# The Effect of Motion Controls on Player Aggression

COMP230 - Ethics Essay

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This essay will look at motion controls in video games and how they effect the players aggression levels. It will specifically look at the Nintendo Wii and the Wiimote controller.

#### 1 Introduction

The effects of violent video games on real life aggression is a commonly addressed subject and one that appears often in the media....

# 2 Violent Video Games and Player Aggression

Modern video games have vastly improved graphics compared to graphics from games years ago. Fumhe says there is also an increase in the amount of violent content in commercial video games. [1] The improvement in graphics means that in game violence looks more realistic than in previous generations and is likely more immersive.

Different studies define violence in different ways. The issue is with how the in game violence is viewed and whether it is ethical. For example an absolutist would say murder is wrong under any circumstance. [2] Yet video game violence is a pretence, none of it is a real and the player is not harming anyone. [3] This raises the issue of whether video game violence should be viewed in the same way as real violence. Motion controls complicate this further as the player is physically acting out the violence to cause harm to a virtual character.

There are many previous studies that have looked at the effects of video game violence and aggression. For example Sherry found that video games do increase player's aggression levels. However this rise is smaller than the effect of seeing violence on television. [4] The rise in aggression is also short term from when the player starts playing a game. This implies that the rise in aggression fades. Even though video games can cause an increase in aggression this does not necessarily translate into aggressive behaviours. [5]

## 3 Motion controls in video games

Motion controls are control systems that monitor the players movement. One type of motion controls is kinesic natural mapping. This captures the players movement without controllers or any physical props. Another type is incomplete tangible natural mapping. This version requires a physical object, such as the Wiimote. Both versions capture that players movement and translate it into its virtual equivalent. [6]

Both types of motion controls provide more intuitive and interactive controls.

[7] However, they require the user to mimic real life action including violent ones.

Improvements in technology means that video games continue to get more realistic, graphics and sound have been continually improving increasing the players immersion in the game [7]. Kim defines immersion as "a psychological state or subjective perception in which even though part or all of an individuals current experience is generated by and/or filtered through human-made technology, part or all of the individuals perception fails to accurately acknowledge the role of the technology in the experience" [7].

McArthur suggests that users may not want full immersion but instead "neo-immersion". [8] Whitson describes immersion in games as loss of self, social and game awarenesses, in contrast Neo-Immersion focuses on those three factors. [9] Wii Sports is a game released with the Wii that uses movement controls using a Wiimote, Whitson suggests that this game is not trying to fully immerse the player they are likely to be playing it with friends and family. However as this is only one game of many released on the Wii platform this idea can not be applied to them all. This suggests that while motion controls make the game more interactive it also make it more social...

# 4 Video Game Controls and Competence

A possible cause for aggression when using motion controls could be how well an action or movement is translated from reality into a game. Przybylski *et al* found links between lack of competence when playing a game and aggression. [10]

Games using motion controls are more intuitive as they use movement the player already knows. [7] However this could cause frustration for players who have experience in real life of what they are trying to accomplish in game. For example if the player has experience with guns they may find a Wiimote does not work the same way making them feel incompetent.

McArthur *et al* found that the Wiimote accessory that held the closest resemblance to a gun had the highest error rate. However, there was another controller that was shaped similar to a gun that had the lowest error rate.

[8] .......

Competence-impeding gaming experiences have the potential to aggravate and demotivate players Przybylski et al [10]

The frustration — aggression hypothesis says that aggression is caused when a person is being blocked from reaching their goal. [11]

Realistic controllers [12]

TV shows were once criticized for for causing violence the same way video games now are. [?]

Games such as Manhunt have been referred to as 'true murder simulators' when played on the Wii. [13] This is due to the player having to mimic the violent acts performed in game.

Motion controls were and evolution on from the standard controller.

Virtual Reality (VR) is a new emerging technology that attempts to fully immerse the player in a virtual world. VR consists of a Head Mounted Display (HMD) and often motion controls similar to the Wiimote.

Looking at the previous evidence it would suggest that VR will soon be accused of causing aggression as well.

#### 5 Conclusion

In conclusion...

### References

- [1] N. Fumhe and R. Naidoo, "Violent gaming and player aggression: Exploring the effects of socio-psychological and technology influences," in Proceedings of the 2015 Annual Research Conference on South African Institute of Computer Scientists and Information Technologists, SAICSIT '15, (New York, NY, USA), pp. 17:1–17:7, ACM, 2015.
- [2] D. R. Forsyth, "A taxonomy of ethical ideologies.," *Journal of Personality and Social psychology*, vol. 39, no. 1, p. 175, 1980.
- [3] G. Tavinor, "Towards an ethics of video gaming," in *Proceedings of the* 2007 Conference on Future Play, Future Play '07, pp. 1–8, ACM, 2007.
- [4] J. L. Sherry, "The effects of violent video games on aggression.," *Human communication research*, vol. 27, no. 3, pp. 409–431, 2001.
- [5] C. J. Ferguson, "Evidence for publication bias in video game violence effects literature: A meta-analytic review," Aggression and Violent Behavior, vol. 12, no. 4, pp. 470 – 482, 2007.
- [6] M. McEwan, D. Johnson, P. Wyeth, and A. Blackler, "Videogame control device impact on the play experience," in *Proceedings of The 8th Australasian Conference on Interactive Entertainment: Playing the System*, IE '12, pp. 18:1–18:3, ACM, 2012.
- [7] K. J. Kim, F. Biocca, and E. J. Jeong, "The effects of realistic controller and real-life exposure to gun on psychology of violent video game players," in *Proceedings of the 5th International Conference on Ubiquitous Information Management and Communication*, ICUIMC '11, pp. 49:1–49:5, ACM, 2011.
- [8] V. McArthur, S. J. Castellucci, and I. S. MacKenzie, "An empirical comparison of "wiimote" gun attachments for pointing tasks," in

- Proceedings of the 1st ACM SIGCHI Symposium on Engineering Interactive Computing Systems, EICS '09, pp. 203–208, ACM, 2009.
- [9] J. Whitson, C. Eaket, B. Greenspan, M. Q. Tran, and N. King, "Neo-immersion: Awareness and engagement in gameplay," in Proceedings of the 2008 Conference on Future Play: Research, Play, Share, Future Play '08, pp. 220–223, ACM, 2008.
- [10] A. K. Przybylski, E. L. Deci, C. S. Rigby, and R. M. Ryan, "Competence-impeding electronic games and players aggressive feelings, thoughts, and behaviors.," *Journal of personality and social psychology*, vol. 106, no. 3, p. 441, 2014.
- [11] J. Dollard, N. E. Miller, L. W. Doob, O. H. Mowrer, and R. R. Sears, "Frustration and aggression.," 1939.
- [12] R. McGloin and M. Krcmar, "The impact of controller naturalness on spatial presence, gamer enjoyment, and perceived realism in a tennis simulation video game," *Presence: Teleoper. Virtual Environ.*, vol. 20, pp. 309–324, Aug. 2011.
- [13] C. Remo, "Thompson demands wendy's cut wii promotion."