

# Video game controversies

**Video game controversies** are societal and scientific arguments about whether the content of video games change the behavior and attitudes of a player, and whether this is reflected in video game culture overall. Since the early 1980s, advocates of video games have emphasized their use as an expressive medium, arguing for their protection under the laws governing freedom of speech and also as an educational tool. Detractors argue that video games are harmful and therefore should be subject to legislative oversight and restrictions. The positive and negative characteristics and effects of video games are the subject of scientific study. Results of investigations into links between video games and addiction, aggression, violence, social development, and a variety of stereotyping and sexual morality issues are debated.<sup>[1]</sup>

## Background

The Entertainment Software Association reports that 17% of video game players are boys under the age of eighteen and that 36% are women over the age of eighteen, with 48% of all gamers being women of all ages. They also report that the average age of gamers is 31.<sup>[2]</sup> A survey of 1,102 children between 12 and 17 years of age found that 97% are video game players who have played in the last day and 75% of parents checked the censor's rating on a video game before allowing their child to purchase it. Of these children, 14% of girls and 50% of boys favored games with an "M" (mature) or "AO" (adult-only) rating.<sup>[3]</sup> 32% of American adults play video games and to 2007, the number was increasing.<sup>[4]</sup>

Since the late 1990s, some acts of violence have been highly publicized just because the suspect had a history of playing violent video games. Some research proposes violent video game use correlates with a temporary increase in aggression and a decrease in prosocial behavior (caring about the welfare and rights of others), but these results have not been reproduced.<sup>[5][6][7]</sup> Others theorise positive effects of playing video games including prosocial behavior in some contexts<sup>[8][9]</sup> and argue that the video game industry has served as a scapegoat for more generalised problems affecting some communities.<sup>[10][11][12]</sup>

## Hypotheses of negative effects of video games

Some scientists propose that particular conditions, for example antisocial personality disorder, may determine those who are most at risk of carrying out violent acts after playing video games. A study by the Minneapolis-based National Institute for Media and the Family suggests that video games can be addictive for kids, and that the kids' addiction to video games increases their depression and anxiety levels.<sup>[13]</sup> Furthermore, people predisposed to violent behavior may be at greater risk of being adversely affected by the playing of violent video games than others.<sup>[5][14]</sup> In 2007, 32% of students ages 12–18 years old reported being bullied at school, compared to 5% in 1999.<sup>[15]</sup>

Other biological theories of aggression and hurt have specifically excluded video game and other media effects because the evidence for such effects is considered weak and the impact too distant. For example, the *catalyst model* of aggression comes from a diathesis-stress perspective, implying that aggression is due to a combination of genetic risk and environmental strain. The *catalyst model* suggests that stress, coupled with antisocial personality are salient factors leading to aggression. It does allow that proximal influences such as family or peers may alter aggressiveness but not media and games.<sup>[16][17]</sup> The *general aggression model* suggests the simulated violence of video games may influence a player's thoughts, feelings and physical arousal and this in

turn creates a short-term (and possibly a long-term) effect on an individual's interpretation of an aggressive or violent act.<sup>[18]</sup>

## Research methods

Research has focused on two elements of the effects of video games on players: the player's health measures and educational achievements as a function of game play amounts; the players' behavior or perceptions as a function of the game's violence levels;<sup>[19]</sup> the context of the game play in terms of group dynamics; the game's structure which affects players' visual attention or three dimensional constructional skills; and the mechanics of the game which affects hand-eye coordination.<sup>[20]</sup> Two other research methods that have been used are experimental (in a laboratory), where the different environmental factors can be controlled, and non-experimental, where those who participate in studies simply log their video gaming hours.<sup>[21]</sup>

## Scientific debate

A common hypothesis is that playing violent video games increases aggression in young people. Various studies claim to support this hypothesis.<sup>[5][22]</sup> Other studies find no link.<sup>[23][24]</sup> Other sources have found that aggression is increased immediately after playing a violent video game.<sup>[25]</sup> After the "Brown vs. Entertainment Merchants Association" legal case, three of the scholars involved with the legal brief for regulation calculated that the over 100 experts supporting that video games have negative effects had on average authored six times as many peer-reviewed media effects articles as the signatories that were against regulation.<sup>[26]</sup> However, three of their opponents claimed that they might have used methodology which have undercounted contributions of some scholars.<sup>[27]</sup> In 1998, Steven Kirsh reported in the journal, *Childhood*, that the use of video games may lead to acquisition of a *hostile attribution bias*. Fifty-five subjects were randomised to play either violent or non-violent video games. Subjects were later asked to read stories in which the characters' behaviour was ambiguous. Participants randomised to play violent video games were more likely to provide negative interpretations of the stories.<sup>[28]</sup> Another study done by Anderson and Dill found that violence in video games increases aggressive behavior both short term and long term.<sup>[29]</sup>

In 1999, David Satcher, the Surgeon General of the United States said "We clearly associate media violence to aggressive behavior. But the impact was very small compared to other things. Some may not be happy with that, but that's where the science is."<sup>[30]</sup> In 2001, a meta-analysis review was conducted at Iowa State University in order to determine a relationship between video game violence and aggression in teenagers. Out of 3,033 participants, the effect size was positive, deducing that high video game violence does in fact lead to heightened aggression amongst teenagers.<sup>[31]</sup>

A 2002 US Secret Service study of forty-one individuals who had been involved in school shootings found that twelve percent were attracted to violent video games, twenty-four percent read violent books and twenty-seven percent were attracted to violent films.<sup>[32]</sup> In 2003, a study approved by Iowa State University was conducted assessing pre-existing attitudes and violence in children.<sup>[33]</sup> The study concerned children between ages 5 and 12, and were assessed for the typical amount of time they played video games per week and pre-existing empathy and attitudes towards violence. The amount of time spent playing video games was also the indication of long-term effects of exposure to violent video games. Next, the children played a violent or non-violent video game for approximately fifteen minutes. Afterwards, their pulse rates were recorded and the children were asked how frustrating the games were on a 1-10 scale, in order to avoid confounding with their aggression trait. Last, the children are given drawings (vignettes) of everyday situations, some more likely to have aggressive

actions following the depiction, while others an empathetic action. This last measure was to assess the goal of the study, if children appear to be more aggressive or empathetic to the vignette situations based on the type of game they played. Results show that there were no significant effects of video game playing in the short term, with violent video games and non-violent video games having no significant differences, indicating that children do not have decreased empathy from playing violent video games. Conversely, children who play more violent video games over a long period of time were associated with lower pre-existing empathy, and also lower scores on the empathy inducing vignettes, indicating long-term effects. It is possible that video games had not primed children for the particular aggression scenarios. This data could indicate desensitization in children can occur after long-term exposure, but not all children were affected in the same way, so the researchers deduced that some children may be at a higher risk of these negative effects. It is possible that fifteen minutes is not quite long enough to produce short-term cognitive effects.

In 2003, Jeanne B. Funk and her colleagues at the Department of Psychology at the University of Toledo, examined the relationship between exposure to violence through media and real-life, and desensitization (reflected by loss of empathy and changes in attitudes toward violence) in fourth and fifth grade pupils. Funk found that exposure to video game violence was associated with lowered empathy and stronger proviolence attitudes.<sup>[34]</sup> Citing David Grossman, Funk also notes that it has been reported that the U.S. Army frequently uses violent video games to desensitize soldiers during training.<sup>[35][36]</sup> However, Ferguson has argued that the alleged use of video games to desensitize soldiers is more conjecture than fact.<sup>[37]</sup> The American Psychological Association (APA) released an official statement in 2005, which said that exposure to violent media increases feelings of hostility, thoughts about aggression, suspicions about the motives of others, and demonstrates violence as a method to deal with potential conflict situations, that comprehensive analysis of violent interactive video game research suggests such exposure increases aggressive behavior, thoughts, angry feelings, physiological arousal, and decreases helpful behavior, and that studies suggest that sexualized violence in the media has been linked to increases in violence towards women, rape myth acceptance and anti-women attitudes. It also states that the APA advocates reduction of all violence in videogames and interactive media marketed to children and youth, that research should be made regarding the role of social learning, sexism, negative depiction of minorities, and gender on the effects of violence in video games and interactive media on children, adolescents, and young adults, and that it engages those responsible for developing violent video games and interactive media in addressing the issue that playing violent video games may increase aggressive thoughts and aggressive behaviors in children, youth, and young adults, and that these effects may be greater than the well documented effects of exposure to violent television and movies. They also recommend to the entertainment industry that the depiction of the consequences of violent behavior be associated with negative social consequences and that they support a rating system which accurately reflects the content of video games and interactive media. The statement is a pending revision in 2014.<sup>[38]</sup>

Ferguson and colleagues suggested that the APA's policy statement ignored discrepant research and misrepresented the scientific literature.<sup>[39][40]</sup> In 2013 a group of 228 media scholars wrote an open letter to the APA asking them to retire their policy statement on video game violence, due to considering the evidence to be mixed.<sup>[41][42]</sup> In 2005, a study by Bruce D. Bartholow and colleagues at the University of Missouri-Columbia, University of Michigan, Vrije Universiteit, and University of North Carolina using event related potential linked video game violence exposure to brain processes hypothetically reflecting desensitization. The findings suggested that chronic exposure to violent video games have lasting harmful effects on brain function and behavior.<sup>[43]</sup>

In 2007, a study at Iowa State University, the University of Michigan, and Vrije Universiteit by Nicholas L. Carnagey and colleagues found that participants who had previously played a violent video game had lower heart rate and galvanic skin response while viewing filmed real violence, demonstrating a physiological

desensitization to violence.<sup>[44]</sup> In 2007, a study at the Swinburne University of Technology found that children had variable reactions to violent games, with some kids becoming more aggressive, some becoming less aggressive, but the majority showing no changes in behavior.<sup>[45]</sup> In the same year, at Michigan State University, John L. Sherry conducted a meta-analysis of studies about video game violence. He concluded that the influence of video game violence on aggression was minimal and previous findings of an effect may have been methodological in origin. For instance, smaller effects were found in experimental studies with longer exposure times, suggesting effects decreased over time.<sup>[46]</sup>

In 2008, a longitudinal study conducted in Japan assessed possible long-term effects of video game playing in children.<sup>[47]</sup> The final analysis consisted of 591 fifth graders aged 10–11 across eight public elementary schools, and was conducted over the course of a year. Initially, children were asked to complete a survey which assessed presence or absence of violence in the children's favorite video games, as well as video game context variables that may affect the results and the aggression levels of the children. Children were assessed again for these variables a year later. Results reveal that there is a significant difference in gender, with boys showing significantly more aggressive behavior and anger than girls, which was attributed by the authors to boys elevated interest in violent video games. However the interaction between time spent gaming and preference for violent games was associated with reduced aggression in boys but not girls. The researchers also found that eight context variables they assessed increased aggression, including unjustified violence, availability of weapons, and rewards. Three context variables, role-playing, extent of violence, and humor, were associated with decreased aggression. It is unknown if the observed changes from the two surveys are actually contextual effects. The researchers found that the context and quality of the violence in video games affects children more than simply presence and amount of violence, and these effects are different from child to child.

In 2008 the Pew Internet and American Life Project statistically examined the impact of video gaming on youths' social and communal behaviors. Teens who had communal gaming experiences reported much higher levels of civic and political engagement than teens who had not had these kinds of experiences. Youth who took part in social interaction related to the game, such as commenting on websites or contributing to discussion boards, were more engaged communally and politically. Among teens who play games, 63% reported seeing or hearing "people being mean and overly aggressive while playing," 49% reported seeing or hearing "people being hateful, racist or sexist while playing", and 78% reported witnessing "people being generous or helpful while playing".<sup>[48][49]</sup>

In 2009, a report of three studies conducted among students of different age groups in Singapore, Japan, and the United States, found that prosocial mostly nonviolent games increased helpful prosocial behaviour among the participants.<sup>[50]</sup> In 2010, Anderson's group published a meta-analysis of one hundred and thirty international studies with over 130,000 participants. He reported that exposure to violent video games caused both short-term and long-term aggression in players and decreased empathy and pro-social behavior.<sup>[51]</sup>

At the Texas A and M University, Laredo, Department of Psychology and Communications, Ferguson said,

"Taken together, [the] meta-analyses range from those which argue against meaningful effects to those which find weak effects. Thus the debate on video game violence has been reduced to whether video game violence produces no effects...or almost no effects."<sup>[52]</sup> Ferguson and Kilburn criticised Anderson's study for methodological flaws including failure to abide by quantifiable measurements of aggression; for using the results of their own or colleagues research as 75% of their study's premise; and for failing to include dissenting studies.<sup>[53]</sup> John Grohol, a psychologist, supported this view.<sup>[54]</sup> Ferguson also went so far as to say that "Statistically speaking, it would actually be more unusual if a youth delinquent or shooter did not play violent video games, given that the majority of youth and young men play such

games at least occasionally,” which would further disprove the notion that video games are the source of teen violence since it would be difficult to single people out when the majority of today's youth is playing violent video games.<sup>[55]</sup>

Anderson, Bushman, and Rothstein replied:

"We conducted a state-of-the art meta-analysis on violent video game effects, one that includes data from more than 10 times as many participants as in meta-analyses conducted by Ferguson and his colleagues. We included unpublished studies, as recommended by virtually all meta-analysis experts. We created and tested stringent inclusion criteria. We conducted appropriate analyses to assess the impact of publication bias and found minimal bias. One could still argue that the magnitude of effects we observed was so small that it is trivial, but most meta-analysis experts, physicians, psychologists, and psychiatrists would disagree with Ferguson and Kilburn on this point as well. Our results suggest that violent video games increase aggressive thoughts, angry feelings, and aggressive behaviors and decrease empathic feelings and prosocial behaviors."<sup>[56]</sup> Rowell Huesmann, a psychology and social studies academic at the University of Michigan wrote an editorial supporting the Anderson meta-analysis.<sup>[57]</sup>

In 2010, Patrick and Charlotte Markey suggested that violent video games only caused aggressive feelings in individuals who had a preexisting disposition, such as high neuroticism, low agreeableness, or low conscientiousness.<sup>[58]</sup> In 2010, after a review of the effects of violent video games, the Attorney General's Office of Australia reported that even though the Anderson meta-analysis of 2010 was the pinnacle of the scientific debate at that time, significant harm from violent video games had not been persuasively proven or disproven, except that there was some consensus that they might be harmful to people with aggressive or psychotic personality traits.<sup>[59]</sup>

The attorney general considered a number of confounders including:

- Social and political controversy about the topic.
- Lack of consensus about definitions and measures of aggression and violent video games (for example, whether a cartoon game has the same impact as a realistic one).
- Levels of aggression may or may not be an accurate marker for the likelihood of violent behaviour.
- The playing of violent video games may not be an independent variable in determining violent acts (for example, violent behaviour after playing violent video games may be age dependant, or players of violent video games may watch other violent media).
- Studies may not have been long or large enough to provide clear conclusions.<sup>[59]</sup>

In 2011, a thirty-year study of 14,000 college students, published by the University of Michigan which measured overall empathy levels in students, found that these had dropped by 40% since the 1980s. The biggest drop came after the year 2000, which the authors speculated was due to multiple factors, including increased societal emphasis on selfishness, changes in parenting practices, increased isolation due to time spent with information technology, and greater immersion in all forms of violent and/or narcissistic media including, but not limited to, news, television and video games. The authors did not provide data on media effects, but referenced various research of the topics.<sup>[60]</sup> A study at Brock University was conducted in 2011 to examine whether or not the use of violent video games promotes aggressive thinking and behaviour.<sup>[61]</sup> Subjects were randomized to play games with or without violent content and with or without competitive content. Competitive content and not violent content was associated with increased heart rate. The authors suggested competition in video game playing was a confounding variable when increased heart rate was used as a marker of

aggression.<sup>[61]</sup>

In 2011, in a longitudinal study of youth in Germany, von Salisch found that aggressive children tend to select more violent video games. This study found no evidence that violent games caused aggression in minors. The author speculated that other studies may have been affected by "single responder bias" due to self-reporting of aggression rather than reporting by parents or teachers.<sup>[62]</sup> In 2012 a Swedish study examined the cooperative behavior of players in *The Lord of the Rings Online*. The authors argued that attempts to link collaborative or aggressive behavior within the game to real life behavior would rely on unwarranted assumptions regarding equivalencies of forms of cooperation and the material conditions of the environment in-game and out-of-game.<sup>[63]</sup> One study from Morgan Tear and Mark Nielsen in 2013 concluded that violent video games did not reduce or increase prosocial behavior, failing to replicated previous studies in this area.<sup>[24]</sup>

In 2013, Isabela Granic and colleagues at Radboud University Nijmegen, the Netherlands, argued that even violent video games may promote learning, health, and social skills, but that not enough games had been developed to treat mental health problems. Granic et al. noted that both camps have valid points, and a more balanced perspective and complex picture is necessary.<sup>[64]</sup> In 2014, Ferguson and Olson found no correlation between video game violence and bullying or delinquency in children with preexisting attention deficit disorder or depressive symptoms.<sup>[65]</sup>

In 2014, Villanova professor, Patrick M. Markey, conducted a study with 118 teenagers in which he proved that video games have no influence on increased aggression of users; however, he did find that when used for the right amount of time (roughly 1 hour) video games can make children nicer and more socially interactive.

This information was provided by the teens teachers at their local schools.<sup>[66]</sup> A 2014 study by Andrew Przybylski at Oxford University examined the impact of violent content and frustration on hostility among video game players. In a series of experiments, Przybylski and colleagues demonstrated that frustration, but not violent content, increased player hostility. The authors also demonstrated that some previous "classic" violent video game experiments were difficult to replicate.<sup>[67]</sup>

In 2015, the American Psychological Association released a review that found that violent video games caused aggressive behavior, with Mark Appelbaum, the chair of the task force that conducted the review, saying that "the link between violence in video games and increased aggression in players is one of the most studied and best established in the field." The same review found insufficient evidence of a link between such video games and crime or delinquency.<sup>[68]</sup> However, controversies erupted over the task force conclusions, with concerns about perceived conflicts of interest among task force members, and methodological limitations of their review.<sup>[69]</sup> 350 academics signed an open letter in 2013, referencing the APA's task force, asking them to repeal their policy statements on video games.<sup>[70]</sup> A 2015 study examined the impact of violent video games on young adults players with autism spectrum disorders (ASD). The study found no evidence for an impact of playing such games on aggression among ASD players. These results appeared to contradict concerns following the 2012 Sandy Hook shooting, that individuals with ASD or other mental conditions might be particularly susceptible to violent video game effects.<sup>[71]</sup>

## fMRI studies

There may be an effect of violent video games on brain activity. Scientists use functional magnetic resonance imaging to study this effect. It has been observed that participants who engaged with VVGs displayed increases in the functioning of their amygdala and decreases in the functioning of their frontal lobe.<sup>[72]</sup> The effect on the frontal lobe may be similar to the deactivation seen in disruptive behavior disorders and if the change is

universal, the effect of violent video games may not relate to an underlying aggressive nature.<sup>[73][74]</sup> During the Brown Vs. EMA legal case, it was noted that the studies conducted by Kronenberger were openly funded by "The Center for Successful Parenting", which may mean a conflict of interest.<sup>[75]</sup> An fMRI study by Regenbogen and colleagues suggested VVGs do not diminish the ability to differentiate between real and virtual violence.<sup>[76]</sup>

## Studies on the effect on crime

In 2008, records held by the US Office of Juvenile Justice and Delinquency Prevention and Office of Justice Programs indicated that arrests for violent crime in the US had decreased since the early 1990s in both children and adults.<sup>[77][78][79]</sup> This decrease occurred despite increasing sales of violent video games and increases in graphically violent content in those games.<sup>[80][81]</sup>

In the United States alone there has been a report of 71 mass shootings between 1982 and August 2015. Seven of these shootings were of someone 18 years of age or younger. That means about 9.8% of the 71 shootings to have been committed by someone 18 or younger. Compare this to the figure of over 150 million Americans that play video games. The vast majority of this figure are teens racking up to 71% of the video game demographic. There is a small percentage of people that committed crimes after playing violent games a figure which is too small of a margin to even be allowed to correlate violence in video games causing these teens to commit violent acts after playing them.<sup>[82][83]</sup> Look also at the rate at which video game sales increased while violent crime decreases. Between 1994 and 2014 there was an increase of 204% total video game sales reaching up to \$13.1 billion in 2014. During that same time violent crimes in general decreased by 37%. In cases where a lone juvenile enacted a murder dropped down 76% during this time as well.<sup>[84]</sup> With the small margin of juveniles that actually commit crime coupled with the decreasing rate of juvenile murder it is hard to find a correlation between violence in video games and juveniles enacting violent crimes after playing them, only when the numbers look like this. A 2011 study by the Center for European Economic Research<sup>[85]</sup> found that although violent video games might increase aggression they also have a paradoxical effect of reducing crime. This is possibly because the time spent playing games reduces time spent engaged in more antisocial activities. The study states that violent video games "paradoxically may reduce violence while increasing the aggressiveness of individuals by simply shifting these individuals out of alternative activities where crime is more likely to occur."<sup>[85]</sup>

## Public debate in US

In the early 1980s, Ronnie Lamm, the president of the Long Island PTA sought legislation to govern the proximity of video game arcades to schools.<sup>[86]</sup> In the 1990s, Joe Lieberman, a US Senator, chaired a hearing about violent video games such as *Mortal Kombat*.<sup>[87]</sup> David Grossman, a former West Point psychology professor and lieutenant commander, wrote books about violence in the media including: *On Killing* (1996) and *Stop Teaching Our Kids to Kill* (1999).<sup>[88]</sup> He described first-person shooter games as *murder simulators*, and argued that video game publishers unethically train children in the use of weapons and harden them emotionally towards commitments of murder by simulating the killing of hundreds or thousands of opponents in a single typical video game.<sup>[89]</sup>

In 2003, Craig A. Anderson, a researcher who testified on the topic before the U.S. Senate, said,

"[S]ome studies have yielded nonsignificant video game effects, just as some smoking studies failed to

find a significant link to lung cancer. But when one combines all relevant empirical studies using meta-analytic techniques, it shows that violent video games are significantly associated with: increased aggressive behavior, thoughts, and affect; increased physiological arousal; and decreased pro-social (helping) behavior."<sup>[90][91][92][93]</sup> In 2005, Anderson was criticized in court for failing to give balanced expert evidence.<sup>[94]</sup>

In 2008, in *Grand theft childhood: the surprising truth about violent video games and what parents can do.*, Kutner and Olsen refuted claims that violent video games cause an increase in violent behavior in children. They report there is a scientifically non-significant trend showing that adolescents who do not play video games at all are most at risk for violent behavior and video game play is part of an adolescent boy's normal social setting. However, the authors did not completely deny the negative influences of violent (M-rated) video games on pre-teens and teenagers: Kutner and Olson suggested the views of alarmists and those of representatives of the video game industry are often supported by flawed or misconstrued studies and that the factors leading to violence in children and adolescents were more subtle than whether or not they played violent video games.<sup>[95][96]</sup>

Henry Jenkins, an academic in media studies, said,

"According to federal crime statistics, the rate of juvenile violent crime in the United States is at a 30-year low. Researchers find that people serving time for violent crimes typically consume less media before committing their crimes than the average person in the general population. It's true that young offenders who have committed school shootings in America have also been game players. But young people in general are more likely to be gamers—90 percent of boys and 40 percent of girls play. The overwhelming majority of kids who play do *not* commit antisocial acts. According to a 2001 U.S. Surgeon General's report, the strongest risk factors for school shootings centered on mental stability and the quality of home life, not media exposure. The moral panic over violent video games is doubly harmful. It has led adult authorities to be more suspicious and hostile to many kids who already feel cut off from the system. It also misdirects energy away from eliminating the actual causes of youth violence and allows problems to continue to fester."<sup>[97]</sup>

2013, in "Playing War: How the Military Uses Video Games", Corey Mead, a professor of English at Baruch College showcased how the U.S. military financed the original development of video games, and has long used them for both training, recruitment purposes, and treatment of post traumatic stress disorder. He also argues that the two industries are currently intertwined into each other in a "military-entertainment complex".<sup>[98]</sup> Writing in 2013, scholars James Ivory and Malte Elson noted that, although research on video game effects remained inconclusive, the culture of the academic field itself had become very contentious and that politicians had put pressure on scientists to produce specific research findings. The authors concluded it is improper for scholars of legislators to, at present, portray video games as a public health crisis.<sup>[42]</sup> Research by Oxford psychologist Andrew Przybylski has shown that Americans are split in opinion on how video game violence links to gun violence. Przybylski found that older people, women rather than men, people who knew less about games and who were very conservative in ideology were most likely to think video games could cause gun violence.<sup>[99]</sup>



Jack Thompson, an activist, filed lawsuits against the makers of violent games, alleging that simulated violence causes real-world violence.



Several groups address video game violence as a topic that they focus on. Groups such as Parents Against Violence, Parents Against Media Violence and One Million Moms take stances aimed at limiting the violence in video games and other media.<sup>[100][101][102]</sup> Groups with opposite interests, such as the Entertainment Software Association seek to refute their claims.<sup>[103]</sup>

## Censorship and regulation

*See also: List of regionally censored video games*

Support for video game regulation has been linked to moral panic.<sup>[104]</sup> Even so, governments have enacted, or have tried to enact, legislation that regulates distribution of video games through censorship based on content rating systems or banning.<sup>[105][106][107][108]</sup> In 2005, David Gauntlett claimed that grant funding, news headlines, and professional prestige more commonly go to authors who, in good faith, promote anti-media beliefs.<sup>[109]</sup> Tom Grimes, James A. Anderson, and Lori Bergen reiterated these claims in a 2008 book examining sociological effects on the production of media effects research.<sup>[110]</sup>

In 2013, the Entertainment Software Association, the lobbying group for the video games industry, had enlisted over 500,000 members to the "Video Game Voters Network," a "grassroots" lobbying group to mobilize gamers to act against public policy that may negatively impact the gaming industry.<sup>[111]</sup> The VGV was launched in 2006 by the ESA, and uses social media sites like Facebook and Twitter to inform members of allies and opponents.<sup>[112]</sup> In 2013, the ESA spent over 3.9 Million USD on lobbying, including but not limited to against VVG legislation. This included opposing a bipartisan federal bill that would direct the National Academy of Sciences to study the effects of all forms of violent media.<sup>[113]</sup> Such bills themselves had come under criticisms from some scholars for pressuring scientists to find specific outcomes rather than studying the issues neutrally.<sup>[42][114]</sup>

Video game consoles were banned in Mainland China in June 2000.<sup>[115][116]</sup> This ban was finally lifted in January 2014. However, the Chinese would still police video games which would be "hostile to China or not in conformity with the outlook of China's government". Reported by Bloomberg, metaphorically speaking, Cai Wu, head of China's Ministry of Culture, said "We want to open the window a crack to get some fresh air, but we still need a screen to block the flies and mosquitoes."<sup>[117]</sup>

## Voluntary regulation

Voluntary rating systems adopted by the video game industry, such as the ESRB rating system in the United States and Canada (established in 1994),<sup>[118]</sup> and the Pan European Game Information (PEGI) rating system in Europe (established in 2003), are aimed at informing parents about the types of games their children are playing (or are asking to play). Some ratings of controversial games indicate they are not targeted at young children ("Mature" (M) or "Adults Only" (AO) in the US, or 15 or 18 in the UK). The packaging warns such games should not be sold to children. In the US, ESRB ratings are not legally binding, but many retailers take it upon themselves to refuse the sale of these games to minors.<sup>[119]</sup> In the United Kingdom (UK), the BBFC ratings are legally binding. UK retailers also enforce the PEGI ratings, which are not legally binding.<sup>[120]</sup>

## US government legislation

No video game console manufacturer has allowed any game marked AO to be published in North America; however, the PC gaming service Steam has allowed AO titles such as *Hatred* to be published on its platform. No major retailers are willing to sell AO-rated games. However, *Grand Theft Auto: San Andreas* was rated AO after the presence of the *Hot Coffee* add-on became evident. The add-on was later removed and the game rated M.<sup>[121]</sup> In the 109th Congress and 110th Congress, the Video Games Enforcement Act was introduced to the US House of Representatives. The act required an identification check for the purchase of M and AO rated games. The bill and others like it did not succeed because of likely First Amendment violations.<sup>[122][123]</sup> Although no law mandates identification checking for games with adult content, a 2008 survey by the Federal Trade Commission showed that video game retailers have voluntarily increased ID verification for M- and AO-rated games, and sales of those games to underage potential buyers decreased from 83% in 2000 to 20% in 2008.<sup>[124]</sup> A further survey in April 2011, found that video game retailers continued to enforce the ratings by allowing only 13% of underage teenage shoppers to buy M-rated video games, a statistically significant decrease from the 20% purchase rate in 2009.<sup>[125]</sup>

On 7 January 2009, Joe Baca, representative of California's 43rd District, introduced H.R. 231, the *Video game health labelling act*. This bill called for a label to be placed in a "clear and conspicuous location on the packaging" on all video games with an ESRB rating of T (Teen) or higher stating, "WARNING: Excessive exposure to violent video games and other violent media has been linked to aggressive behaviour."<sup>[126][127]</sup> The proposed legislation was referred to the Subcommittee on Commerce, Trade and Consumer Protection. On 24 January 2011, Joe Baca reintroduced the *Video game health labelling act* as H.R. 400 of the 112th Congress.<sup>[128]</sup> The bill was once again passed onto the subcommittee.

On 27 June 2011, the Supreme Court of the United States ruled on *Brown v. Entertainment Merchants Association*. Video games were protected speech under the First Amendment. The case centered on a California law that sought to restrict sales of violent video games to minors. The video game industry, led by the Entertainment Merchants Association and the Entertainment Software Association, successfully obtained an injunction on the bill, believing that the definition of violence as stated in the California law was too vague and would not treat video games as protected speech. This opinion was upheld in lower courts, and supported by the Supreme Court's decision. The majority of the justices did not consider the studies brought to their attention as convincing evidence of harm, and stated that they could not create a new class of restricted speech that was not applied to other forms of media.<sup>[75][129][130]</sup> However, Justice Breyer's minority decision found the evidence more convincing.<sup>[131]</sup>

Deana Pollard Sacks, Brad Bushman, and Craig A. Anderson objected to the ruling, noting that the thirteen experts who authored the Statement on Video Game Violence on the Brown side were considerably more academically merited, and had on average authored over 28 times as many peer-reviewed journal articles about aggression/violence based on original empirical research as the signatories supporting the EMA, whereas the over 100 signatories supporting Brown had on average authored over 14 times as many.<sup>[26]</sup> Richard Hall, Ryan Hall, and Terri Day replied: "It is not surprising that Anderson and Bushman found their own qualifications and the qualifications of those who agree with them to be superior to the qualifications of those who disagree with them", and claimed that they might have used methodology which have undercounted contributions of some scholars.<sup>[132]</sup> On 3 April 2013, Dianne Feinstein, a Californian senator and Democrat, spoke in San Francisco to a group of 500 constituents about gun violence. She said, video games have "a very negative role for young people, and the industry ought to take note of that" and that Congress might have to step in if the video games industry did not cease to glorify guns.<sup>[133]</sup>

## Parental controls and resources

According to the Entertainment Software Association (ESA) and the Entertainment Software Rating Board (ESRB), parents believe that parental controls on gaming consoles are useful.<sup>[134]</sup> Parents have resources they can use to gain more knowledge about the media that their children are consuming. Researchers of video game violence, Dr. Cheryl Olson and Dr. Lawrence Kutner, have compiled a list of advice for parents that want to better monitor their children.<sup>[135]</sup> The Entertainment Software Rating board provides easy access to the ratings of a large database of video games.<sup>[136]</sup> Common Sense Media is database which shows the ratings of movies, games, TV shows, and other media. For each piece of media, it lists a suggested age rating, and scales that measure positive messages, language, violence, drug use, and consumerism. It also provides a summary of the content of the media from a fellow-parent's perspective.<sup>[137]</sup>

## Other controversies

### Sexual themes

*Main article: Sex and nudity in video games*

Tolerance of sexual themes and content in video game content varies between nations. Controversy over sexual themes has occurred in the US. For instance, in June 2005, an entire portion of unused code was found within the main script of *Grand Theft Auto: San Andreas*, allowing the player to simulate sexual intercourse with the main character's girlfriends. This mode, entitled *Hot Coffee*, could be accessed in the PC version via mod, and through Action Replay codes in the PS2 and Xbox versions.<sup>[138]</sup> The scene was left on the disc and could be accessed by altering a few bytes of the game's code via hex editor. This feature prompted the Entertainment Software Rating Board (ESRB) to change the rating of *San Andreas* on 20 July 2005 to "adults only". Furthermore, the game was withdrawn from sale in many stores. Rockstar Games posted a loss of \$28.8 million in that financial quarter. This event was dubbed the Hot Coffee mod controversy.<sup>[139]</sup>

The game, *RapeLay*, a Japanese eroge with a storyline centering on the player's character stalking and raping a mother and her two daughters also caused controversy. Campaigns against the sale of the game resulted in its being banned in many countries. *RapeLay*'s publisher, which intended the game only to be available in Japan, withdrew it from distribution.<sup>[140]</sup>

### Portrayal of gender

*Main article: Gender representation in video games*

Some scholars have expressed the concern that video games may have the effect of reinforcing sexist stereotypes.<sup>[141]</sup> In 1998, a study by Dietz, conducted at the University of Central Florida, found that of thirty-three games sampled, 41% did not feature female characters, 28% sexually objectified women, 21% depicted violence against women, and 30% did not represent the female population at all. Furthermore, characterizations of women tended to be stereotypical: highly sexualized ("visions of beauty with large breasts and hips"), dependent ("victim or as the proverbial *Damsel in Distress*"), opponents ("evil or as obstacles to the goal of the game"), and trivial ("females depicted in fairly non-significant roles").<sup>[142]</sup> However, the study is criticized for not including a wide range of video games for study and for including old games published up to twenty years ago which do not represent current industry standards, for example, an increased presence of strong female characters.<sup>[143][144]</sup>

In 2002, Kennedy considered the characteristics of the character, Lara Croft in the *Tomb Raider* video game

series. She is presented as a beautiful, clever, athletic, and brave English archaeologist-adventurer. Lara Croft has achieved popularity with both males and females as an action heroine, although depending on what perspective is applied she can either represent 'a positive role model for young girls' or a 'combination of eye and thumb candy for the boys'.<sup>[145]</sup> Dietz's findings are supported by a survey commissioned in 2003 by *Children Now*. The survey found that gender stereotypes pervade most video games: male characters (52%) were more likely than females (32%) to engage in physical aggression; nearly 20% of female characters were hyper-sexualized in some way, while 35% of male characters were extremely muscular.<sup>[146]</sup>

In 2004, the game developer, Eidos, remodeled Lara Croft for *Tomb Raider: Legend*. The character was modified to have a more believable figure with less revealing clothing.<sup>[147]</sup> In 2005, Terry Flew, academic, expressed a similar opinion: gender bias and stereotyping exists in many games. Male characters are portrayed as hard bodied, muscled men while female characters are portrayed as soft bodied, nearly naked women with large breasts, portrayed in a narrowly stereotypical manner. Females are usually constructed as visual objects in need of protection who wait for male rescue, whereas men are portrayed with more power. According to Flew, such depiction of females in games reflects underlying social ideas of male dominance and themes of masculinity. Although not all video games contain such stereotypes, Flew suggests that there are enough to make it a general trait and that "...different genders have different gaming."<sup>[148]</sup>

## LGBT characters

*Further information: LGBT themes in video games and List of LGBT characters in video games*

Lesbian, gay, bisexual, and transgender (LGBT) characters have been depicted in some video games since the 1980s. LGBT content has been subject to changing rules and regulations by game companies.<sup>[149]</sup> These rules are generally examples of heterosexism in that heterosexuality is normalized while homosexuality is subject to additional censorship or ridicule.<sup>[150][151]</sup> Sexual orientation and gender identity were significant in some console and PC games, with the trend being toward greater visibility of LGBT identities, particularly in Japanese popular culture<sup>[152]</sup> and games marketed to LGBT consumers.<sup>[153][154][155]</sup>

## Portrayal of race

*See also: Race and video games*

Video games may influence the learning of young players about race and urban culture.<sup>[156]</sup> The portrayal of race in some video games such as the *Grand Theft Auto* series, *Custer's Revenge*, *50 Cent: Bulletproof*, and *Def Jam: Fight for NY* has been controversial. The 2002 game, *Grand Theft Auto: Vice City* was criticized as promoting racist hate crime. The game takes place in 1986, in "Vice City", a fictionalized Miami. It involves a gang war between Haitian and Cuban refugees which involves the player's character.<sup>[157][158]</sup> However, it is possible to play the game without excessive killing.<sup>[159]</sup> The 2009 game *Resident Evil 5* is set in Africa, and as such has the player kill numerous African antagonists. In response to criticism, promoters of *Resident Evil 5* argued that to censor the portrayal of black antagonists was discrimination in itself.<sup>[160]</sup>

## Portrayal of countries

War-themed video games such as *Medal of Honor: Warfighter* and *Call of Duty: Black Ops II* have been criticized for how they portray Arab people and predominantly Islamic countries like Pakistan.<sup>[161]</sup>

## Addiction

*Main article: Video game addiction*

Video game addiction is the excessive or compulsive use of computer and video games that interferes with daily life. Instances have been reported in which users play compulsively, isolating themselves from family and friends or from other forms of social contact, and focus almost entirely on in-game achievements rather than broader life events.<sup>[162][163]</sup> The first video game to attract political controversy for its "addictive properties" was the 1978 arcade game *Space Invaders*.<sup>[164][165]</sup> One study from Chung Ang University observed that other structures affected by the use of video games include the anterior cingulate cortex and orbitofrontal cortex.<sup>[166]</sup> The results from this experiment suggest an increase in stimulation of these areas, resembling a pattern similar to those with substance dependence. Researchers interpreted their results of this increase in activity of the anterior cingulate and orbitofrontal cortices to be an indication of an early stage of video game addiction.<sup>[166]</sup>

Today, parents are still extremely concerned with video game addiction.<sup>[167]</sup> Though all children are different, most parents claim that video game addiction makes the child more negative toward obeying them.<sup>[168]</sup> Teens that participate in video games tend to find addiction with more violent games.<sup>[169]</sup> Being addicted to video games can also affect social outcomes.<sup>[170]</sup> Today, video game addiction continues to be worried about by parents for many issues including health.<sup>[171]</sup>

## Health problems

*Main article: Video game-related health problems*

## Digital rights management

*Main article: Digital rights management*

Digital rights management (DRM) is a type of technology that is intended to control the use of digital content and devices after purchase. Many companies make use of DRM to prevent copyright infringement and to protect an entity's intellectual property from public access.<sup>[172]</sup> Opponents of DRM argue that it only inconveniences legitimate customers and allows big business to stifle innovation and competition. In the US, the Digital Millennium Copyright Act (DMCA) of 1998 increased the strength of DRM.<sup>[173]</sup> Objection to DRM caused Microsoft to change its DRM policy for Xbox One.<sup>[174]</sup> Always-on digital rights management (DRM), also known as persistent online authentication, is a type of controversial technology relating to video games. This technology requires a consumer to maintain a connection to a host server in order to use a particular product or play a game.<sup>[175]</sup> Those against Always-on DRM focus on server connection difficulties, single player offline preferences, and game playability once companies shut down a server.<sup>[176]</sup>

## Online harassment

*See also: Cyberbullying § In gaming, and Sexism in video gaming*

A further issue that can occur through gaming is online harassment or bullying behaviors. A specific example of harassing behavior occurring within a game can be found in Xbox Live services. With its online chat and party system, this leaves the service open to unwanted harassment, trolling, or bullying to occur between players. To

address these concerns, Microsoft made improvements with reputation levels for a player's Xbox Live account. The system is set to warn, then punish bad behavior in hopes of better regulating Xbox Live accounts.<sup>[177]</sup>

The anonymous nature of the internet may be a factor of encouraging anti-social behavior. This type of behavior expands to other parts of the internet separate from gaming, such as online forums, social media sites, etc. Lack of accountability for one's actions on the internet may encourage others to engage in harassing behavior. Without minimal threat of punishment, some may find it easier to carry out negative behavior over online gaming.<sup>[178]</sup>

Regarding whether attitudes towards women in games and gaming culture extend as far as misogyny, opinions have been divided. For example, VentureBeat writer Rus McLaughlin sees it as a status quo "ingrained in video-game DNA",<sup>[179]</sup> while Joe Yang (writing for the same source) regards such claims to be misleading, and sees misogyny as a problem where it does occur, but disputes that it is inherent or normative, or that the whole culture should be described that way.<sup>[180]</sup>

## Criminal activity

Other common occurrences include online casino scams, phishing, cell phone dialers, malware in illegal downloads,<sup>[181][182][183][184]</sup> and money laundering.<sup>[185]</sup>

## Religion and video games

*Main article: Religion and video games*

While religion is seen as a serious topic, video games are considered entertainment.<sup>[186]</sup> As such, the use of religion and religious motifs in video games can sometimes be controversial. For example, *Hitman 2: Silent Assassin* (2002) sparked controversy due to a level featuring the killing of Sikhs within a depiction of their most holy site, the Harmandir Sahib, where hundreds of Sikhs were massacred in 1984.<sup>[187]</sup>

## Publicized incidents

### In United States

Many incidents in the United States that are speculated to be related to video games have helped fuel controversy, starting with Noah Wilson.

On 22 November 1997, Noah Wilson, aged 13, died when his friend, Yancy, stabbed him in the chest with a kitchen knife. Wilson's mother, Andrea Wilson, alleged her son was stabbed to death because of an obsession with the 1995 Midway game *Mortal Kombat 3*; that Yancy was so obsessed with the game that he believed himself to be the character, Cyrax, who uses a finishing move which Wilson claims involves taking the opponent in a headlock and stabbing them in the chest, despite the fact that Cyrax has never used this Fatality in any game he has appeared in. The court found "Wilson's complaint fails to state a claim upon which relief can be granted."<sup>[188]</sup>

There have also been video game-related crimes which took place at schools. On 24 March 1998, 13-year-old Mitchell Johnson and 11-year-old Andrew Golden killed 4 students and a teacher in the Westside Middle School massacre. Although no connection to video games was drawn by the press at the time, the case was re-examined

by commentators a year later, subsequent to the events of the Columbine High School massacre, and it was determined that the two boys had often played *GoldenEye 007* together and they enjoyed playing first-person shooter games.<sup>[189][190]</sup>

On 20 April 1999, 18-year-old Eric Harris and 17-year-old Dylan Klebold killed 12 students, a teacher, and themselves in the Columbine High School massacre. The two were allegedly obsessed with the video game *Doom*. Harris also created WADs for the game, and created a large mod named "Tier" which he called his "life's work". Contrary to rumor, however, neither student had made a *Doom* level mimicking the school's layout, and there is no evidence the pair practiced the massacre in *Doom*.<sup>[191]</sup>

## 2000s

Video games sparked controversy again when, in November 2001, at the age of twenty-one, Shawn Woolley committed suicide in a state his mother claimed was an addiction to *EverQuest*. Woolley's mother said,

"I think the way the game is written is that when you first start playing it, it is fun, and you make great accomplishments. And then the further you get into it, the higher level you get, the longer you have to stay on it to move onward, and then it isn't fun anymore. But by then you're addicted, and you can't leave it."<sup>[192]</sup>

Later video game controversies centered on whether some murderers were inspired by crime simulators. In February 2003, 16-year-old American Dustin Lynch was charged with aggravated murder. He pleaded insanity in that he was obsessed with *Grand Theft Auto III*. Jack Thompson, an attorney and an opponent of video games, offered to represent Lynch.<sup>[193]</sup> Thompson encouraged the father of victim to pass a note to the judge that said "the attorneys had better tell the jury about the violent video game that trained this kid [and] showed him how to kill our daughter, JoLynn. If they don't, I will."<sup>[194]</sup> Lynch later retracted his insanity plea. His mother, Jerrilyn Thomas, said,

"It has nothing to do with video games or Paxil, and my son's no murderer."<sup>[195]</sup>

On 7 June 2003, 18-year-old American Devin Moore shot and killed two policemen and a dispatcher after grabbing one of the officers' weapons following an arrest for the possession of a stolen vehicle. At trial, the defense claimed that Moore had been inspired by the video game *Grand Theft Auto: Vice City*.<sup>[196]</sup> On June 25, 2003, two American step brothers, Joshua and William Buckner, aged 14 and 16, respectively, used a rifle to fire at vehicles on Interstate 40 in Tennessee, killing a 45-year-old man and wounding a 19-year-old woman. The two shooters told investigators they had been inspired by *Grand Theft Auto III*.<sup>[197]</sup> In June 2007, 22-year-old Texan, Alejandro Garcia, shot and killed his cousin after arguing over whose turn it was to play the game *Scarface: The World Is Yours*. He pleaded guilty at his murder trial on 6 April 2011, and was sentenced to 15 to 30 years in prison.<sup>[198][199]</sup>

In September 2007, in Ohio, 16-year-old Daniel Petric snuck out of his bedroom window to purchase the game *Halo 3* against the orders of his father, a minister at New Life Assembly of God in Wellington, Ohio, U.S.<sup>[200]</sup> His parents eventually banned him from the game after he spent up to 18 hours a day with it, and secured it in a lockbox in a closet where the father also kept a 9mm handgun according to prosecutors.<sup>[201]</sup> In October 2007, Daniel used his father's key to open the lockbox and remove the gun and the game. He then entered the living room of his house and shot both of them in the head, killing his mother and wounding his father. Petric was sentenced to life in prison without parole, which was later commuted to 23 years in prison.<sup>[202]</sup> Defense

attorneys argued that Petric was influenced by video game addiction. The court dismissed these claims. The judge, James Burge, commented that while he thought there was ample evidence the boy knew what he was doing, Burge thought the game had affected him like a drug, saying "I firmly believe that Daniel Petric had no idea at the time he hatched this plot that if he killed his parents they would be dead forever."<sup>[203]</sup>

In December 2007, 17-year-old Lamar Roberts and his 16-year-old girlfriend, Heather Trujillo, were accused of beating a 7-year-old girl to death. They were said to have been imitating the content of *Mortal Kombat*.<sup>[204]</sup> In July 2008, Heather was sentenced to 18 years in prison and 6 years in a youth-offender program,<sup>[205]</sup> and, on January 16, 2009, Lamar was sentenced to 36 years in prison.<sup>[206]</sup>

Reports initially claimed that the killer in the 2007 Virginia Tech massacre was an avid *Counter-Strike* player. However, police reports said that roommates of the killer had never seen him play any video games.<sup>[207]</sup> Despite these discoveries, activist Jack Thompson continued to argue that video games were to blame.

In June 2008, four teens allegedly obsessed with *Grand Theft Auto IV* went on a crime spree after being in New Hyde Park, New York. They first robbed a man, knocking out his teeth and then they stopped a woman driving a black BMW and stole her car and her cigarettes.<sup>[208]</sup>

In April 2009, Joseph Johnson III was charged with murder after shooting his friend, Danny Taylor, during a quarrel over a video game in Taylor's apartment in Chicago, Illinois.<sup>[209]</sup>

## 2010s

In January 2010, 9-year-old Anthony Maldonado was stabbed to death by his 25-year-old relative, Alejandro Morales, after an argument regarding Maldonado's recently purchased copy of *Tony Hawk: Ride* and a PlayStation 3 console.<sup>[210][211][212]</sup>

On November 29, 2010 in South Philadelphia, Pennsylvania, a 16-year-old boy, Kendall Anderson, bludgeoned his mother to death in her sleep with a claw hammer after she took away his PlayStation.<sup>[213][214]</sup>

After the Sandy Hook Elementary School shooting on 14 December 2012, initial media reports mis-identified the shooter as Ryan Lanza, the brother of the perpetrator. After discovering that Ryan had liked *Mass Effect* on Facebook, an internet mob immediately attacked the game's Facebook page, labelling the developers "child killers".<sup>[215]</sup> Once it was discovered that it was his brother, Adam, who had carried out the massacre, initial news stories claimed a link to two video games, *Starcraft* and *Dance Dance Revolution*.<sup>[216]</sup> After a UK tabloid claimed that Lanza had a *Call of Duty* obsession, this was widely repeated across the internet,<sup>[217]</sup> Subsequently, a small town near Sandy Hook organized the collection and burning of video games in exchange for a gift certificate.<sup>[218]</sup> A report by CBS claimed that anonymous law enforcement sources suggested a link to video games, which was later dismissed by the Connecticut police, saying that it was "all speculation".<sup>[219]</sup> However, the incident prompted a wave of legislative and bureaucratic efforts against violent video games in the following months, including a meeting between US vice president, Joe Biden, and representatives from the video game industry on the topic of video game violence.<sup>[220]</sup> The official investigation report, released on 25 November 2013, discussed video games only briefly in the 48-page document and did not suggest they contributed to Lanza's motive. The report revealed that Lanza played a variety of video games, although he was most fond of non-violent video games such as *Dance, Dance Revolution* and *Super Mario Brothers*. The report particularly focused on *Dance, Dance Revolution* which he played regularly, for hours, with an associate.<sup>[221]</sup> In



December 2013, freelance author Matthew Lysiak presented a considerably different summary of Lanza in his book *Newtown: An American Tragedy*, describing violent video games as Lanza's "other obsession" (apart from firearms), and quoting Lanza's mother as calling Lanza's game playing as "zoned out" and "like a zombie".<sup>[222]</sup>

In May 2013, in the trial of Christopher Harris, an Illinois man accused of murdering a family of five, the issue of video game violence was raised by the defense. The defense claimed that the family was, in fact murdered by the 14-year-old son and Harris walked in on the mass murder in progress and had to defend himself, killing only the teen in the process. The defense called a research psychologist who testified that the teen's exposure to violent video games, along with an alleged history of social, school and family problems, made him at risk for aggression. However, during cross-examination, the psychologist acknowledged having no clinical license, not having conducted a proper psychological evaluation or psychological autopsy and that research evidence couldn't link video games to violent crimes. The psychologist also asserted that even games such as *Pac Man* could possibly be considered violent. Harris' brother testified against him and forensic evidence linked Harris to the homicides. In referring to the psychologist's testimony, one assistant attorney general was heard to remark, "The most offensive testimony I've ever heard in my life, I think." The jury did not accept the defense's argument and Harris was convicted of all five murders.<sup>[223][224]</sup>

## Outside United States

Numerous other incidents have taken place outside the United States, starting with José Rabadán Pardo. In April 2000, a Spanish 16-year-old, José Rabadán Pardo, murdered his father, mother, and his sister with a katana, proclaiming that he was on an "avenging mission" for Squall Leonhart, the main character of the video game *Final Fantasy VIII*.<sup>[225]</sup> On February 27, 2004, in Leicester, England, 17-year-old Warren Leblanc lured 14-year-old Stefan Pakeerah into a park and murdered him by stabbing him repeatedly with a claw hammer and a knife. Leblanc was reportedly obsessed with *Manhunt*, although investigation quickly revealed that the killer did not even own a copy of the game. The victim's mother, Giselle Pakeerah, has been campaigning against violent video games in the UK ever since.<sup>[226]</sup> The police investigating the case have dismissed any link.<sup>[227]</sup> In October 2004, a 41-year-old Chinese man named Qiu Chengwei stabbed 26-year-old Zhu Caoyuan to death over a dispute regarding the sale of a virtual weapon the two had jointly won in the game *The Legend of Mir 3*.<sup>[228]</sup>

Incidents have also occurred, concerning if suicide and deaths were a result of video game addiction or not. On 27 December 2004, 13-year-old Xiao Yi committed suicide by jumping from a twenty-four story building in Tianjin, China, as a result of the effects of his addiction, hoping to be "reunited" with his fellow gamers in the afterlife, according to his suicide notes. Prior to his death, he had spent thirty-six consecutive hours playing *Warcraft III*.<sup>[229][230]</sup> In August 2005, 28-year-old South Korean Lee Seung Seop died after continuously playing *StarCraft* for 50 hours.<sup>[231]</sup> In September 2007, a Chinese man in Guangzhou, China, died after playing internet video games for three consecutive days in an internet cafe.<sup>[232][233]</sup>

In December 2007, a Russian man was beaten to death over an argument about *Lineage II*. The man was killed when his guild and a rival challenged each other to a real-life brawl.<sup>[234]</sup> On 2 August 2008, Polwat Chinno, a 19-year-old Thai teenager, stabbed and killed a Bangkok taxi driver during an attempt to steal the driver's cab in order to obtain money to buy a copy of *Grand Theft Auto IV*. A police official said that the teen was trying to copy a similar act in the game. As a consequence, officials ordered the banning of the game and later the series, which led its distributor, New Era Interactive Media, to withdraw it, including its installment, from shops across Thailand.<sup>[235][236][237]</sup> On October 13, 2008, the disappearance of Brandon Crisp and his subsequent death involving, according to his parents, obsessive playing of *Call of Duty 4: Modern Warfare* has been referenced in

discussions about video game obsession and spawned a report aired by CBC's the fifth estate on video game addiction and Brandon's story titled "Top Gun", subtitled "When a video gaming obsession turns to addiction and tragedy".<sup>[238]</sup>

## 2010s

In January 2010, Gary Alcock punched, slapped and pinched his partner's 15-month-old daughter in the three weeks leading up to her death before he delivered a fatal blow to the stomach which tore her internal organs because she interrupted him playing his Xbox. She died from internal bleeding after suffering thirty-five separate injuries including multiple bruises, rib fractures and brain damage, which were comparable to injuries suffered in a car crash. Alcock was jailed for life and must serve at least 21 years.<sup>[239][240]</sup> In May 2010, French gamer Julien Barreaux located and stabbed a fellow player known only as "Mikhael" who had stabbed Barreaux in the game *Counter-Strike* 6 months earlier. The judge at his trial called him "a menace to society".<sup>[241][242]</sup>

On 9 April 2011 in Alphen Aan Den Rijn, The Netherlands, 24-year-old Tristan van der Vlis opened fire in a shopping mall, releasing more than a hundred bullets with a semi-automatic rifle and a handgun, killing 6 people and wounding 17 others, after which he also killed himself.<sup>[243]</sup> A fair amount of attention was given to Van Der Vlis' playing of *Call of Duty: Modern Warfare 2* and to the alleged similarities between the events in Alphen a/d Rijn and the controversial "No Russian" mission in the game, where the player can choose to (or choose not to) partake in the killing of a large group of innocent people inside an airport terminal.<sup>[244][245]</sup> On 22 July 2011, Anders Behring Breivik perpetrated the 2011 Norway attacks, detonating a car bomb in the executive government quarter, and then travelled to a summer camp for teenagers, where he proceeded to stalk and kill a large number of people. Seventy-seven people were killed in the attacks, a majority of them being teenagers who were at the summer camp. Hundreds were injured by the car bomb explosion.<sup>[246]</sup> Breivik himself admitted in court that he had deliberately used the 2009 video game *Call of Duty: Modern Warfare 2* to train for the attacks, specifically by practicing his aim using a "holographic aiming device".<sup>[247]</sup> He stated in his manifesto that he had been planning the attacks since 2002.

On Wednesday 24 March 2012, 14 year-old Noah Crooks was accused of shooting his 32-year-old mother with a .22 caliber rifle after a failed attempt to rape her. Noah was charged with first-degree murder and assault. During the dispatch call to 911 shortly following the murder, Crooks revealed that Gretchen Crooks had taken away his *Call of Duty* video game because his grades had turned poor and that this was the reason why he snapped. According to dispatch, Noah Crooks did not seem emotional even though he had murdered his mother a couple of hours earlier.<sup>[248]</sup> On the night of April 14, 2012, in Clydebank, Scotland, a 13-year-old boy slashed his friend's throat after a session of *Gears of War 3*. The wound was deep enough to expose his trachea and required 20 staples after his surgery. In March 2013, Brian Docherty, a chairman of the Scottish Police Federation, commented that "These games are rated 18 and shouldn't be played by children of this young age" and that "We need to look again at what we can do to [prevent children from playing games meant for adults]."<sup>[249]</sup> Similar and other effects were denounced in 2004 by Gary Webb in his article *The Killing Game*, exposing the use of increased reality video games by the US Army.<sup>[250]</sup>

## Positive effects of video games

Some researchers claim that video games, more than causing no harm, are beneficial to social and cognitive development and psychological well-being.<sup>[8][251]</sup> Certain scholars admit that games can be addictive, and part of their research explores how games connect to the reward circuits of the human brain. But they recognize the

cognitive benefits of playing video games: pattern recognition, system thinking, and patience.<sup>[252]</sup>

## Cognitive skills

Action video game players have better hand-eye coordination and visuo-motor skills, such as resistance to distraction, sensitivity to information in the peripheral vision and ability to count briefly presented objects, than non-players.<sup>[253]</sup> Through the development of the PlayStation Move, Kinect and Wii, video games can help develop motor skills through full body movement.<sup>[254]</sup> Experiments have indicated increases in cognition and problem solving skills in professional gamers.<sup>[252]</sup> A common thought is that video games are for people who are lazy, but in reality they are benefiting children with spatial navigation, reasoning, memory and perception.<sup>[255]</sup>

In 1994, a study conducted by the University of California in which fifth graders played extensive hours of video games, they managed to gain better spatial skills.<sup>[256]</sup> The children were split into two groups, with the experimental group playing Marble Madness, while the control group played Conjecture. The distinction is important because Marble Madness requires spatial skills while Conjecture does not. The results may not be generalizable, since the sample of kids is taken from a single private school, and may not necessarily be representative of the population. The children practiced their respective game for forty-five minutes per session for three sessions, all on separate days. Appropriate pre- and post-tests were also assessed for spatial ability, on the day before and after the sessions. Results indicated a gender difference in spatial ability, with the best boy doing better than the best girl, and the worst boy doing much better than the worst girl. Boys generally have a higher predisposition to video games, so their extra practice with video games may be influencing this. Irrespective of gender, practicing Marble Madness significantly increased spatial ability, especially in the children who had low performance on the spatial ability pre-test. Conversely, playing Conjecture did not increase children's spatial skills. This indicates that the type of game is important to consider when changes to cognitive abilities appear to be present. It is unknown if these increases in spatial ability persist into the long-term. This could mean that any benefits to practicing may only last if practice sessions are done at least intermittently.

## Relief from stress

Olsen suggests video games may provide relief from stress; over 25% of girls and 49% of boys use violent games such as *Grand Theft Auto IV* as an outlet for their anger.<sup>[257][258]</sup> She also suggests video games can have social benefits for children, for example, video games can provide a topic of discussion and something over which children can bond, and can help children make friends; playing video games can increase a child's self-esteem when they are struggling in one aspect of their life, but are able to do something correctly in a video game; and, children can also learn to take on leadership roles within a multi-player online game.<sup>[259]</sup> Christopher Ferguson, a psychologist well known for his video game research, conducted a study in which results suggest that violent games reduce depression and hostile feelings in players through mood management.<sup>[260]</sup>

According to a research paper done by Radboud University, creating positive emotions help to build motivation, relationships, and cope with failure. It also helps to monitor negative emotions such as anger, frustration or anxiety and control these emotions in order to achieve a goal (Isabela Granic, Adam Lobel, and Rutger C.M.E. Engels). By learning to motivate themselves, students could push themselves to achieve goals and improve their performance academically as they would improve their performance similarly in their video games. Also, social games that rely on interactions with other people would promote healthy relationships and better

communication between their fellow students, teachers and others outside of school. This could also benefit the students to work harder in class to achieve better grades and learn from their mistakes and improve rather than become frustrated. As video games are a favored pastime among many students, having a game that promotes positive emotions will help to alleviate stress in the classroom, making the environment fun and sociable.<sup>[261]</sup>

## Physical rehabilitation

Studies have also tried using video games to assist in physical rehabilitation. Researchers used video games to provide physical therapy, improved disease self-management, distraction from discomfort, and increased physical activity, among other things. All of the above studies showed a significant improvement among testers.<sup>[262]</sup> In addition, research done in Taiwan has shown that video game therapy can be used to improve the physical health of children with developmental delays.<sup>[263]</sup>

## Education

Other studies have examined the benefits of multiplayer video games in a family setting;<sup>[264]</sup> the use of video games in a classroom setting;<sup>[265]</sup> online gaming; and the effects of video game playing on dexterity, computer literacy, fact recall processes and problem solving skills.<sup>[266]</sup> Glazer, a researcher, suggests, "'A kid in the classroom has to worry about looking like an idiot. In a game, they're raising their hand all the time, and true learning comes from failing."<sup>[267][268][269]</sup> Not all video games are mindless. According to John L. Sherry, assistant professor at Michigan State University, 'educators are increasingly using educational games in the classroom as a motivational tool. The right video games help children master everything from basic grammar to complex math without the drudgery of old-school flash cards.'<sup>[270]</sup>

As well, certain studies indicate that video games may have value in terms of academic performance, perhaps because of the skills that are developed in the process. "When you play ... games you're solving puzzles to move to the next level and that involves using some of the general knowledge and skills in maths, reading and science that you've been taught during the day," said Alberto Posso an Associate Professor at the Royal Melbourne Institute of Technology, after analysing data from the results of standardized testing completed by over 12,000 high school students across Australia. As summarized by The Guardian,<sup>[271]</sup> the study [published in the International Journal of Communication], "found that students who played online games almost every day scored 15 points above average in maths and reading tests and 17 points above average in science." However, the reporter added an important comment that was not provided by some of the numerous Web sites that published a brief summary of the Australian study: "[the] methodology cannot prove that playing video games were the cause of the improvement." The Guardian also reported that a Columbia University study indicated that extensive video gaming by students in the 6 to 11 age group provided a greatly increased chance of high intellectual functioning and overall school competence.

In an interview with CNN, Edward Castronova, a professor of Telecommunications at Indiana University Bloomington said he was not surprised by the outcome of the Australian study but also discussed the issue of causal connection. "Though there is a link between gaming and higher math and science scores, it doesn't mean playing games caused the higher scores. It could just be that kids who are sharp are looking for a challenge, and they don't find it on social media, and maybe they do find it on board games and video games," he explained.<sup>[272]</sup>

## Business skills

In 1997, Herz and in 2006, Wade and Beck, authors, suggested video game playing may increase entrepreneurial skills. Herz argued that many so-called negative effects of video games, such as aggression and lack of pro-social behavior, are both necessary and useful traits to have in a capitalistic society. Specifically, Herz argued that many academic researchers have an anti-capitalist bias, and thus failed to notice the benefits of such traits.<sup>[273][274]</sup>

## Pro-social behaviour

In 2012, a study approved by Iowa State University assessed whether prosocial games could promote helpful behavior in children. In this study, children aged 9–14 years old played three different types of video games.<sup>[275]</sup> They were first assessed for aggression in order to avoid confounding. Afterwards, they completed a puzzle task with a partner and then assigned tangrams to a fictitious person in another room. The participants were told that the person in the other room, who they did not know was not actually real, had an opportunity to win a prize. The children were told they were not eligible for the gift card. The measure for helpful or hurtful behavior was based on how many easy or difficult tangrams they assigned to the fictitious person. Results indicated that playing prosocial games significantly more helpful behaviors in children than those who played violent video games. Conversely, playing violent video games had significantly more hurtful behaviors in children than the children who played prosocial games. Deviations from the expected pattern were also non-significant. The short-term effects observed after only thirty minutes of playing are substantial enough to consider the possibility that the longer amount of time a child plays a video game, the more effect it will have on their behavior. The researchers concluded that playing prosocial games affects a child's social cognition, because it changes their attitudes and affect. It is also important to note that outside the confines of a study, playing a video game may affect how a child acts, but it is not the only factor present that can affect this.

A study conducted in June 2014 at the University of Buffalo concluded that violent behavior in virtual environment could lead to players' increased sensitivity of the moral codes that they violated, due to immoral behavior in video games eliciting guilt in players.<sup>[276]</sup>

## Mental health disorders

Studies have shown that video games, whether they are designed to be therapeutic or not, can be used to lower anxiety levels of those who suffer from chronic anxiety issues.<sup>[277]</sup>

## See also

- Culture war
- Folk devil
- Think of the children
- Game brain
- Video game addiction
- Greek electronic game ban
- List of banned video games
- List of controversial video games
- Censorship
- Media influence
- Media violence research
- Moral panic
- Nanny state
- Video game content rating system
- Videogame Rating Council

## Examples:

- Gamergate controversy
- *Islamic Fun*
- *Super Columbine Massacre RPG!*
- *Tropes vs. Women in Video Games*

■ *V-Tech Rampage*

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## Students Over Time: A Meta-Analysis" Personality and Social Psychology Review

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## Video game classifications and controversies

List of controversial video games · List of banned video games · List of regionally censored video games  
· Religion and video games · Video game content rating system

Family Entertainment Protection Act · Law 3037/2002 ·

**Video game law** Truth in Video Game Rating Act · Video Game Decency Act ·  
Video Recordings Act 1984

Australian Classification Board · Central Board of Film Certification  
(India) · CERO (Japan) · ClassInd (Brazil) · ESRA (Iran) · ESRB (U.S.,  
Canada, Mexico) · Game Rating Board (South Korea) ·

**Game content** **Active** Game Software Rating Regulations (Taiwan) · IARC (online) ·  
**rating boards** iOS App Store (online) · MDA (Singapore) ·  
National Audiovisual Institute (Finland) · OLFC (New Zealand) · PEGI\*  
(Europe, Israel, Quebec) · USK (Germany)

3DO Rating System (U.S.) · BBFC\* (UK) · ICRA (online) ·  
**Defunct** Korea Media Rating Board · Recreational Software Advisory Council  
(U.S.) · SELL (France) · Videogame Rating Council (U.S.)

**Lawsuits** *Brown v. Entertainment Merchants Ass'n* · *Entertainment Software Ass'n v. Foti* ·  
Jack Thompson lawsuits · *Strickland v. Sony*

**Controversies** Atari video game burial · *Call of Duty: Modern Warfare 2* · *Grand Theft Auto IV* ·  
*Grand Theft Auto V* · *Left 4 Dead 2* · *Mortal Kombat* · *Resistance: Fall of Man* ·  
Corrupted Blood incident · Disappearance of Brandon Crisp ·  
ESRB re-rating of *The Elder Scrolls IV: Oblivion* · *Hot Coffee* mod · Jynx ·



## Controversy Surrounding Garry's Mod

- Not all of Europe uses the PEGI rating system.

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