

Christopher Keo (013867680)

Christopher_keo@student.uml.edu

3/20/18

Literature Review 2

The two papers being discussed are ***Enhancing the Gaming Experience Using 3D Spatial User Interface Technologies(2017)*** and ***Stirring up Experiences through Movement in Game Play: Effects on Engagement and Social Behavior(2008)***.

Introduction

In today's society we are seeing a shift in the type of video games that are being produced. In an effort to make games more realistic and fun for gamers, the use of 3D displays and 3D technologies have become more common. Items such as stereoscopic 3D displays, head trackers, Guitar hero guitars, Wii controllers and hand-gestural interfaces have become more common in order to add to one's gaming experience. The papers that have been chosen both try to observe the positive and negative effects of immersing a gamer in the world that they are playing in. While paper 1(2017) focuses on the gaming experience alone, paper 2(2008) goes beyond by looking at social interaction as well.

Experiments

Paper 2 used a series of experiments to see what the impact of controllers that used natural movement. By doing so the researchers wanted to study whether this new ability to play the game would negatively effect social interaction with others also playing the game. The other aspect of their study was to see if gamers would fully immerse themselves in a game that allowed natural movement. If this was true then there would be no social behavior, however, if there was a possibility by the end of the study that both a full gaming immersion and social interaction were possible. The experiment that was setup so that 10 pairs were brought in to play a game which required them to play the drums one with an actual set of drums and another with a controller. After each pair got to play with each different set they took questionnaires to rate their level of game and social engagement. The study concluded that the physical

interaction with an actual drum created a more engaging social and gaming experience. At first guess, researchers were worried that because a gamer was able to use natural movement for a game in order to make the game more realistic they would be *too* immersed and therefore neglect the social engagement but this was not the case.

Paper 1 draws from the ideas brought up in Paper 2 by focusing solely on a user's gamer experience. Paper 2 gave insight into the positive correlation between social engagement and gaming in their original study. Now, Paper 1 tests to see which specific natural movement controller can offer gamers with the most immersive and realistic gaming experience. In the study, which was conducted in 2017, researchers used 3 different natural movement allowing devices to see if it could enhance a users gaming experience. The 3 devices were a 3D stereoscopic display and controller, a head tracking controller and a hand-gestural menu controller. Different styles of games were picked for each controller a pool game was used for the 3D display, a first person shooter was used for the head tracker and a bouncing game was used for hand-gestural. The overall results of the tests were mixed. While participants were fully engaged in their gaming experience usually it depended on the controller or the game itself instead of just the ability to use natural movement.

Conclusion

Paper 1 and Paper 2 both studied the user gaming experience through the physical use of one's motion. In conclusion researchers found that immersing yourself into the game greatly added to one's gaming experience while also adding social engagement benefits. Beyond this idea, was Paper 1's urge to see which of the 3 natural movement devices would be most beneficial and therefore by testing this maybe being able to improve natural movement 3D technology controllers in the future.

Works Cited

Kulshreshth, K. Pfeil and J. J. LaViola, "Enhancing the Gaming Experience Using 3D Spatial User Interface Technologies," in *IEEE Computer Graphics and Applications*, vol. 37, no. 3, pp. 16-23, May-June 2017.
doi: 10.1109/MCG.2017.42

Siân E. Lindley, James Le Couteur, and Nadia L. Berthouze. 2008. Stirring up experience through movement in game play: effects on engagement and social behaviour. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '08). ACM, New York, NY, USA, 511-514. DOI: <https://doi.org/10.1145/1357054.1357136>