Chris Allulis

Analysis: *Behavioral realism and the activation of aggressive concepts in violent video games*

Summary of paper including the research question

I **chose to analyze** "Behavioral realism and the activation of aggressive concepts in violent video games" **from the journal** "Entertainment Computing".

In popular media, it has been a common trope to blame violence in video games and other forms of mass media for violent events. This is highly topical at this very moment, as the United States decides what causes violence (or more specifically, gun-related violence).

The debate is so contentious that even the president of the United States has weighed in on the topic. The president was quoted as saying **"I'm hearing more and more people seeing the level of violence in video games is really shaping young people's thoughts".** Questionable grammar and knowledge aside, this is clearly an issue still being debated.

The paper sought to analyze whether making violent video games more realistic had any discernible effect on aggression levels of individuals that play them. The researchers were not just concerned with the games themselves looking realistic, but also the games behaving realistically.

Two experiments were performed:

- "Experiment 1 investigated whether making in-game enemies behave realistically via the use of ragdoll physics increased the activation of aggressive concepts in players"
- "Experiment 2 investigated the effects of … realistic nonplayer character (NPC) tactics on the activation of aggressive concepts in VVGs"

In other words, experimental conditions were set up in which one scenario had enemies behave more realistically than the control scenario. The other scenario involved programming non-playable characters to behave more realistically. Participants played the game for four minutes in both cases, and were then asked to complete a word fragment completion task (involving words that are **"aggressive"**). In addition, the number of **"kills"** was recorded when the conditions were changed in the game. The researchers were measuring users aggression and ability to focus on the task given the differing experimental conditions.

In my opinion, the research question that the authors attempted to answer was: **"Does** increasing the realism of violent video games affect aggression levels of people playing the violent video games**?"**

Several interesting results of years of experiments are notable:

- According to this research study, "The results of both experiments described [in the paper] strongly conflict with the idea that increasing the behavioral realism of VVGs leads to similar increases in their aggression-related effects"
- "Early research into the effects of realism in VVGs predicted the presence of an important link between realism and VVG effects. This effect, too, now appears to be failing to materialize". In other words, the initial hypotheses made by researchers when this research first came to prominence is largely proving to be false.

Strengths of the paper

The experiment utilized a large sample size of 898 participants, a significant number of people! In addition, I found the experimental conditions to be well designed. I also found the specific questions the researchers were asking to be clever. They weren't simply asking "do violent video games make people violent in everyday life?". They were asking more nuanced questions that could be measured quantitatively.

The researchers built a custom First Person Shooter(FPS) in Unity3D so that experimental conditions could be changed among the different groups. I find this experimental approach to be far more compelling than the classic example of sending out surveys and seeing who responds.

Weakness of the paper
From my reading, there doesn't seem to be any glaring weaknesses. Perhaps the data could have been presented in a more digestible way.

Whether it should be published.
I enjoyed reading this paper (potentially because it aligns with my world view and understanding of this topic). As topical and needlessly contentious as this debate seems to be, there needs to be thorough research that can determine if violence in video games really changes people's behavior so that we have quick citations.

I believe this paper adds some much-needed detail to this research issue – I conclude that this paper should be published.