

Chapter 20

The Learning Impact of Violent Video Games

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ABSTRACT

There is strong research evidence to suggest that exposure to violent video games is related to an increase in aggressive behaviors in children. Violent video games trigger short-term bursts of aggression, but more importantly they can actually change the user's thinking processes over time. However, there is also strong evidence to the contrary. This chapter presents an overview of recent evidence for and against the argument on violent games and aggression, together with suggestions for ways that parents can help to mitigate negative effects.

INTRODUCTION

“Should I worry about my kids playing violent video games?” is a question concerned parents often ask video game researchers. Faced with ever-higher gameplay statistics and more frequent incidents of school violence, parents are concerned about the impact of video game violence on children, adolescents, and adults—often putting themselves at odds with industry spokespeople. To help researchers respond to these questions, this chapter gives an overview

of concerns, controversy, and research evidence surrounding possible relationships between video games and violent behavior. We start by outlining why video games are potentially more influential than other forms of electronic entertainment, and we outline theories that attempt to explain connections between violent video gameplay, aggression, and violent behavior. We then present evidence from both sides of the debate, discuss issues that complicate research in this area, and conclude with recommendations for parents to monitor and mitigate the effects of violent video game content in their children more effectively.

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CAUSES FOR CONCERN

The video game industry has experienced staggering growth over the past two decades. In 2007, total US game industry sales jumped to \$US18.8 billion, a 40% increase over 2006 (NPD Group Inc., 2008). In the US, video game sales overtook music sales in 2008, and the worldwide video gaming market, excluding hardware and accessories, is projected to reach US\$48.9 billion by 2011 (Reuters, 2007). It has been estimated that nearly 80% of US children between the ages of 6 and 11 play online games (Mediamark Research and Intelligence, 2007), and youth aged 12 to 17 play for an average of 10 hours each week (NPD Group Inc., 2007).

As video games have evolved over time, aggression and violence have become dominant game themes; for example, Haninger and Thompson (2004) found that 98% of a random sample of 81 games contained violence, and 90% either rewarded players who injured characters, or required them to do so. Public concern with video game violence has grown with school shootings such as the 1999 Columbine High School shooting in Colorado, in which the student killers were players of *Doom*®, a game licensed as a US military training tool. As a result, parents, advocacy groups and media organizations press researchers to accelerate their study and understanding of the relationships between violent video games and violent behavior.

Video game researchers commonly define aggression as “behavior (verbal or physical) that: (a) is intended to harm another individual; (b) is expected by the perpetrator to have some chance of actually harming that individual; and (c) is believed by the perpetrator to be something that the target individual wishes to avoid” (Gentile & Anderson, 2006, p. 226). Physical aggression takes place on a continuum from mild to very severe, and violence happens at the severe end of that continuum. Researchers apply these definitions to behavior in both video games and physical reality.

Why might violent video games (VVGs) lead to aggression and violence? VVGs typically require players to perform simulated aggressive and violent acts, including repeated killing, in highly realistic virtual “worlds.” Many features of these simulation games embody the best practices used in learning environments and advertising, both of which are consciously designed to change knowledge, attitudes, and behaviors. Specific violent video game features that appear to make them effective learning tools, particularly for adolescents who are still developing attitudes, beliefs, judgment, and moral control, (summarized from Anderson, 2004; Dill & Dill, 1998; Eron, 2001; and Funk, Baldacci, Pasold, & Baumgardner, 2004) include:

- rewards for violent and anti-social behavior
- player identification with violent aggressors through characters or avatars
- extreme simulated violence in realistic situations
- active, intense player involvement compared to passive media forms such as television and film, potentially leading to stronger effects on the player’s cognition and emotion
- continuous stimulation and a highly interactive entertainment environment, possibly creating addiction
- frequent exposure, modelling, practice, and, as noted above, rewards for violent behavior
- desensitization to violence after frequent exposure, which has been found to be associated with both lower empathy and stronger pro-violence attitudes

In a conceptual analysis, Gentile and Gentile (2008, p. 128) identify seven ways in which video games “systematically and effectively use educational principles” to engage players and teach them the skills they need for violent gameplay. These are:

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