

Effect of Opponent Type on Moral Emotions and Responses to Video Game Play

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Abstract

This study suggests that fighting against different types of opponents in video games (e.g., human opponents vs. monster opponents) may lead to different emotional responses and moral judgments toward game characters. Based on Bandura's moral disengagement theory, this study proposes that shooting at monster opponents makes game players feel less guilty and judge the player-controlled character as more morally justified. An experiment was conducted in which participants played shooting games with either human opponents or monster opponents. The results show that when playing against monster opponents, participants felt both less ashamed and less guilty, reported enjoying the game more, and judged their character as more justified than participants who played against human opponents.

Introduction

RECENT RESEARCH SUGGESTS THAT PLAYING violent video games may raise moral conflicts in game players.¹ In the gaming world, acts of violence or brutal behavior, such as shooting or killing, may have negative effects on players and may undermine their ability to enjoy gaming. To obtain optimal gaming experiences, game players may adopt strategies to alleviate the negative feelings caused by violations in moral conduct.¹

Players may justify their actions, for example, by noting that violent actions are necessary to win the game or that opponents are harmful or cruel and should be treated badly. Narratives of video games framed by game designers also help players justify violent actions that may violate moral standards. Most leading characters in video games are heroes, and their violent interactions are often justified for the purpose of saving the world or protecting lives.² These narratives provide an easy way for players to disengage from their own moral sanctions regarding shooting or killing opponents.

According to Bandura's moral disengagement theory,³⁻⁵ dehumanization is a coping mechanism in which people deem the targets of violent acts as lacking humanity. This view of the victim being less human or lacking in human qualities such as feelings and hopes can disengage moral sanctions.³ Thus, these nonhuman creatures do not deserve moral or empathetic concern. This study specifically examines this moral management strategy during video game play by examining how players respond to two different conditions. One provides a contextual cue that enables players to

justify their violent actions through the process of dehumanization, whereas the other provides no such contextual cue. This study suggests that shooting or killing human opponents during video game play may lead to stronger emotions related to moral transgression, such as guilt or shame,⁶ than does the act of shooting nonhuman (i.e., monster) opponents. Players may also make different moral judgments toward the player-controlled game character when fighting against the two different types of opponents. Players may consider a game character that is shooting at monster opponents or nonhuman creatures to be more justified than a character that is shooting at human opponents. Lastly, levels of hostility and game enjoyment were also compared to examine whether the two different opponent types, one that enables the application of the dehumanization technique and the other that does not, would lead to different responses.

Other noticeable factors may also contribute to different reactions toward video game play. Previous studies suggest that there are gender differences in terms of video game motivations, uses, and performances.^{6,7} Evidence shows that men often find violent games more entertaining and less arousing than women.^{8,9} Players with different video game experience have also been shown to have different affective responses after playing games.¹⁰ These variables are examined in the following analyses.

Methods

Participants were recruited from a large university in Taiwan. In total, 120 students participated in the study

(60 women and 60 men). The average age of the participants was 21 years ($SD=2.21$). On average, participants played video games for 6.17 hours ($SD=7.53$) per week.

Material and procedure

A list of shooter video games sorted into opponent types was created according to game availability. Popular video games were not included because of the study's intent to recruit participants who were not familiar with the selected video games so that short-time game play responses could be measured. The video game used for the human-opponent condition was called *25 to Life*, whereas the video game used for the monster-opponent condition was called *Left for Dead*. Both games are violent shooter games and were set in this study to be played from the first-person perspective (*25 to Life* allows gamers to play from the first-person and the third-person perspective). In *Left for Dead*, the characters being played are survivors who are fighting against zombie-like infected characters. In contrast, opponents in *25 to Life* were human characters. The soundtracks of the video games were set to minimal to avoid the influence of video game music on the participants. None of the participants reported hearing the soundtracks of the games.

Participants were led to an experimental room on arrival and were randomly assigned to play one of the two games for 20 minutes. After the game play, they filled out a questionnaire that measured moral judgments, moral emotions, hostility, game enjoyment, weekly video game play, and demographic information.

Measurements

Moral judgment of the game character was assessed by asking participants whether they agreed with the following three items, "what the character does is justified," "what the character does should be awarded," and "what the character does should be punished." The last item was reverse coded.

Moral emotion was measured via two items: guilt and shame.¹¹ Participants provided answers from 1 to 5 regarding the degree to which they felt guilty and ashamed. Feelings of hostility were measured by asking participants whether they felt angry, annoyed, disgusted, or irritated. Reliability for the scale was $\alpha=0.76$.

Enjoyment was assessed by asking participants to rate their perception of the game as being "enjoyable or not enjoyable," "likeable or unlikable," and "entertaining or not entertaining." Participants rated the three-item enjoyment scale on a seven-level semantic differential format (i.e., extremely, very, somewhat, neither, somewhat, very, and extremely).

Reliability for the scale was $\alpha=0.90$. Demographic information and weekly game play were also assessed at the end of the questionnaire.

Results

A 2 (opponent types) by 2 (gender) analysis of variance was conducted on participants' weekly game play. The results showed a nonsignificant main effect for opponent types, $F(1, 116)=0.01$, $p>0.10$. However, there was a significant main effect for gender, $F(1, 116)=15.32$, $p<0.01$. On average, men spend more time playing video games per week ($M=8.85$, $SD=8.07$) than do women ($M=3.56$, $SD=5.98$). Therefore,

participants' weekly game play was statistically controlled in the following analyses.

Analyses of covariance were conducted to test the hypotheses. Opponent types and the gender of participants were the between-subject factors; and moral judgments of game characters, feelings of guilt, shame, hostility, and game enjoyment were entered as the dependent variables in each analysis. A descriptive analysis of the dependent variables by gender and opponent types is presented in Table 1.

The analysis of moral judgment toward the game characters showed no significant interaction between opponent types and the gender of the participants [$F(1, 115)=0.00$, $p>0.10$, partial $\eta^2=0.00$], and the main effect of gender was not significant either [$F(1, 115)=3.41$, $p>0.05$, partial $\eta^2=0.03$]. However, there was a significant main effect of the game type on moral judgment [$F(1, 115)=192.65$, $p<0.01$, partial $\eta^2=0.63$]. Participants judged the characters they were controlling as more morally justified when shooting at monsters ($M=4.87$) than when shooting at humans ($M=2.10$).

Feelings of shame and guilt were analyzed independently. A significant interaction existed between gender and opponent types with regard to feelings of shame [$F(1, 115)=6.49$, $p<0.05$, partial $\eta^2=0.05$]. Female participants felt more shame in the human-opponent condition ($M=4.30$, 95% CI [3.81, 4.80]) than in the monster-opponent condition ($M=2.41$, 95% CI [1.71, 3.10], $p<0.01$). Men, however, did not respond differently between the two conditions ($M_{human}=3.42$, 95% CI [2.93, 3.92]; $M_{monster}=3.05$, 95% CI [2.35, 3.74], $p>0.10$). Women's feelings of shame ($M=4.30$) were also higher than men's feelings of shame ($M=3.42$, 95% CI [2.93, 3.92], $p=0.05$) in the human-opponent condition. In terms of feeling guilt, only the main effect of opponent types was significant [$F(1, 115)=5.94$, $p<0.05$, partial $\eta^2=0.05$]. Participants felt more guilt in the human-opponent condition ($M=4.01$) than in the monster-opponent condition ($M=3.23$).

The results also showed that opponent type did not lead to different levels of hostility in participants ($F(1, 115)=1.57$, $p>0.10$, partial $\eta^2=0.01$), although a significant main effect of gender did exist with regard to hostility [$F(1, 115)=4.73$,

TABLE 1. MEANS AND STANDARD DEVIATIONS OF MORAL JUDGMENTS, MORAL EMOTIONS, HOSTILITY, AND ENJOYMENT BY GENDER AND CONDITIONS

		Male		Female	
		M	SD	M	SD
Moral Judgments	Human	1.94	1.01	2.27	1.02
	Monster	4.72	1.08	5.02	1.03
	Total	2.86	1.67	3.18	1.66
Guilt	Human	3.65	1.79	4.38	1.63
	Monster	3.40	1.60	3.05	1.50
	Total	3.57	1.72	3.93	1.70
Shame	Human	3.43	1.66	4.30	1.67
	Monster	3.05	1.50	2.40	0.88
	Total	3.30	1.61	3.67	1.70
Hostility	Human	2.82	.96	3.68	1.06
	Monster	3.43	1.23	3.59	1.09
	Total	3.02	1.09	3.65	1.06
Enjoyment	Human	4.44	1.12	3.97	1.36
	Monster	4.65	1.26	5.17	1.03
	Total	4.51	1.17	4.37	1.38

$p < 0.05$, partial $\eta^2 = 0.04$]. In general, women ($M = 3.62$) felt more hostile than men ($M = 3.14$) after playing either of the games.

An analysis of game enjoyment showed a significant interaction effect between gender and opponent types [$F(1, 115) = 4.68$, $p < 0.05$, partial $\eta^2 = 0.04$]. Women enjoyed playing the monster-opponent game ($M = 5.25$, 95% CI [4.70, 5.79]) more than playing the human-opponent game ($M = 4.03$, 95% CI [3.65, 4.42], $p < 0.01$). Male participants did not differ between conditions with regard to enjoyment of the game being played ($M_{\text{human}} = 4.37$, 95% CI [3.99, 4.76] versus $M_{\text{monster}} = 4.57$, 95% CI [4.03, 5.12], $p > 0.10$).

The covariate, participants' weekly game play, was not significantly related to any of the dependent variables ($F_{\text{judgment}}(1, 115) = 1.18$, $p > 0.10$; $F_{\text{shame}}(1, 115) = 0.01$, $p > 0.10$; $F_{\text{guilt}}(1, 115) = 0.36$, $p > 0.10$; $F_{\text{hostility}}(1, 115) = 0.25$, $p > 0.10$; $F_{\text{enjoyment}}(1, 115) = 2.88$, $p > 0.05$).

Discussion

The results of this study suggest that the act of committing violence toward different types of opponents in video games leads to different emotional reactions and moral judgments toward game characters due to the dehumanization technique. Shooting or killing monsters allows for this type of disengagement of moral sanctions. Nonhuman creatures, therefore, do not deserve players' empathic concerns. The results of this study show that participants deemed the player-controlled character that shot monsters as being more justified than the one who shot human characters. Participants also felt more ashamed and guilty when fighting against human characters.

Women and men seem to have different reactions when playing games with different opponent types. Female participants felt more ashamed for fighting against human opponents than they did for shooting monsters. There were no significant differences with regard to men's feelings of shame between the two conditions. The same pattern applies to reported game enjoyment. Previous research on moral disengagement suggests that men disengage from moral sanctions more readily than do women.⁴ The evidence of gender differences in moral disengagement provides an explanation for the results regarding females' differential responses to the two conditions and the lack of differences in men. When women were required to shoot humans during game play, their moral concerns were stimulated, causing them to feel shame for their cruel behavior and to enjoy the game less. However, when facing game designs that help apply the dehumanization technique (e.g., fighting against monster opponents in this study), women's moral concerns and the related emotions decreased. In contrast, as is apparent from the results regarding the human-opponent condition, which did not facilitate the utilization of the dehumanization process, moral feelings of shame with male participants were significantly lower than those with female participants. This result indicates that men have a stronger ability in general to disengage from the moral concerns stimulated by their violent behavior during game play. These findings of gender differences in moral reactions may have implications for research on noninteractive media content, such as movies or television shows. Previous research suggests that men accept and engage in media violence more than women do, because

of gender-role socialization.^{12,13} The results of this study indicate different moral reactions according to gender, depending on how violent media contents are portrayed.

It is interesting to note that in the monster-opponent condition, women enjoyed the game more than men. This suggests that women may still enjoy violent shooting games, especially those that contain some specific narrative features. Future research might explore more on what other aspects of narrative features may have influenced game enjoyment. In addition to this, the discovery that opponent types did not cause differing levels of hostility suggests that future research might also explore whether playing different types of opponents leads to long-term differences. For example, playing video games with monster opponents may stimulate greater enjoyment in women, with equal amounts of hostility after gaming. Greater game enjoyment may lead to more repetitive game play,¹⁴ which may lead to aggressive emotions or other long-term effects, as many studies suggest.¹⁵⁻¹⁷

The participants' past experience with video games was not related to any of the responses examined in the study. The possibility exists that general video game experience does not have any effect on the discussed cognitive or emotional responses after game play, although specific experience with violent shooting games may suggest certain predictions. Future research should explore this possibility.

The two video games selected for this study were somewhat different in terms of their themes and storylines. *25 to Life* is a cops and gangsters-style shooter game, whereas *Left for Dead* is a horror shooter game. Although the opponent types of video games are often associated with specific storylines, which calls for human opponents in law enforcement or military style shooter games and non-human opponents in horror shooter games, future research should, nevertheless, further examine the effects of opponent types by adopting more comparable games or editing a video game's source codes to manipulate opponent types in the game.

This study shows that violent behavior produces moral emotions such as guilt or shame during game play, especially when the targets are human-like characters. Video games that include monster opponents reduce players' moral concerns and influence players' moral judgments toward game characters. Future research should explore whether a reduction in moral concerns can lead to any changes in gaming behavior (such as an increase in violent actions) or even affect gamers in real-world settings.

Acknowledgment

This study was supported in part by a research grant from the National Science Council, Taiwan.

Disclosure Statement

The author has no conflict of interest.

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