulates infantry combat…It has received a lot of attention because it exists in two versions—one of which is used as a military training tool, while the other is on sale to the public." That the tools used to train the army to act judiciously yet swiftly in hostile environments are analogous to those same programs utilized by the citizenry is arguably a topic of concern. Though the concept of a "hidden army" of gamers could prove potentially beneficial for the nation, the notion that nearly any individual can purchase a program that can train them to become an army-caliber assailant is certainly unsettling.

There are, however, doubts on the actual training potential of such commercial games. According to Lieutenant-Colonial James Riley, "simulating infantry combat…is much more difficult." As he admits, he is not certain how much "simulation dexterity translates into reality." Riley also diminishes the actual ability of commercial games to teach combat mastery. "Colonel Riley says that it does not meet the needs of any of his courses, and that when infantrymen play the game, they complain of its lack of fidelity" ("Playing to win", 2004). Though commercial games do share similarities with their professional counterparts, how well they actually train users to kill is still a subject for scrutiny.

One interesting difference between the two programs noted through observation lies in the way in which users are taught to pacify targets. As Grossman and Degaetano relate, "The normal, almost universal, response is to fire at a target until it drops and then move on to the next target…But most video games teach you to fire at each target only once, hitting as many targets as you can as fast as you can in order to rack up a high score. And many video games give bonus effects…for head shots" (1999, 76). Army protocol is to down targets. Video game protocol is to execute them.

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Using Video Games to Teach about Gun Safety and Trauma

With that, we may finally begin investigating the possibility of using video games to teach about gun safety and gun trauma. The previous sections detailing background information and the purported effects of video game violence should have provided a decent primer that will allow for comprehension of the concepts and possibilities that will be explored in this final section. This section will suggest the development of two separate types of games: (1) A game that will seek to impart gun safety skills through the same methods of behavioral conditioning utilized in other gun games and (2) A game that will intend to sensitize players to the effects of violence.

As already mentioned, these games would not be intended for children but rather for adolescents who would be cognitively capable of comprehending the lessons and values the games would seek to impart. Their more developed state should also allow them to more selectively discern between fact and fiction, granting them the ability to objectively shape their own values against the content offered to them. As an "overwhelming majority of video-game players are adolescents, a group in the process of developing attitudes and beliefs", exposing them to such games at this point in their lives could potentially have long-term benefits that can help shape them into prudent and insightful individuals (Dill and Dill, 1998, 412).

Teaching Gun Safety through Recognition and Repetition

The goal of this first game would be to promote gun safety through recognition of mechanisms and their safety functions and constant repetition of tasks such as reloading and monitoring of safety mechanisms. In terms of arms recognition, the game would need to strive for realism as much as possible in terms of gun design. The heaviest emphasis in the design would be on accurately translating all the mechanisms of the gun including firing procedure,

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recoil, reloading, and safety mechanisms. An accurate depiction will allow players to come into contact with a virtually loaded arm and experiment with procedures without receiving harm. The game will simulate how all the mechanisms properly work for the player so they can learn the correct methods of handling. Eventually, through trial and error (behavioral conditioning), the player will learn the proper procedures for handling a virtual firearm and should be able to translate those skills if he ever encounters a live weapon.

One of the most important questions to ask about such an endeavor is if it would even work. As mentioned, simulation efficacy has been considered reasonably reliable in translating skills thereby enhancing the effectiveness of this approach. Additionally, the approach of teaching through an exciting, familiar medium, the video game, could potentially generate the type of interest that other methods such as lessons or videos may not be able to generate. As Dill and Dill mention, "Some video games can promote learning of new information and skills in positive ways. These games have the potential to engender a new excitement about learning. Video games can be engaging, challenging, and can offer an excellent forum for self-guided learning" (1998, 424).

The downside of such an approach is rather easy to discern as well. Even in describing the approach, I could easily imagine the boredom a player would experience in making sure that all the mechanisms are in working order as opposed to just simply pointing and shooting. To remedy this, any game would have to involve many outside elements that would pique the interest of the audience for which this game is intended. A possible convention one could implement is designing the gun maintenance procedures as mini-games that must be completed in order to proceed with the game which can grant the player bonuses when done swiftly, but more importantly, correctly. How the player would actually play this game is also a

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complication. In order to generate realism, one would surmise that handling an actual object that is gun-shaped would be optimal. This would, however entail producing a new type of controller that might prove cumbersome in the end.

With all these potential complications and considerations, my suggestion would be to at least consider this game as a type of program employed purely for gun education and not for entertainment. Though it may not be the most engaging experience players would have, it would considerably beat out passive experiences such as simply watching a video or listening to an instructor speak on gun safety. The benefits of interactivity are not something so easily discounted when it comes to educating.

Sensitizing to Violence

By this point, there should hopefully be no need for an explanation of the notion of desensitization to violence through video games. What has yet to be explored, however, is the concept of sensitization to violence through video games. This concept essentially entails making violence the center of the game; but rather than trivializing it in the ways many games do, the game will instead portray violence in the way it actually is—as a saddening but inherent part of human nature. As Representative Lantos stated before Congress, "Violence must be put in a context where the portrayal of violence can play an extremely important social constructive role" *(Violence in Video Games: Hearing before the Subcommittee on Telecommunications and Finance,* 1994, 6). Simply, it is a part of human nature better explored and understood rather than relegated to the shadows, only to be invoked in times of hatred and strife.

Many have already advocated the use of the violent video game as a medium for good. The Procon.org report states, "Violent video games provide healthy and safe opportunities for children to virtually explore rules and consequences of violent actions. Violent games also allow

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youth to experiment with issues such as war, violence and death without real world consequences" ("Do violent video games contribute to youth violence?" 2011, Procon.org). A game can allow countless individuals to experience miseries that they might never want to experience in real life—miseries that other individuals live through every day of their lives. In a sense, video games could potentially be used to restore and rekindle empathy within humanity—a concept that, in my humble opinion, has become scarcer and scarcer over the past few years.

Grossman and Degaetano also comment on the ability of violence to act for good. They write:

> Scientific evidence has established that screen portrayals of violence need not lead to reinforcement of aggressive attitudes and behaviors. If the consequences of violence are demonstrated, if violence is shown to be regretted or punished, if the perpetrators are not glamorized, if the act of violence is not seen as justifiable, if in general violence is shown in a negative light as causing human suffering and pain, then the portrayal of violence is less likely to create imitation effects. But if the violence is glamorized, sanitized, and made to seem routine or even fun to do, then the message is that it is acceptable (1999, 7).

If violence could be harnessed, if it could be accurately portrayed in what it does – in how it destroys – then maybe society could stand to gain from it.

Producing a game that would sensitize players to violence would involve personalizing the trauma from acts of violence to the individual playing. For one, depictions of fatal blows should truly reflect how the blow from a weapon should look. If someone has their head shot at five times directly by a shotgun, their head should not even be there for the other four blows. The viscera should fly in the way that an actual shotgun blast would send it flying. On the walls, on the floor, all over the disemboweled human's devastated comrades. When that happens, that slain man's comrades should not absent-mindedly continue to charge in, heeding no regard for their fallen comrade. Their grief should become visible and audible. They should be overcome by emotion. And they should act accordingly.

Every life the player takes should bear an emotional weight on him. To teach about gun trauma, and all violent trauma for that matter, the reactions in a game should be as chillingly and

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painfully human as possible. The motivation to continue on should, however, well justify the burden of every life taken. A game of such raw violence requires an equally debilitating and devastating story to go along with it. Only with an agonizing plot line can actual loss be felt. To emphasize the effects of loss on both sides of an encounter, such a game would require players to alternate between opposing factions every other level. Whenever the player kills one of the enemies in one level, he loses a valued companion in the next. At the very least, the value of a life will able assessed in utilitarian terms—if not emotional ones.

The notion of such a game creates a great deal of controversy with very little effort. One issue the game may encounter in development is whether or not it would even have an audience. Arguably, the purpose of video games is to suspend one's disbelief and to escape into a world close to reality, but not quite real enough to make it feel "strange". Why would anyone then want to play in a "real world"? At the very least, the novelty of such a game could attract the interest of some gamers looking for a new experience.

In terms of actual enjoyment, the previously mentioned sentiment that "Nobody plays *Call of Duty* for the story" becomes a point of concern. Though there are games purely based on story that do succeed, they are not quite nearly as successful as their counterparts that offer gratuitous, online violence. At the very least, the audience drawn to such a game devoid of trivial violence would hopefully constitute a large enough initial base to spread word about the title.

In terms of its effects on mentality, apart from potentially having no effect on a player's perceptions of humanity, the more dangerous outcome of a reversal of expectations could result as well. To draw a parallel, the Scared Straight program, which brings juvenile delinquents to adult prisons in order to expose them to the atrocities that could await them if they continued down their errant paths, was superficially proclaimed to be a wonderful success story by all those

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who commented on it. Yet an article written by Anthony Petrosino, Carolyn Turpin-Petrosino, and James O. Finckenauer in 2000 titled "Well-Meaning Programs Can Have Harmful Effects! Lessons from Experiments of Programs Such as Scared Straight" found that, across nine different studies, the average offense rate for those who did participate in the program was higher than for those who did not (Petrosino et al., 2000,363-366). Some of the potential reasons that Petrosino et al. proposed could be at fault included the idea that "some youngsters might find prison attractive, stating, 'Many delinquent youths feel alienated…delinquents view prison as a place where they can have friends and a community now lacking in their lives" (2000, 366) and that:

> "The project may romanticize the Lifers—and by extension other prison inmates [sic]—in young, impressionable minds. Or the belittling, demanding, intimidating, and scaring of particular youth may be seen as a challenge; a challenge to go out and prove themselves, their peers and others that they were not scared". (2000, 367)

What this study demonstrates is that, even though a program may have good intentions, it is impossible to predict how any given individual will react to a situation. In the worst case scenario, the program may end up inflicting more harm on the individual than if he was simply left alone. Petrosino et al. modestly state that "despite our best intentions, programs can not only fail to reach objectives but can backfire, leading to more harm than good" (2000, 371).

Arguably the dilemma at the heart of this endeavor is whether the potential benefits warrant breaching the moral and ethical bounds that will be overstepped. This ultimate quandary, however, has the fewest answers simply because it is an issue that, to the best of this author's knowledge, has not been commonly addressed. Though the concept of combating violence with more violence is one of the oldest concepts in human history, the notion of using an utmost level of violence to attempt to understand violence (and our fellow man in the process) is a notion that one could suppose has been seldom thought upon. Only through actual application can any

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outcomes be observed. But for now, this author leaves those decisions in the hands of individuals who may be able to make them.

In the meanwhile, a more immediate focus on what we can do here and now with the resources and knowledge we have is the best thing we can do. Though this article by no means provided any concrete answers to any of the questions on the subject, it at the very least reflects on possible solutions. Even though video games may prove to be the entirely wrong answer to address problems of gun safety and gun trauma, the mere suggestion could provide direction towards a more fitting answer. We can only know by trying.

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Bibliography

Call of Duty: Modern Warfare 2. Encino: Infinity Ward, 2009

Cohen, Peter. June 29, 2011 (9:47am PDT) "California's failed video game law sponsor vows to
        continue fight" *ZDNet: Gamification*.
        http://www.zdnet.com/blog/gamification/californias-failed-video-game-law-sponsor-
        vows-to-continue-fight/513.

Dill, Karen E. and Jody C. Dill "Video Game Violence: A Review of the Empirical Literature."
        Aggression and Violent Behavior 3.4 (1998): 407-428. Accessed November 1, 2011. doi:
        10.1016/S1359-789(97)00001-3.

Eggert, Pascal, July 21, 2010, "On Guns in Video Games." *The Firearm Blog*. March 20, 2008,
        http://www.thefirearmblog.com/blog/2010/07/21/on-guns-in-video-games-guest-post/.

"Facts for Families." *American Academy of Child & Adolescent Psychiatry* 91 (August 2006): 1-
        2. Accessed November 15, 2011.
        http://www.aacap.org/galleries/FactsForFamilies/91_children_and_video_games_playing
        _with_violence.pdf.

Fallout 3. Bethesda: Bethesda Game Studios, 2008

Garbarino, James, Catherine P. Bradshaw, and Joseph A. Vorrasi "Mitigating the Effects of Gun
        Violence on Children and Youth." *The Future of Children* 12.2 (Summer – Autumn
        2002): 72-85 http://www.jstor.org/stable/1602739.

Grossman, Lt. Col. Dave and Gloria Degaetano. *Stop Teaching Our Kids to Kill: A Call to
        Action Against TV, Movie & Video Game Violence*. New York: Crown Publishers, 1999.

Hardy, Marjorie S. "Teaching Firearm Safety to Children: Failure of a Program."
        Developmental and Behavioral Pediatrics 23.2 (April 2002): 71-76. Accessed December
        16, 2011.
        http://journals.lww.com/jrnldbp/Abstract/2002/04000/Teaching_Firearm_Safety_to_Chil
        dren__Failure_of_a.2.aspx.

Petrosino, Anthony, Carolyn Turpin-Petrosino, and James O. Finckenauer. "Well-
        Meaning Programs Can Have Harmful Effects! Lessons from Experiments of Programs
        Such as Scared Straight." *Crime & Delinquency* 46 (July 2000): 354-379. Accessed
        December 14, 2011. doi: 10.1177/0011128700046003006.

"Playing to win - Computing: How close is the relationship between real-world skills and video
        games, on playing fields and battlefields?" *The Economist*, December 2, 2004. Accessed
        November 1, 2011. http://www.economist.com/node/3422957.

`

Procon.org. "Do violent video games contribute to youth violence?" Accessed December 17, 2011. http://videogames.procon.org/#Background.

Smith, Stacy L., Ken Lachlan, and Ron Tamborini. "Popular Video Games: Quantifying the Presentation of Violence and Its Context." *Journal of Broadcasting & Electronic Media,* 47.1 (2003): 58-76. Accessed December 15, 2011. doi: 10.1207/s15506878jobem4701_4.

Thompson, Kimberly M. and Kevin Haninger . "Violence in E-Rated Video Games." *The Journal of the American Medical* Association 286.5 (2001): 591-600. Accessed November 21, 2001. http://jama.ama-assn.org/content/286/5/591.full.pdf+html.

U.S. Congress. House. Committee on Energy and Commerce. *Violence in Video Games: Hearing before the Subcommittee on Telecommunications and Finance*. 103rd Cong., 2nd sess., June 30, 1994.

Wintemute, Garen J. "Where the Guns Come from: The Gun Industry and Gun Commerce." *The Future of Children* 12.2 (Summer - Autumn, 2002): 54-71 http://www.jstor.org/stable/1602738

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