The Effects of Verbal Profanity on the Gameplay Experience in First-Person Shooters

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Overview

This study investigates the effects of verbal profanity or lack thereof on the valence, arousal, dominance, and presence of players in the genre of first-person shooter (FPS) games. While graphic violence in console and computer games has been studied extensively, the increasing inclusion of profanity has been largely overlooked by researchers. People respond to media not as means of presenting reality, but as if the portrayals themselves are real (Reeves & Nass, 1996). Therefore, it is reasonable to assume that players' responses to verbal profanity in console and computer games should be similar to their responses to real people using profanity. By studying the responses of test subjects, this research intends to garner insight into perceptions of verbal profanity in console and computer games.

A study by Bradley & Lang found that negative sounds are more arousing than positive sounds (Bradley & Lang, 2000). Ballard & Weist conducted a study with animated blood toggled on and off in *Mortal Kombat* and found that playing with depictions of blood was more arousing than without (Ballard & Weist, 1996). Investigations of songs with violent lyrics found that college students who listened to them experienced increased aggressive thoughts and feelings (Anderson, Carnagey, & Eubanks, 2003), and while that study does not focus on the

cognitive psychological measures this study uses, it does indicate a correlation between language of an extreme nature and mental and emotional processes.

Based on these findings and the fact that verbal profanity that often alludes to violence is considered by most individuals to be a "negative" audio component, the following were the expected results with the inclusion of verbal profanity in a first-person shooter:

1. Participants will report lower valence on the SAM scale when verbal profanity is included than when it is not. This will be due to the perception that swearing is a "bad" thing and will likely vary between participants depending on their personal feelings towards verbal profanity.

2. Due to the inherently arousing nature of negative content, participants will report greater arousal on the SAM scale when verbal profanity is included than when it is not.

3. Participants will report less dominance on the SAM scale when verbal profanity is included than when it is not, due to the profanity being directed toward them in the game and resulting in feelings of inferiority.

4. Participants will report greater presence on the SAM scale when verbal profanity is included than when it is not, assuming that the verbal profanity in the game increases his or her feeling of the game being a "real" experience.

Design

This experiment used a between-subject design in which each participant played a PC-based FPS with profanity either included or excluded.

Stimuli

The test stimulus was *Unreal Tournament 2003* for the personal computer. This game features fast-paced, first-person perspective gameplay in which the player competes in free-for-all battles using a variety of projectile weaponry. Each participant played for an interval of fifteen minutes in the "Antalus" game level. The "mature taunts" option was toggled randomly for each participant. This option controls whether or not mature language taunts (those that include swearing) are used by the computer-controlled players (bots) in the game. This study used human bots only since their vocalizations of the taunts are easier to understand than those of alien bots. "Mature taunts" consist of the following:

"Die, bitch!"

"You whore!"

"Kiss my ass!"

"Holy shit!"

Bots also draw from a list of taunts used regardless of whether "mature taunts" is toggled (appendix A). With ten bots in the game and "mature taunts" toggled on, an average of one mature taunt was made per minute, which was an adequate amount of verbal profanity for our study.

Subjects

Subjects consisted of eleven students and one professor: ten males and two females. They received nothing more than hearty thanks for their participation.

Procedure

This experiment was conducted over roughly a seven hour period in one day. Each participant took part in the experiment individually for half an hour. The experimenters randomly selected beforehand whether the participant would play with mature taunts toggled. A moderator briefed the participant with the order of events. Those who were less familiar with the game or the PC controls were given a brief tutorial. The participant then commenced a game session that automatically terminated play at the end of fifteen minutes. Each session was recorded to a VCR for future review.

Response Measurement

At the end of the session, participants rated their responses on a hard copy of Lang's Self-Assessment Manikin (SAM; Lang, 1980) scale. The SAM scale measures valence, arousal, dominance, and presence. Each participant also completed a basic questionnaire to gather the following information:

- the participant's sex
- age group
- game playing habits
- experience with FPS style games
- opinion towards profanity in FPS console/computer games
- personal use of vulgar language
- perception of verbal profanity experience in the game he/she just played

Results

Of the twelve participants, one returned clearly outlier results. As one who had never played FPS-styled games, she did not fit our target demographic. Her answers on the SAM scale were the most extreme possible in the opposite direction of the majority of responses. For these reasons, her data was disregarded in this analysis. Excluding the outlier data, the following results were found:

1. As hypothesized, participants reported lower valence (5.8 on a 9-point scale where 9 is greatest valence) when verbal profanity is included than when it is not (6.2). This indicates a trend in the right direction, but the difference is not significant.

2. Against our hypothesis, participants reported less arousal (7.2 on a 9-point scale where 9 is greatest arousal) when verbal profanity is included than when it is not (7.4), but this is not a significant difference.

3. As hypothesized, participants reported less dominance (5.2 on a 9-point scale, where 1 is most dominant) when verbal profanity is included than when it is not (3.2). This difference is approaching significance (t=-1.588, df=9, p=0.147).

4. As hypothesized, participants reported greater presence (4.7 on a 9-point scale where 1 is greatest presence) when verbal profanity is included than when it is not (5.6). This indicates a trend in the right direction, but the difference is not significant.

The questionnaires revealed a high correlation approaching significance between participant's personal use of vulgar language and his or her opinion of verbal profanity in FPSs (t=0.706, df=1, p=0.015) with those who personally use vulgar language showing a greater preference for its inclusion in the game. It also showed a correlation between personal use of

vulgar language and the perceived level of profanity in the game they played, where those who use profanity less perceived language in the game as being more extreme, regardless of whether "mature taunts" was toggled.

Discussion

The results appear to be good news for those who favor profanity in games since this experiment found that its inclusion led to lower valence, which is likely the developers' desire for the types of games that include profanity. Also, a trend of greater presence was seen with the inclusion of verbal profanity, which would please developers since their intent is to immerse the player into the game world.

According to this experiment's findings, the inclusion profanity seemed to incite no additional arousal; this should allay the fears of those who have concerns with the transfer of excitation following participation in "arousing" media (such as violent video games). According to Dolf Zillmann, "a person who is still aroused from something that happened a while ago, whatever it may have been, and who is now confronted with a situation that causes him or her to respond emotionally, should experience this emotion more intensely and also behave more intensely than he or she would without the presence of residual arousal from the earlier arousing experience." Since arousal levels were not significantly different when verbal profanity was present, it can be safely assumed that its inclusion does not affect the transfer of excitation to subsequent circumstances (Bryant & Zillmann, 1991, pg.116-117). This is far more applicable to children rather than the adults tested since individuals "cannot be cognizant of the fact that they are still aroused from an earlier experience" (Cantor, Zillmann, & Bryant, 1975) if excitation transfer is to occur (Bryant & Zillmann, 1991, pg.117).

Subjects in this study perceived dominance as lower when the profanity was present, which at first glance would seem to be opposite of what a developer would want in a game. However, with highly competitive games such as *Unreal Tournament 2003*, the jeers of the opponents in the game can actually aid in increasing the competitiveness of the player. Verbal provocation can decrease players' sense of dominance while also goading them to play more to become more skilled than their opponents. Although perceived as demeaning and crass, the profanity can cause the player to want to try even harder, rather than turning away to other activities. Factors such as profanity that lower dominance and valence can combine to set the tone of the game and its atmosphere, thus making it an effective tool from the developer's point of view.

The results from this study are far from conclusive, but definitely support the hypotheses enough to warrant further research. The greatest factor working against this study was the limited number of subjects that could be garnered in a limited period of time. Ideally, more people would have participated, with everyone fitting into the target demographic of gamers with first-hand experience with PC FPS games. Of those who did participate, many who had played FPS games had done so on consoles only. PC controls consist of a combination of mouse and keyboard manipulation that many participants found unfamiliar. Having to overcome this learning curve could have affected the results measured by the SAM scale, specifically presence and dominance. The results of the questionnaire show that profanity and perceptions of it are personal and often depend heavily on individuals' usage. While this study dealt with adults, the effects of profanity on younger people who have not become habituated to it and profanity's impact on the gameplay experience could be substantially different. Overall, verbal profanity in games is a subject that warrants further, more in-depth research.

References

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Bryant, J., & Zillmann, D. (Eds.). (1991). *Responding to the Screen: Reception and Reaction Processes*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., Publishers.

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Appendix A

Regular Taunts in *Unreal Tournament 2003*

Just hold still and I'll make it quick!

You flee better than you shoot!

Suck on this!

Hold still, damn it!

Useless!

Step aside!

Oh yeah!

Tag `em and bag `em!

Eat that!

Right between the eyes!

MY house!

Ownage!

Anyone ELSE want some!?

Kill `em all!

You like that?

See ya!

Is that your best?

Next!

Not even CLOSE!

And STAY down!

You be dead!

Nailed him!

That HAD to hurt!

That was nasty!

Burn, baby!

Loser!

Try turning the safety off!

Step aside!

You suck!

Duck faster next time!

Boom!

You die too easily!

Appendix B

Names and Sex of Bots Used from *Unreal Tournament 2003*

Female:

     BlackJack

     Diva

     Lauren

     Rylisa

     Sapphire

Male:

     Brock

     Gorge
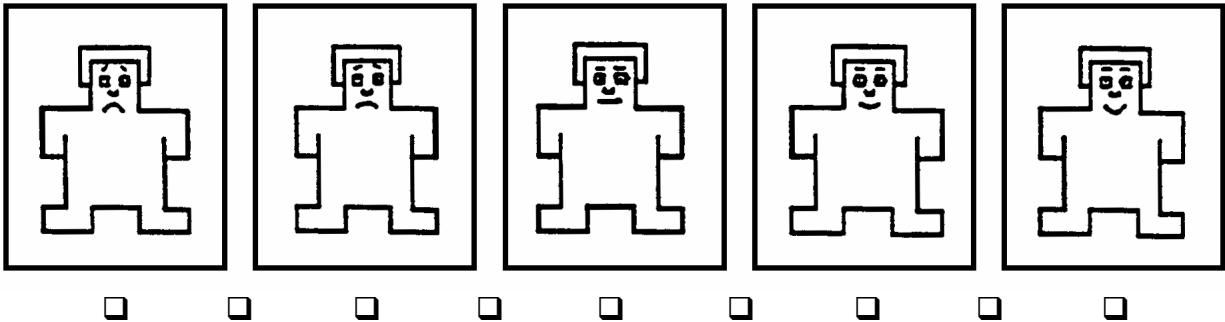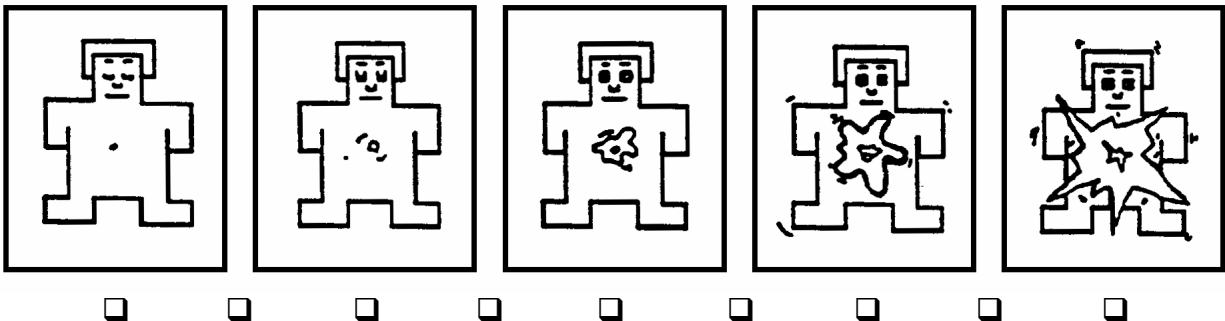
     Horus

     Malcolm

     Romulus

Appendix C

The following pages contain the questionnaire used in this study. An explanation of the SAM scale used was given prior to the subject filling out the questionnaire.
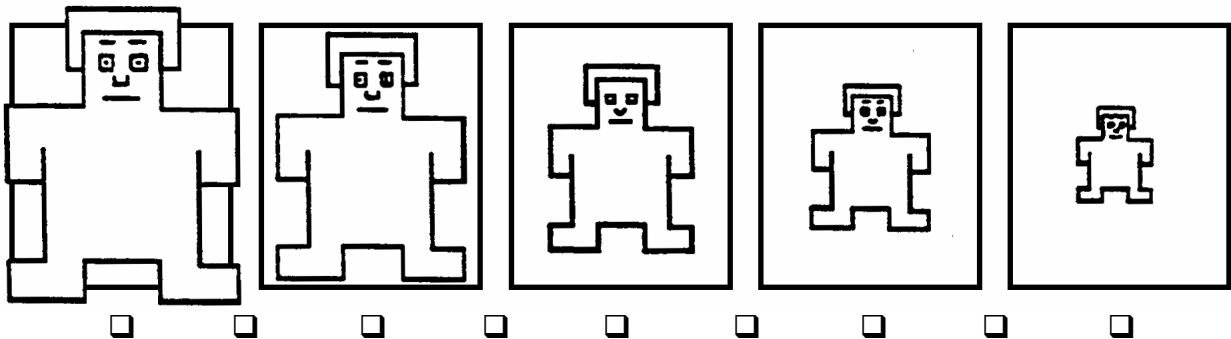

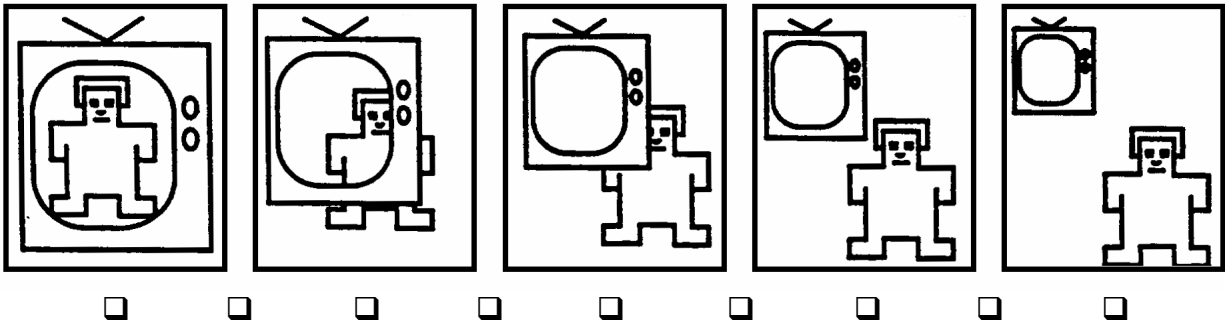Check a box below the scale that indicates how **sad** or **happy** the game made you feel:

❏   ❏   ❏   ❏   ❏   ❏   ❏   ❏   ❏

Check a box below the scale that indicates how **excited** the game made you feel:

❏   ❏   ❏   ❏   ❏   ❏   ❏   ❏   ❏

Check a box below the scale that indicates how **dominant** the game made you feel:

❏   ❏   ❏   ❏   ❏   ❏   ❏   ❏   ❏

Check a box below the scale that indicates how **present** you felt within the game:

❏　　❏　　❏　　❏　　❏　　❏　　❏　　❏　　❏

Gender:　　　　　　　　　　Age Group:

❏　　**Male**　　　　　　❏　　18 - 25
❏　　**Female**　　　　　❏　　26 - 30
　　　　　　　　　　　　❏　　31 - 40
　　　　　　　　　　　　❏　　40+

On average, how much time do you spend *per week* playing console and/or computer games?

❏　　**Less than 1 hour**
❏　　**1 - 2 hours**
❏　　**2 - 4 hours**
❏　　**4 - 8 hours**
❏　　**8 - 12 hours**
❏　　**More than 12 hours**

Out of your time spent playing these games each week, what percentage is spent playing first-person shooter (FPS) style games?

❏　　**0 - 10%**
❏　　**10 - 25%**
❏　　**25 - 50%**
❏　　**50 - 75%**
❏　　**75 - 100%**

What is your opinion of verbal profanity (swearing or other foul language) in computer/console games, specifically FPS style games?

- ❑ **I dislike it strongly and think it's generally unnecessary.**
- ❑ **I prefer not to have it, but it won't stop me from playing a game if it's a really good game.**
- ❑ **I don't care either way – I'll take it or leave it.**
- ❑ **I prefer games with swearing.**
- ❑ **I love it and think more games should have it!**

Which of the following describes your use of vulgar language? (Check all that apply)

- ❑ **I never swear.**
- ❑ **I seldom swear.**
- ❑ **I swear when angered.**
- ❑ **I swear when in physical pain.**
- ❑ **I swear in everyday conversation.**
- ❑ **I swear nearly all the time.**

How would you rate the level of verbal profanity in the game?

- ❑ **Extreme**
- ❑ **High**
- ❑ **Moderate**
- ❑ **Low**
- ❑ **Didn't notice any**