Violent Video Games

by Christopher J. Ferguson, Ph.D.

How Hysteria and Pseudoscience Created a Phantom Public Health Crisis

The 1999 massacre of 12 students and 1 teacher at Columbine High School is likely the single event, more than any other, which touched off enormous public concern about the possible deleterious effects of violent video games on today's youth. The perpetrators of the massacre arguably had many issues; yet a considerable amount of attention focused on potential media influences. Movies such as the Matrix, the music of Marilyn Manson (who the boys apparently didn't actually listen to) and violent video games such as *Doom* became the focus of much scrutiny. Rumors (ultimately found to be false) that Eric Harris had designed levels of *Doom* that looked like Columbine High School began to circulate. Though school shooting events such as that at Columbine are exceedingly rare, they are frightening and their very unpredictability and stunning violence gives rise to calls for answers from an anxious public. Many of society's elders, unfamiliar with video games and perhaps assuming games are universally intended for children (they're not), are shocked to find much adult content in some games. The social science community, raised on hefty doses of Skinnerian and Banduran dogma and arguably only recently awaking from a comparative ignorance of the effects of biology and genes on behavior, find that the potential modeling influences of violent games fit well in the existing mechanistic socialization paradigms. Politicians, aware that other issues related to violence such as policing, the economy, poverty, genetics and family violence, are either intractable or expensive, see video game violence issues as an easy way to appear to be "concerned for children" while appealing to both highly liberal and highly conservative voters. Yet does the science behind video game violence really warrant such a concern?

This is, of course, not a phenomenon new to video games. Previous media ranging from non-Latin translations of the Bible (for which Tyndale was burned at the stake), to novels (in the 19th century, it was thought that women were unable to distinguish between fiction and reality, a mantra now commonly applied to children) to jazz, rock and roll and rap, to Betty Boop (forced to put on clothes by the Hays Commission), to Dungeons and Dragons, television, movies, Harry Potter and now video games have been subjected to much scrutiny. In each case these new media forms were thought to possibly spark waves of rebelliousness, violence, mental illness and moral degradation. Arguably, most individuals now consider those previous "moral panics" to be just that...unjustified panics, yet we seem to have not learned the lesson well in regards to video games.

What Does the Research Say?

As Kutner and Olson point out in their new book on video games (2008), there is a small group of academic researchers who have promoted the "hysteria" view of violent video games, mainly by employing highly flawed research methods to support a social engineering agenda. These researchers have been very vocal and have either ignored work of researchers that is unsupportive of their view, or employed ad-hominem attacks to suggest that any opposing views may be financially supported by the video game or other media industries. At the extreme end of their claims, some have suggested that the effects of media violence including video games are as strong as those seen in smoking and lung cancer research (e.g. Bushman & Anderson, 2001). This claim should immediately invite skepticism; after all the American Cancer Society states on their website that 87 percent of lung cancers can be attributed directly to smoking. Are 87 percent of violent crimes directly attributable to video games or other media? Indeed the calculations used to make such claims have been demonstrated to be faulty (Block & Crain, 2007).

When the general public or mental health professionals hear about video game research they typically hear simply that researchers found "violent video games increase aggression." Most people, hearing this claim, picture children (or adults) hitting each other, kicking, screaming or engaging in even more serious aggressive acts. Most people would be surprised that almost no studies of violent games employ these behaviors as dependent variables. More commonly, people are asked to fill in the missing letters of words (such as kn_ _e...if the respondent fills in the missing letters as knife rather than knave, they are considered more aggressive). A reasonable question to ask is whether these measures really correlate with real-world violence.

The answer clearly seems to be 'no' for several reasons. First, the measures are often employed in a non-standardized non-reliable manner. Without standardization, researchers can pick results that best support their hypothesis and ignore those that do not. This would be akin to giving a patient the MMPI (Minnesota Multiphasic Personality Inventory) and picking and choosing specific questions from the inventory that supported a clinician's existing beliefs while ignoring the rest.

In Anderson & Dill's (2000) study, which is often cited, the authors use the noise-burst method (delivering non-painful noise bursts to opponents in a mutually consenting reaction time game) for four different ways to measure "aggression". They find significance for only one of the four, yet chose to highlight the one result at the expense of the other three as it best supported their hypothesis. Had they employed proper statistical controls (a Bonferroni correction) even the fourth result would have been non-significant. In other words their results disprove the violent video game — aggression link, not prove it. In my own research, employing a standardized and reliable version of the noise-blast test, I found no differences between violent and non-violent video game play (Ferguson et al., 2008) in regards to subsequent aggression.

Research now suggests as well that most of the measures employed in violent video game research simply do not correlate with serious acts of aggression or violence. In other words, sometimes it is not clear what these studies are studying, so it may not be aggression. Most of the research also fails to control for "third variables" such as genetics (admittedly difficulty for social scientists to control), personality, family violence exposure and sometimes even gender (as males are both more aggressive and play more video games, any correlation between violent games and aggression that does not control for gender is blatantly bias). In my research, I find that family violence exposure and certain personality traits are predictive of violent criminal behaviors, but exposure to violent video games is not. Several researchers (particularly Cheryl Olson and John Colwell) have found that males may even use violent games to relax and reduce aggression, although it's certainly too early to conclude that these effects are reliable.

What Do Independent Reviews Conclude About Video Game Effects?

The American Psychological Association's taskforce on video games and interactive media concluded that violent video games may cause an increase in aggression. However this taskforce is comprised of the same activist scholars who have promoted anti-game claims. These scholars reviewed their own research and, not surprisingly, declared it flawless and convincing. No researchers whose results challenged these findings were invited onto the panel, nor were there any independent reviewers. Thus the APA's conclusions can hardly be considered an independent review. In this case the scientific community has simply failed to police itself. Arguably, social scientists may be biased in that pointing out learning-based "crises" appears to make social science as socially relevant as medical research. Similarly, it may be easier to find grant funding by arguing in favor of an impending crisis, rather than suggesting that the subject of research is "no big deal."

By contrast, independent reviews by the U.S. Surgeon General, the UK's Byron report and the U.S. Secret Service have all failed to support a link between violent games and violence. Both the U.S. Surgeon General's report and the UK's Byron report noted significant flaws in the research and weak effect sizes overall. The U.S. Secret Service (2002) analysis of 41 American school-shooters found extraordinarily low levels of violent video game consumption among this population (only 12 percent had "some interest" in violent video games, as opposed to over 90 percent of young males in the non-offender population). At least 9 video game censorship laws have been challenged in courts; in each case the proposed legislation was struck down on both constitution and scientific grounds. Some judges specifically criticized anti-game scholars for biased presentation of the existing research (e.g. ESA, VSDA and IRMA v. Blagojevich, Madigan and Devine, 2005).

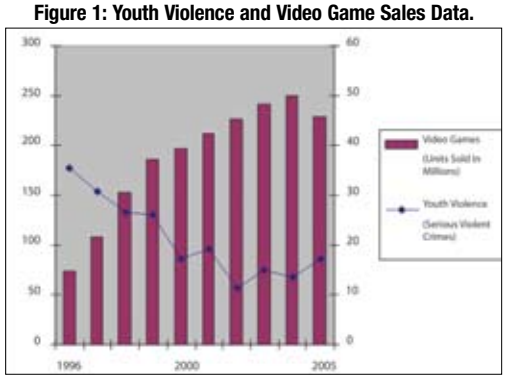
Several recent meta-analyses (including 2 that I conducted and one by John Sherry) found no evidence in the existing scientific literature supportive of either a correlation or causal relationship between violent video game play and increased aggression. A recent meta-analysis of violent media more generally finds no association with violent criminal behaviors (Savage, in press). Thus I think it is safe to conclude that the current body of research, seriously flawed as it is, does not warrant consideration of violent games as a public health concern.

But Isn't Youth Violence on the Rise?

As Kutner and Olson (2008) note in their book, anti-media scholars eagerly pointed to crime waves in the 1970's and 1980's as evidence that television, in particular, was having a deleterious effect on violent crime. Then, in the 1990s, violent crimes plummeted, both in terms of raw numbers or crimes (yet the U.S. population continues to increase quickly) and in regards to per-capita crimes. This is true for both adults and youth. So we know that video games (which became more violent in the 1990's due to technological advances) have not sparked a youth violent wave simply because there is no youth violence wave.

Now some anti-game activists claim that violent crime data does not matter, but this is simply lazy pseudoscience — indeed this is a retreat to an unfalsifyable position — to assert that real-life data do not matter. How much concern would we have regarding smoking if lung cancer rates decreased among smokers? Or would global warming be a top political concern if worldwide temperatures were decreasing year after year? The foundation of a public health crisis is that something bad has to be going on, and that is not the case here, quite the opposite. In *figure 1* I present the data on youth violence (using the more conservative raw numbers of crimes) and video game consumption (the graph presents all years for which both sets of data were available). The correlation for this figure is r = -.95. That's a remarkable correlation between video game consumption and violent crime — *in the wrong direction*. Naturally the data is only correlational, so we cannot conclude that video game consumption is responsible for this violence decline. But we can pretty much rule out video games as a source of increased violence. The per-capita data are even more striking. Per-capita violence victimization rates in 1973 (the first year the U.S. federal government tracked such data) was 47.7 victims per 1000 citizens over age 12. In 2005 (the most recent year on file), that figure was 21.0, the lowest on record across all forms of violence from assaults, to rapes, to murders. So, in general, as our society's media has become more violent, we as a people are the least violent that we have ever been on record.

Figure 1: Youth Violence and Video Game Sales Data.



This data has not stopped the hysteria and speculation. In several recent mass-murder cases, including the Virginia Tech shooting, a mass-shooting at a Utah mall and the Northern Illinois University shooting, violent video games

continued on page 22

continued from page 13

were immediately fingered by pundits and some scholars as potentially responsible. In none of these recent cases did investigators find that the shooters were prominent video game players (the Virginia Tech Review Panel specifically found that the Virginia Tech shooter did not play violent games at all). Interestingly, video games are rarely mentioned when a shooter is over the age of 30 as in the case of Charles Thorton (age 52) who killed 5 at a Kirkwood, Missouri, city council meeting in February 2008.

What Can Mental Health Professionals Do?

• *Become informed before you inform*. All too often, mental health professionals, eager to appear as experts perhaps, make uninformed statements to the community and to the press. I'd advise mental health professionals to become familiar with video games (i.e. actually play the games) before making sweeping statements on their effects. For instance I often times see activists (usually "elders") comment that games, such as the *Grand Theft Auto* series "awards points" for antisocial acts such as shooting police officers or beating prostitutes. Almost no modern video game "awards points" for anything anymore, rather they seek to tell complex stories. Making these kinds of statements portrays the speaker as misinformed and probably biased. Anyone actually familiar with video games will be aware of this.

For the record, it would be more accurate to state that *Grand Theft Auto* allows players to commit antisocial acts if they so choose, although it is actually not a required facet of the game play. In fact antisocial acts are often times punished in the game (shooting a police officer is likely to be "rewarded" by a swarm of angry police officers all gunning for the player). In some modern video games, players are afforded a full range of moral options — seeing the ones that some players choose (including children) may make society's "elders" uncomfortable, but it cannot be said that the video game is forcing these kinds of choices. The origin of the behavior exists within the player, not the game.

In one recent unfortunate incident a psychologist, Cooper Lawrence, commented on the game *Mass Effect* without (by her own admission) ever having played the game (Gamepolitics.com, 2008). Dr. Lawrence compared a mild love scene in the game to pornography implying that there was explicit sex and nudity in the game, which was not factual. To her credit Dr. Lawrence retracted her statements when presented with evidence from the game, but these kinds of misstatements do much to harm the credibility of the social sciences and mental health field.

• *Become Critical Consumers of Research.* As the famous statement (attributed to both Mark Twain and Prime Minister D'Israeli) goes "There are three kinds of lies in the world...lies, damn lies and statistics." It is simply not enough to hear that "video games cause aggression." Ask yourself, how was aggression measured? Did the authors control adequately for personality, family violence, genetics or even gender? Why does this research conflict with real world data on violent crimes? It is safe to say that the social science community too often is apt to making grandiose conclusions that have little factual basis. It is the responsibility of every social scientist and mental health professional to put the breaks on irresponsible hysteria.

• *Understand the Historical Roots of Media Violence Hysteria.* As already mentioned, many forms of media from the Bible, to comic books, to music and movies have been at the center of controversies. Often times obliging social scientists have provided "evidence on demand" to support these hysterias. Seldom have these new media forms resulted in real violence waves. Only the advent of television in the U.S. appeared to coincide with an increase in violent crimes, although most criminologists now conclude that this elevation in violence was due to wider social upheavals, a sinking economy, and the cocaine drug trade, not television. It is time that, as social scientists, we learn from the mistakes of history and move on. If not, social science and the mental health professions merely indulge in moral righteousness at the expense of scientific credibility, particularly to a new generation of young adults who are perfectly aware we do not know what we are talking about.

Other negative consequences that should be considered are the amount of tax dollars and public attention that has been allocated to violent video games that could have gone towards real factors influencing violence, such as family violence, poverty and policing. Ever dollar spent on video game censorship legislation is a dollar not spent on services for the mentally ill or disadvantaged children.

In conclusion, the hyperbole on violent video game effects is supported neither by high-quality research data nor by real-world violent crime data. It is time to close the book on the video game controversy and prioritize our efforts on concerns that may, at the same time, have real merit as causes of violence, and yet be intimidating to fix. It is time perhaps as well to acknowledge that the origins of violence lay within us, our genes and our species, not in external phenomenon. Violence in the media including video games does not cause us to be who we are; they are merely a reflection of ourselves. It is time to stop blaming the mirror.▼

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