

# The Moderating Effect of Attitude toward Violence in a Video Game setting: Initial Explorations

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## ABSTRACT

The discussion around the violence exhibited in video games has been ongoing for quite some time, however very little has been focused on the attitudes and understandings of violence as exhibited by video game players. This study examined the interrelation between self concept, presence and player views of violence. Initial results indicate that experiencing presence via interaction and emotional connection has an impact on the participants views of violence, whereas experiencing presence via spatial understanding and orientation did not.

## Introduction

The discussion around the violence exhibited in video games has been ongoing for quite some time. It is, perhaps more salient now after the recent political movement that has grown after the shooting at Marjory Stoneman Douglas High School. However the discussion of video game violence has focused almost solely on the social effects of game violence. Very little has been focused on the nature and interrelations of the violence portrayed in videogames and the players views of violence. Additionally very little work has been done on player characteristics' impact on this equation. In this study we examine the interrelation between self concept, presence and player views of violence. Since presence has been conceptualized as a conduit into a computer mediated environment we explored the connection between presence and avatar self concept as moderated by views of violence. Our results indicate that the pattern of moderation is driven more by the nature of presence experienced than the type of self concept exhibited by the player or their specific views of violence. Further research is necessary on determining the direction and degree of moderation experienced.

## Literature review

### Self-Concept

Self concept has been explored (as it relates to the self/avatar relationship) from several different perspectives including the concept of extended self concept (where we put ourselves

into the objects we own) (Belk, 1988), the distributed self (Turkle, 1995), in that one's understanding is not unitary but fragmented into several different selves as represented by virtual identities in virtual environments. Bessiere, Seay and Kiesler (2007) state that one's avatar represents one's aspirational identity, whereas Schultze et al (2009) report on the notion that the greater the perceived presence (as exhibited by the integration of social and tele presence) the closer the relationship between self and avatar. What is consistent between these approaches is that one's self concept is not unified but has more than one dimension.

## Presence

The general consensus of presence is that it is a sensation of “being” in an environment. (Heeter, 1992; 2003; Lombard & Ditton, 1997; Schloerb, 1995). Much of the early work on presence focused on this understanding. Lombard and Ditton (1997) discuss presence as the perception of non-mediation. They argue that the degree to which a medium can produce an environment that is accurate in its representations leads to an experience that seems real. Alternatively, Heeter (1992; 2003) defines presence as the process of discerning and validating the existence of oneself as part of, but separate from, the environment. The environment, therefore, must react to the participant’s actions. However, Haans and Ijsselsteijn (2012) argue that there must be a separation between environment and the perception of oneself in order for presence to be experienced. It is this separation that allows us to place ourselves into a surrounding.

## The Effects of Video Game Violence

The effects of violence in video games has been investigated since the first games came onto the market. Early studies in this area examine the nature of video game addiction (Klein 1984) and the impact on aggression (Buchman and Funk, 1996; Dominick, 1984). These early works focused more on understanding the impact than assessing the nature of it. However as research in the field started to mature scholars focused more on the effects of the game play on aggressive behavior outside of the game. Smith et al (2002) investigated the moderating effects of media on aggressive behavior whereas Haninger and Thompson (2004) linked the nature of game play to the use of controlled substances. As research in this field progressed scholars started to look at other possible factors in the nature of video game violence including the degree of presence experienced (Tamborini et al, 2004), and the impact on personality traits (Anderson and Bushman, 2002).

The overwhelming conclusion to be drawn from this body of work is that violence in video games has a mostly negative impact on social interaction. However, with the exception of very few studies the focus has been on the external effects of violence and not on internal game play or understandings. As the realism of games becomes greater the degree of connection to characters within the games becomes of greater interest. Eastin (2006) explores the impact of gender on aggression within a video game and Lachlan and Maloney (2008) investigate the impact of violence and presence on different personality traits.

## Methodology

The basic premise of this paper was tested by running a moderated regression where the degree of experienced presence was regressed onto avatar self concept which, in turn, was moderated by the player's general views of violence. In this respect we could determine first if experiencing presence actually affected one's avatar self concept and then to see if their views of violence impacted this relationship. To perform these tests the PROCESS plugin (Hayes, 2017) was used to determine if the original relationship was valid and if the moderator affected the original relationship.

The scenario for testing these relationship was the video game Skyrim. Skyrim is an adventure role playing game that takes place in an archaic environment. The game is an open format game which means that players are free to do whatever they want and quests are action based as opposed to trying to finish a level of play. Skyrim was chosen for this study due to its advanced character development and the high degree of player character interaction. This level of interaction should allow for advanced and complex connections.

## Results

The test sample for this study consisted of 172 students at Lynchburg College with an average age of 20.5 with a gender split of 57.6% male and 42.4% female. Students were recruited mainly from business and psychology classes. Upon entering the study students would arrive at the testing lab and fill out a pre survey. Once this was completed they would then play the game for two hours, fill out a post survey and then were free to leave. However to complete the study students had to play for two more sessions for a total of six hours of gameplay. At the end of each session students would fill out a post survey.

To test these relationships The Malhotra (1981) scale of self concept, The Nicovich (2017) scale of presence and the Citak (2009) scale of violence was used. The self concept measured the participant's character self concept. This is a semantic differential scale that rated the degree of alignment between two opposite poles. This scale factored into three distinct elements of how they viewed their character. The first factor consisted of the indicators of uncomfortable, unpleasant, emotional, liberal and simple (ACSR1). The second factor consisted of the indicators of thrifty, contemporary, organized and formal (ACSR2). The third factor had the indicators of rugged and dominant (ACSR3). The factor structure converged in 6 iterations and scale reliabilities ranged from .79 to .90.

The Presence scale was developed to investigate presence as a reflection of one's understanding of their surroundings (Nicovich, 2017). This scale factored out into the elements of Spatial presence, Participation, Physical orientation, Unity and Emotional affiliation. These scales had reliabilities that ranged from .75 to .96. And finally Violence also factored into three factors consisting of negative views of violence, positive views of violence and entertaining views of

violence. These scales had reliabilities that ranged from .77 to .83. All scales exhibited factor loadings above .5.

The results of the series of moderated regressions can be seen in table 1. Each cell reports the significance of the original regression relationship of each factor of presence regressed on to the various aspects of avatar self concept in the first column and the level of significance of the violence moderating variable. For this study we were most interested in the pattern of significant moderating relationships. Bolded numbers relate relationships that are significant to at least the .1 level. This is a very liberal significance cut off but we deemed appropriate for an exploration study at this stage. A note on why we regressed presence onto avatar self concept is warranted here. Avatar self concept can be considered to be a part of the player's self concept but to expose it it is necessary to put the player into a situation where the character can be dominant. Presence, in this sense is the gateway into the situation. It is necessary, therefore, to ascertain if the player is connecting with the character. That is why presence is the endogenous variable and character is the exogenous variable. However once that connection is made in what is a fairly violent situation we can see if views of violence moderate this connection.

ViNeg as the moderator		X variable				
		space	Part	Orien	Unity	emotaf
Y variable	acsr1	.00 .16	<b>.00 .087</b>	.00 .48	.00 .49	<b>.00 .06</b>
	acsr 2	.01 .12	<b>.00 .02</b>	.00 .18	<b>.00 .00</b>	<b>.00 .02</b>
	acsr3	.59 .91	<b>.03 .08</b>	.00 .89	.00 .32	.81 .88
ViPos as the moderator		X variable				
		space	Part	Orien	Unity	emotaf
	acsr1	<b>.00 .00</b>	<b>.00 .00</b>	<b>.01 .02</b>	.02 .17	<b>.00 .00</b>
	acsr 2	.54 .64	<b>.07 .04</b>	.08 .90	.36 .25	.36 .28
	acsr3	.00 .38	<b>.00 .07</b>	.01 .14	.00 .85	.01 .66
ViFun as the moderator		X variable				
		space	Part	Orien	Unity	emotaf
	acsr1	<b>.00 .01</b>	<b>.01 .04</b>	.03 .40	.01 .22	<b>.00 .01</b>
	acsr 2	.01 .14	<b>.00 .01</b>	.01 .62	<b>.00 .00</b>	<b>.00 .00</b>

	acsr3	.65 .66	.15 .69	.00 .91	.00 .59	.81 .53
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Table 1

## Interpretations

The first thing that stands out is that engaging in presence via participation leaves one most consistently impacted by violent views. This makes sense in that the player is engaging (via their created avatar) in violent acts (See table 2). However it must be noted that the level of depicted violence in Skyrim is much less than that of many other games. Also of consistent impact was if the player engaged in presence via an emotional affiliation. Violence as an emotional expression would also seem to have an impact as well though this effect was not as consistent. If we look horizontally along the rows we see that there is not much consistency with respect to character type. From this we posit that there is not much difference between character traits with some being significantly impacted and some not. When viewed from this perspective there does not seem to be an overall pattern of effect by type of presence. The overall impact of each type of violence view was different in pattern but not in magnitude as for each moderator 6 of the 15 cells significantly impacted by views of violence.





 <p><a href="https://www.nexusmods.com/skyrim/mods/45894/">https://www.nexusmods.com/skyrim/mods/45894/</a></p>	 <p><a href="http://www.gamemodding.net/en/skyrim/skyrim-monsters/44888-chicken-death-beta.html">http://www.gamemodding.net/en/skyrim/skyrim-monsters/44888-chicken-death-beta.html</a></p>
 <p><a href="https://www.nexusmods.com/skyrim/mods/9573/?tab=images">https://www.nexusmods.com/skyrim/mods/9573/?tab=images</a></p>	 <p><a href="http://thereticule.com/have-video-games-become-too-violent/skyrim-beheading-decapitation-violence-in-video-games/">http://thereticule.com/have-video-games-become-too-violent/skyrim-beheading-decapitation-violence-in-video-games/</a></p>

Table 2

What is interesting to note is that the pattern of impact is almost identical between negative views of social violence and views that violence positively affects game play. Positive views of social violence seemed to be less emotional in nature and with respect to ACSR1 have an impact if one is engaged in presence via an understanding of the physical world and where they fit into it geographically.

As a result of this investigation it appears that one's views of violence, generally whether positive, negative or entertaining, appear to have the greatest impact on an emotional or participatory degree of connection into the displayed environment.

## Limitations and Future Directions

All studies have limitations and this one is no different. Perhaps the largest limitation to this study is the lack of direction of the moderating influences. It is important to know if the moderating influence retards or enhances the nature of the original relationship. This is the next step for this study as we prepare it for journal publication. Also of interest for future research is the question of gender differences. Violence has long been viewed to be more of a masculine trait than a feminine trait and it will be interesting to see if this holds true in a game situation. Also, what impact might these relationships have on social action outside of the game? Does one's views of violence within a game really affect one's actions in real life? The literature seems to indicate that it does. However, the question that always seems to come up in a study like this is "are these results repeatable?" As such the next logical step is to investigate these relationships in a different situation to see if there is indeed a consistency across situations or if the results we found are context specific. Much would need to be examined and a means of measuring the level of experienced violence would have to be either developed or extrapolated.

## Conclusions

The overall conclusion that can be drawn from this study is that views of video game violence, can moderate the connection with the character within a game setting, however not all aspects of engaging in presence are the same. The emotional nature of violence does impact the more emotional aspects of presence, specifically participation and emotional affiliation. However it doesn't seem to matter much as to which aspects of self concept are being experienced.

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### Relevance to Marketing Educators, Researchers, and Practitioners:

This study is timely and relevant as it examines one possible factor in the rash of gun violence that has been happening in this country lately. If marketing professionals better understand the link between video games and real world violence they can better engage ethical considerations when developing and marketing these types of games. For researchers a thorough understanding of the psychological impact of violence as portrayed in a CMC environment is critical, especially as these environments are becoming more and more immersive and realistic. And finally for educators, many if not most of our students are game players. Understanding the influences on our students is the first step in being able to make our discipline relevant to them.

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Stef G. Nicovich earned a Ph.D. in Marketing from the University of Memphis. His published articles have appeared in a number of journals including *The Journal of Consumer Behaviour*, *The Journal of Interactive Advertising*, *The Journal of Computer Mediated Communication*, *The Journal of Interactive Marketing*, *The Atlantic Marketing Journal* and *The Journal of Business and Economic Studies*. Dr. Nicovich's research focuses on psychological reactions to mediated environments.

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