

# Chapter 12

## The Process Model of Gameplay to Understand Digital Gaming Outcomes

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### ABSTRACT

*Common conceptions of digital gaming often allude to its role in promoting aggression, yet little is understood about its function as enjoyable leisure. This alternative lens permits a more comprehensive account of the way in which gaming may hold equivalent benefits to that of other leisure. In developing a rationale for this solution, this chapter evaluates theoretical models explaining the processes through which digital game violence can translate into aggressive behavior. Here, there is a suggestion that these models are too restrictive in accounting for diverse gaming outcomes, suggesting that theoretical frameworks need to be sufficiently complex to account for a wider set of influences. Leisure theory is presented as a framework for understanding diverse gameplay experiences and their impact on gaming outcomes. This framework presents an alternative to the traditional focus of much research by suggesting that differential outcomes of gaming occur as a result of interactions between personal and contextual factors, as well as the dynamic process of gameplay itself.*

### INTRODUCTION

Digital games have been the focus of psychological research for a number of decades, yet there remains substantial concern and debate about the potentially harmful effects of violent digital games on children and young people (DeLisi, Vaughn, Gentile, Anderson & Shook, 2013). These concerns primarily relate to the amount of violent content in particular types of digital games, given that evidence has suggested exposure to violent content in games is related to increases in aggressive attitudes and behaviour (Anderson et al., 2010), and reduced sensitivity to real life violence (Bartholow, Bushman, & Sestir, 2006).

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While some researchers claim that there is conclusive evidence of a link between violent game exposure and aggressive cognition, affect and behaviour (Anderson et al., 2010), others have criticised the theoretical and methodological basis of such claims (Adachi & Willoughby, 2011a; Elson & Ferguson, 2014; Ferguson, 2007). This suggests a need to reconsider the way in which outcomes of (violent) gaming are studied. This is the key focus of the current chapter. This includes a critical consideration of the socio-cognitive models which are typically used within this area, and questions the extent to which they can effectively represent the range of potential outcomes of playing digital games. Following this, other key factors are reviewed, and presented as a reason to reconsider the theoretical underpinnings of this research field. Here, a Process Model of Gameplay is presented as a solution to further understand these issues. Specifically, this model aims to provide a framework through which to understand a variety of factors and the diversity of gaming experiences, and their combined role on gaming outcomes. In a practical sense, this can inform future psychological research to adopt a more holistic approach when measuring digital gaming outcomes, particularly in controlling for the extent of factors which are influential in this regard.

## **Background: Existing Theoretical Models**

Existing theoretical models explaining the influence of violent game content on aggression outcomes include the General Aggression Model (GAM: Anderson & Bushman, 2002; Anderson & Huesmann, 2003), and the General Learning Model (GLM: Buckley & Anderson, 2006). These consolidate existing socio-cognitive models to explain the effects of media violence on aggression-related outcomes. The underlying principle of these models is that engaging with violent digital games interacts with an individual's internal state, trait and situational factors to influence appraisal and subsequent behaviour (DeWall & Anderson, 2011). The long-term effects of such processes are said to occur through the development of knowledge structures via learning processes which create a repeated pattern of responses, increasing the accessibility of violent "scripts" over time (Barlett & Anderson, 2013). Beyond this, the GLM more specifically explains how exposure to *any* media content can "teach" a behavioural response. This includes the role of prosocial media content on teaching prosocial behaviours (Greitemeyer & Oswald, 2009), suggesting digital games can be effective "teachers" when exposing participants to specific types of content (Gentile & Gentile, 2008), and thus highlighting their use within educational contexts (Prensky, 2001). However, given that many games include violent content, this has caused substantial concern in particular academic communities, and prompted much research to investigate the way in which repeated exposure to game violence may be harmful through the way in which aggressive scripts are learnt and applied in the real world.

Although some studies have provided support for these models, other studies have not. Specifically, some researchers have criticised the restrictive nature of these models (e.g., Ferguson, 2009). One such criticism is that they imply "passive modelling" in which individuals exposed to violent media will be more likely to engage in real world violent behaviour, regardless of other key influential factors (e.g., family violence, trait aggression) (Ferguson, 2009). Relevant evidence here is the modelling which has been shown through objectification of females within many digital games (Burgess, Stermer & Burgess, 2007), and the consequences this has on real-world prejudices and beliefs towards women (Beck, Boys, Rose & Beck, 2012; Dill & Thrill, 2007). Similarly, particularly in relation to aggressive effects, existing models exclude the role of genetic predispositions and innate motivational systems towards violent behaviour which are believed to explain a substantial proportion of the variance in real-life violent be-

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