The effects of video games on sexism attitudes in males

Troy Deskins

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Abstract
Research on video game usage has primarily focused on its violent content and how it predicts aggression in participants. Typically, most of these studies show that video games (VGs) cause individuals to become more aggressive and so VGs are theorized as a powerful medium for influencing behavior and cognition. Stereotypic presentations within media also influences behavior and cognition. Given that many VGs make use of stereotypes, particularly negative stereotypes related to gender, there is a need to investigate how VGs might reinforce and normalize the mistreatment of women in society. It was hypothesized that prior experience of playing violent video games (e.g., in person or online game play/messaging) might cause players of these games to accept the mistreatment of women. Specifically, participants were asked to rate how offensive they found screen shots of a series of sexist chat messages sent to female gamers to be. The analyses revealed that those who play violent video games, and scored high on benevolent sexism rated the sexist stimuli messages more amusing than others. In this study it was shown that high hostile sexists believed these messages to be amusing. It was also found that benevolent sexists also found the messages less amusing, a result consistent with prior research. Implications and future directions are also discussed.

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Research on video game usage has primarily focused on its violent content and how it predicts aggression in participants. Typically, most of these studies show that video games (VGs) cause individuals to become more aggressive and so VGs are theorized as a powerful medium for influencing behavior and cognition. Stereotypic presentations within media also influences behavior and cognition. Given that many VGs make use of stereotypes, particularly negative stereotypes related to gender, there is a need to investigate how VGs might reinforce and normalize the mistreatment of women in society. It was hypothesized that prior experience of playing violent video games (e.g., in person or online game play/messaging) might cause players of these games to accept the mistreatment of women. Specifically, participants were asked to rate how offensive they found screen shots of a series of sexist chat messages sent to female gamers to be. The analyses revealed that those who play violent video games, and scored high on benevolent sexism rated the sexist stimuli messages more amusing than others. In this study it was shown that high hostile sexists believed these messages to be amusing. It was also found that benevolent sexists also found the messages less amusing, a result consistent with prior research. Implications and future directions are also discussed.
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The Effects of Video Games on Sexism Attitudes in Men and Women

Introduction

As society becomes more connected through the Internet, many forms of traditional human interaction have shifted toward online communities. One of the largest growing online communities is the video game community. The video game industry has become more profitable than all other forms of media, reaching revenues of 21 billion dollars in annual sales (Ortutay, 2009). In fact, over forty-one percent of Americans now report playing video games (Williams, Martin, Consalvo, & Ivory, 2009). According to a 2015 report by the Electronic Software Association, four out of five homes in the U.S. have a device for gaming. Over 51% of homes own a dedicated game console, 43% of these people play these games regularly, and the two largest game genres are reported as social and multiplayer games. Although boys and men used to make up the bulk of video game players, this pattern is changing. Now, almost half (44%) of players identify as female (O'Leary, 2012).

According to O'Leary (2012), despite this shifting demographic, a dearth of psychological research has examined how playing video games might affect players' gender schemas. This is especially important in the modern gaming context because many popular video games are played in real-time with other players from across the globe. These games also often include the ability to “chat” – i.e., communicate orally via headphones or visually with “chat windows” that appear onscreen with text messages from other players (Fox & Tang, 2014). This ability to communicate with other players comes with pros and cons. Although being able to coordinate game-related activities via chat tools can improve rapport with other players and improve the overall experience of
Effects of Video Games on gaming, many players commonly report abusive treatment and distasteful actions on the part of a great number of fellow online gamers. Moreover, due to the anonymity that online environments can provide, this tendency for abusive and disrespectful communication is exacerbated because people are not held accountable for what they post or say. In such spaces, people a subset of individuals feel empowered to ignore or defy the social prohibitions against expressing blatantly racist or sexual/sexist sentiments.

When the specific search terms “sexism and video games” were included in the psychology research database, PsychINFO, only 11 peer-reviewed publications were found. At this time, the dominant research on video game users consists of mostly examinations of how levels of aggression are influenced by video game use. Considering that the evolving social climate is one wherein online socializing is becoming a new norm, we must pay special attention to the shortcomings and benefits of this new medium. The purpose of the current study is to examine how the pervasive bias against women is, and how this might permeate the video game industry. Specifically, I will explore the premise that video games perpetuate sexist attitudes in players (especially male players) during online interactions. If this postulation is sound, I will also explore whether or not this bias might be manifest in how video game players evaluate blatantly sexist comments made by male players, but directed at female players. Support for these issues can be derived from the exploratory research of Fox and Tang (2014).

Specifically, Fox and Tang (2014) have found that many players commonly report abusive treatment and distasteful interactions with fellow online gamers. Moreover, due to the anonymity that many online environments allow, such settings seem to provide fertile ground for those interested in engaging in sexual harassment and other forms of
negative interaction. In their research, Fox and Tang (2014) investigated what personality traits, and demographic variables with level of video game play, would predict sexist attitudes toward women who play video games. Participants were recruited through online forums, blogs, and social media sites to participate in an online survey that measured lifetime video game play, conformity to masculine norms, empathy, sexism and social dominance orientation. They found that participants who endorsed masculine norms were more likely to report sexist attitudes about women who play video games, and scored much higher on sexism compared to the participants who did not endorse masculine norms. Unfortunately, the majority of research on video games is squarely focused on exploring the effects of violent content on gamers (Anderson et al., 2010). However, violence is only a small aspect of modern games, as many of them seem to feature sexist and highly stereotypical driven content (Stermer & Burkley, 2012).

For example, in a content analysis of video games conducted by Williams Martins, Consalvo, and Ivory (2009), these researchers found that 40% of the games studied featured no female characters at all, and when female characters were present their role was usually that of a sexualized secondary character. This sexualizing of female characters usually took the form of presenting such characters with unrealistically large breasts, small waists, and large or even exposed buttocks. Additionally women were also often relegated to the role of a prop or foil for male leads (Burgess, Dill, Stermer, Burgess, & Brown, 2011).

Many theories have been proposed to explain why these games may lead to the marginalization of women and other groups. According to cultivation theory (Stermer & Burkley, 2012), repeated exposure to such media messages perpetuates attitudinal
endorsement of these sentiments. In line with objectification theory, media depictions of women as sexually submissive objects can influence individual’s thoughts, reinforce gender stereotypes, and gender roles (Stermer & Burkley, 2012). Traditionally, video games have been seen as a male activity, made by and for males. Even though female game player numbers are on the rise, very few women actually design or write code for these games (Kafai, Heeter, Deener, & Sun, 2006). Consonant with Western norms of masculinity, many online gaming platforms portray virtual environments in which men dominated women, and this bias is generally not questioned by the predominantly male consumers and producers of these media (Dill & Thill, 2007).

This expectation provides a framework that males are of higher status compared to female gamers, and while women can and most often do remain anonymous in gaming environments, if they do reveal their gender, their abilities as a gamer and character are often questioned or ridiculed (Fox & Tang, 2014). Although sexist humor is overtly offensive to women, anyone who may spend time in these games might not see this as an issue. A primary goal of this project is to determine whether reactions to these offensive messages map onto degree of sexist attitudes held by participants. Another goal is to assess the relationship between sexist humor and ambivalent sexism (e.g., misguided benevolence). Finding these messages amusing or offensive may represent a resolution to conflicted heterosexual ambivalence and, therefore, hostile and ambivalent sexists may react differently to the messages.

**Popular Theories in Media Research.**

Media may shape and affect beliefs and attitudes toward gender roles and society (Breuer, Kowert, Festl, and Quandt 2015). In their research, Breuer and colleagues used
Effects of Video Games on postulates of Cultivation theory to explain how the media influences. Cultivation theory suggests that being exposed long term to media content can shape the perception and attitude of an individual's social reality by assuming these perceptions of social realities become more similar to those portrayed in the media, and the more heavily it is used, the stronger this becomes (Breuer et al., 2015). Cultivation theory has been widely used in media research; currently it has been used over 500 studies, and traditionally research in line with Cultivation Theory has traditionally focused on violent content within video games. According to Gerbner, media exposure creates a view that becomes consistent with the distorted reality, rather than the actual reality itself (Gerbner, 1999). This theory suggests that media messages use three psychological outcomes, understanding, describing, and deciding, to reveal the way things work, and describe what they are, and what we should do about them (Gerbner, 1999). Thus, unreal symbols in media contribute to an individual’s schemas on gender roles and relationships, and that these schemas influence their relationships, behaviors, thoughts and feelings (Dill and Thill 2007).

Ambivalent Sexism Theory

Sexism is a bias based on the idea of one gender is superior in particular domains, and such thinking can lead to discrimination of a group. Such thinking is usually formed through a person’s conception of gender roles (Glick & Fiske, 1996). According to Ambivalent Sexism Theory our social structure consists of a hierarchy of dominant men and submissive women. For both sexes, they can hold both benevolent and hostile attitudes toward each sex, consisting of power differences, gender roles and stereotypes, and heterosexual relations (Glick and Fiske, 1996). This is separated into two separate
Effects of Video Games on but related attitudes; hostile and benevolent sexism (Lee, Fiske, and Glick, 2010). Benevolent attitudes toward male stereotypes consist of men being instrumental, respectable, and powerful, whereas hostile attitudes include seeing men as arrogant, unscrupulous, and aggressive, while women are stereotyped as warm, likeable, weak, and submissive (Dill and Thill, 2007). Although both reinforce traditional gender roles, there are differences between the two, as hostile sexism is the more familiar form of sexism, involving feelings of antipathy, and fear that feminist views take from men’s status in society (Stermer and Burkley, 2015).

Men and women can both express sexist beliefs about either sex (Glick & Fiske, 1996). These can lead to prejudice and discriminating behaviors in many social institutions for the discriminated sex. These views when focused on gender role can hurt and even restrict a person’s advancement in life, such as employment, and even education. Research by Glick and Fiske (1996) led to the development of the Ambivalent Sexism Inventory (ASI). The reasoning for this scale was to provide evidence that men’s power structure and dependency on women forms ambivalence toward women. The ASI measures this theory and contains subscales for Hostile Sexism and Benevolent sexism, which consists of power, gender differentiation, and heterosexuality. Whereas hostile sexism is used to justify derogating women, benevolent sexism is the view that women are pure and in need of a man’s protection. With benevolent sexism, views on gender roles become rigid and characterized as protective, patronizing attitudes towards women, consisting of views such as that women are to delicate for sports, our that they are morally pure in comparative to men (Stermer and Burkley, 2015). In heterosexual relations women are seen as desirable objects for men, existing only to satisfy their needs,
rather than attempting to fulfill their own desires, leading to sexist jokes, sexual harassment, and discrimination at work (Dill and Thill, 2007). It seems reasonable then, that for individuals higher in hostile sexism, that sexist treatment of women might be seen as less offensive compared to how individuals lower in hostile sexism might perceive such treatment. How video games might promote this, however, remains to be seen, but is the focus of the present research.

**Masculine norms**

In Western society, there is a strict schema related to how men are supposed to behave. We describe this scripted behavior as “masculinity.” Masculinity norms are communicated to all members of the society by approval or disapproval of relevant behaviors by others and, over time, those identified by society as actually being male (Thompson, Pleck, & Ferrera, 1992). Typically, the scripted role the men are expected to manifest includes such assumptions as the idea that men should be dominant, competitive, strong, stoic, and independent (Mahalik, Locke, Diemer, Scott, & Gottfried, 2003). The degree to which men are able to successfully enact masculine norms can influence how they treat other men, as well as how they treat women. Current research suggests that men who are found to be relatively high in their endorsement of masculinity scripts are more likely to sexually harass women (Pryor, 1987). Furthermore, Sinn (1997) found that men high in traditional masculinity were more likely to support views of sexual harassment and hold negative attitudes toward gender equality. These masculine norms are stronger when the majority of social interactions occur between other men (Fox & Tang, 2014). This stereotype that a real man is rough, rugged, tough, aggressive, and violent, and that men should be ready for whatever stands in their way is
often reinforced by the media as the prototype for the hyper-masculine man (Yang, Huesmann, & Bushman, 2014).

Hypermasculinity is a term to describe the exaggeration of masculine stereotypes, and can be applied to putting emphasis on masculine gendered physical traits and behavioral attitudes, as well as how dismissal or hostile they are towards feminine traits (Salter and Blodgett, 2012). Scharrer, defines this as the exaggeration of macho characteristics, and distorted sexual attitudes towards partners and a desire for action and danger, and accepting that physical violence is apart of being a male (Scharrer, 2004). Comparatively, hyper-feminity is the exaggeration of the female stereotype, focusing on dependence, submission, and sexuality the main value of women (Scharrer, 2004). The issue of hyper-masculinity, sexism and hostile responses by male gamers over a female gamer’s expression of femininity encourages and perpetuates the idea of masculine privilege and discourages any ungendered discourse by women in online gaming communities (Salter & Blodgett, 2012). Research by Thomas and Levant (2012), investigated whether endorsing traditional masculinity ideology moderates this relationship in college men, exposed to violent video games. As hypothesized, exposure to violent video games was correlated with aggression, and traditional masculinity ideology was correlated with aggression (Thomas and Levant, 2012). This masculinity endorsement was found to moderate the relationship between violent video games, and aggression, while high endorsement increased the positive linear relationship between exposure and aggression (Thomas and Levant, 2012).
Gender and Video Game Content

Measurement of gender representation in video games is difficult because game content is much different than that of video, television, and music (Ivory, 2006). Unlike other forms of media such as television, the content analysis of video games is not a linear uniform package; the content within video games depends on the player’s experience, skill, and time commitment (Ivory, 2006), making traditional forms of content analysis difficult and tenuous for video games. However, the gender content within video games has undergone some analysis, and consistently the results have shown that video games include far more male characters than female characters (Ivory, 2006). Some examples of how gender is represented in video games was shown in research by Burgess and colleagues (2011). They reviewed over 149 games and found that female characters were overly sexualized within video games; and this sexualization generally took for form of endowing female characters with impossibly large breasts, small waists, and large, exposed buttocks. They also found that female characters were generally regulated to background roles in the game, or they were given no meaningful role in the games (Burgess et al., 2011). In contrast, research by Leonard (2003) revealed that male characters in video games were designed to regularly engage in physical violence (63% of all male characters). If the game contained a female character, shown to be capable of engaging in the same missions, and equal to the strength of the male character, the female character would still be sexualized (i.e. dressed in provocative clothing) whereas the male character was not.

Most female characters in video games are usually stereotyped and objectified (Burgess et al., 2011). In an earlier study, Burgess, Stermer, and Burgess (2007)
performed a content analysis of 250 video game covers and found female characters were portrayed as ancillary characters, and represented in stereotyped gender roles, or subject to objectification. For example, in the game *Mortal Kombat*, the character Princess Kitana needed assistance from the male characters, even though her fighting abilities were shown to be on par with her counterparts; thus, she was still depicted as reliant on the male characters even though she was as strong as they were (Stermer and Burkley, 2015). Dietz (1998) analyzed female character portrayal and violence, and found that when women were included in the game, 79% of the actions toward women were aggressive and 20% of them depicted violence toward women. Of these only 10% of the games featured female main characters. Other common roles for females included the damsel in distress, or an obstacle (Dietz, 1998). Beasley and Collins-Standley (2002) analyzed Nintendo and PlayStation games and found the characters primarily in revealing clothing, and also large breasted and used as sex objects. Scharrer (2004) analyzed the images and text of advertisements of the top three selling video game magazines and found that males outnumbered females three to one, and over half contained violence, muscular males, and female characters depicted as much sexier and attractive compared to their counterparts.

Research by Yang, Huesmann, and Bushman (2014), examined differences between playing as a male or female aviator to see if this causes an increase in players' aggression. They assigned male and female participants randomly to a violent video game, as either a male our female avatar. After completing game play, participants gave an ostensible partner who hated spicy food hot sauce, and the amount given was used for aggression measurement. The results of this study found that both male and females
Effects of Video Games on assigned to the male avatar were more aggressive compared to those using the female avatar (Yang et al., 2014). In another study, research by Dill, Brown and Collins (2008), looked at the relationship between sex-stereotypes, game characters, harassment, and rape myth. In that study, it was found that short-term exposure to this content influenced sexual harassment judgments, but had no significant findings in rape myth acceptance. The collection of these studies suggests that playing VGs, or exposure to them, may lead to more sexist attitudes or treatment of women.

**Sexism and Online Gaming**

A virtual environment is defined as a synthetic representation of a natural or imagined environment, and these digital worlds can contain replicas of everything found in the real world, and they are populated with digital representations of humans called avatars (Guadagno, Muscanell, Okdie, Burk, and Ward, 2010). Within these digital environments, there is a form of harassment that is known as griefing, which is defined as intentional harassment of other players in the gaming world (Gray, 2011). Griefers are players who get enjoyment not from gameplay, but primarily causing other players to become distracted during gameplay (Foo & Koivisto, 2004). Additionally, another form of online deviance is known as flaming, and while it is similar to griefing, but refers to negative antisocial behavior, such as expression of hostility, profanity, and venting strong emotions (Thompsen, 2003). Flaming consists of homophobic, racist, and misogynist language during electronic communication, and is usually found in online spaces that are anonymous (Thompsen, 2003).

The anonymity of the Internet disinhibits and compels some people to do things; they normally would not (Gray, 2011). Research by Gray (2012) revealed that the online
community known as Xbox Live features a world abasement of minority women. Also, women video game players when identified as a woman repeatedly experience discrimination when they enter these gaming communities (Gray, 2012). Often, the women are subjected to sexist jokes such as “get back in the kitchen,” or are sexually harassed (Gray, 2012). Gray’s research (2011) consisted of ethnographic methods: participant observations and narrative interviewing. Gray immersed herself into the day-to-day activities of a clan member of a guild on the Xbox-Live community, to study a variety of communities comprising females of all colors. Gray found that most of these women had grouped themselves into clans, who play together online. These women all suggested that when a griefer hears a female sounding individual it would lead to acts of racism, sexism, and other inequalities (Gray, 2011). Once these women are heard, they reported experiencing these inequalities, and additionally, they perceived males as the oppressor to avoid, and many of them responded by avoiding males all together and self-segregating (Gray, 2011). Even more disturbing was the reports that males would be inclusive of women, but only if they fill a subservient role. There seems to be an inherent desire for women to serve as a type of mascot that reflects an inferior view of women within this community (Gray, 2011).

These findings indicate that there is an urgent need to asses the experiences of the non-traditional gamer (Gray, 2011). The workers that make up the gaming industry consists primarily of men, and considering that they have played video games themselves throughout their development, it is possible that the programmers and developers of these games perpetuate female gender-roles through some underlining bias (Deskins, 2013). Considering the findings of Gray, testing video game users for reactions to sexual
Effects of Video Games on harassing messages is important; as to see if these video games are reinforcing the benevolent sexism views these male gamers may hold towards women.

**Current Research**

The purpose of the present study is to examine the role of playing video games and reported sexism on how participants react to sexist statements directed toward women. It was hypothesized that video game players low in sexist beliefs would be offended by sexist statements whereas people high in sexist beliefs would agree or be less offended by sexist statements. It was also expected that gender would interact with these effects. Specifically, men high in hostile sexism will find the messages significantly more amusing and less offensive than either woman or men low in both hostile sexism. The goals of this study were to extend previous research examining the relationship between hostile sexism and the enjoyment of sexist humor, and underscore the possibility that benevolent sexism may represent qualitatively distinct attitudes for men and women. In order to gain a complete understanding of the relationships between sexism, gender, and men's and women's real world reactions to sexist humor, it is important to continue to investigate reactions to these messages, especially with the current rise of online gaming.

**Methodology**

**Participants**

To conduct this project, 117 undergraduate participants (41 men, 76 women) were recruited for the study, using classroom announcements and the EMU’s subscription to the Sona online human participant management system.
Effects of Video Games on

Measures and Stimuli

**Filler Questions.** The majority of the questions that participants completed in the two-part questionnaire were filler items that were included to reduce participants’ ability to ascertain the true intent of this study (this intent was, however, revealed to participants during the debriefing procedure of this study). Immediately after completing the questionnaires of this study, participants were introduced to an ostensibly separate part of the study concerning how individuals form impressions of others on the basis of information sent through messaging online.

**Demographic Questionnaire.** This questionnaire assessed participants’ race, gender, video game playing habits, and their undergraduate classification. (see Appendix A for specific items).

**Ambivalent Sexism Inventory** (ASI). This questionnaire measures various forms of anti-feminist attitudes (Glick & Fiske, 1996). Specifically, it consisted of two subscales of 11 items each (22 items in total). The first subscale assessed a respondent’s endorsement of hostile sexism (HS), or the idea that sexism is no longer a problem in modern society. It includes items such as “women fail to appreciate all that men do for them” and “most women interpret innocent remarks as sexist” (p. 500). The second subscale assessed a respondent’s endorsement of benevolent sexism (BS). Benevolent sexism is characterized by the idea that women are to be cherished and protected by men. It includes such items as “men should always open the door for women” and “women should always be there for a man.” Participants utilized a Likert rating scale to complete this measure (i.e., 1 = strongly disagree to 5 = strongly agree). Higher scores indicate a stronger endorsement of the construct of interest. It should be noted that 18 additional
items created specifically for this study were added to the ASI to obfuscate the purpose of this scale.

Screenshot Stimuli. For the images of sexual mistreatment of women, participants were presented with seven screenshots of instances of men harassing women with blatantly sexist comments. Specifically, participants would be linked to a webpage that included an image of a text comment made to a female player. These comments included sentiments related to the targeted woman’s promiscuity, physical attributes, or her need to better engage in stereotypical gender scripts (e.g., “go in the kitchen and stop gaming its for men not for pussys”), etc. After viewing each image, participants were asked to rate how offensive and amusing they found each image by using a 6-point Likert-type scale (0 = Strongly Disagree, 5 = Strongly Agree). The average offensiveness and amusement ratings were summed across the multiple images to arrive at two total scores (i.e., one total score for how “amusing” participants found the sexist comments ($M = .82, SD = .96$), and one total score for how “offensive” they found the comments, $M = 3.99, SD = 1.03$).

Independent and Dependent Variables

All students participated in the same online study. The independent variables of this study included participants’ gender, video game usage (i.e., “yes,” they played video game; or “no,” they do not play video games), and scores on the hostile sexism (HS) and benevolent sexism (BS) subscales of the Ambivalent Sexism Inventory (ASI; see Appendices). The two dependent variables of this study were participants’ summed ratings of how “amusing” or “offensive” the messages in the screenshots were to participants.
Procedure

After completing the IRB approved consent procedures, participants were given access to online versions of all of the questionnaires described above. Immediately after completing these questionnaires, participants were then asked to view and evaluate a series of screenshots of text messages sent to women online (see figure 1 for these items). Next, participants completed the demographic questionnaire. Finally, participants were thanked and debriefed.

Results

In order to effectively examine how benevolent sexism influenced amusement ratings, scores on that subscale were split into high and low levels of benevolent sexism and for hostile sexism using a median split for both subscales. Ratings of how amusing participants found the sexist comments to be for scores on the benevolent sexism subscale was negatively correlated, \( r(117) = -0.230, p = 0.103 \). As expected higher benevolence ratings predicted lower levels of amusement. That same rating, however was positively correlated with participants’ hostile sexism scores, such that higher hostile sexism reports predicted individuals reporting the images as more amusing \( r(117) = 0.332, p < 0.001 \). The same set of correlations were also conducted for how offended participants were by the images as a function of benevolent and hostile sexist ratings. As can be seen in Table 1, higher benevolence scores predicted more offensiveness ratings, \( r, (117) = 0.235, p = 0.01 \), and higher hostile scores predicted less offensiveness, \( r(117) = -0.299, p = 0.001 \). The relationship between amusement and offensiveness ratings were also examined for how much participants reported playing violent video games. As shown in
Table 1, the correlation for benevolence and offensiveness was not significant, $r(117) = .087, p = .351$. As can be seen in Table 1, a correlation of amusement with violent video game play was also ($r(117) = .184$ and $p = .047$). That correlation showed that as people who reported playing more VVGs they also reported finding the images more amusing.

In order to examine the suspected differences of Hostile sexism, gender and whether or not participants played Violent Video Games (VVGs) or not, a $2$(Hostile sexism split: above, below median) X $2$(gender: women, men) x $2$(Violent Video Games played: yes, no) analysis of variance (ANOVA) was used for the mean amusement scores. That ANOVA indicated a marginal main effect for VVGs, $F(1, 109) = 3.436, p = .067$. That effect occurred because individuals who play VVGs reported more amusement across the images ($M = .988$) than did individuals who do not play VVGs ($M = .635$). There was also a marginally significant effect for Hostile sexism, $F(1, 109) = 3.712, p = .057$. That effect occurred because people higher in hostile sexism rated the images as more amusing ($M = 1.06$) than did people low in Hostile sexism ($M = .55$). No other effects or interactions were significant.

Similar analyses for video game type, sex, and hostile sexism was conducted for the offensiveness ratings. Table 2, presents a breakdown of the descriptive statistics for each of the participants by sexism split, VG type, and sex. The same sets of analyses were used for ratings of offensiveness of the images. Those analyses found only a main effect of Hostile sexism, $F(1, 109) = 7.697, p = .007$. That effect occurred because people higher in Hostile sexism found the images to be less offensive ($M = 3.70$) than did people low in Hostile sexism ($M = 4.34$). No other effects or interactions with hostile sexism
were found. Table 3, presents a breakdown of the descriptive statistics for each of the participants by sexism split, VG type, and sex.

In order to examine the suspected differences for how amused benevolent sexist participants were, a similar 2(Gender: women, men) X 2(Benevolent sexism: High, Low) X 2(VVG Participation: Does not play VVGS, Does play VVGS) ANOVA was conducted for mean evaluations of how amusing the images were rated. That analyses found a significant main effect of video games, $F(1, 109) = 5.012, p = .027$, such that individuals who played VVGs were more amused (.99) than were people who did not ($M = .64$). Additionally, there was a significant VVG type X Gender interaction, $F(1, 109) = 4.140, p = .044$. Simple effects tests indicated that that effect occurred because men who played VVGs were more amused ($M = 1.25$) than were men who did not play VVGs ($M = .27$), or women who did play VVGs ($M = .74$). No other effects were significant. Table 4 presents a breakdown of the descriptive statistics for each of the participants by sexism split, VG type, and sex.

The same analyses were conducted for the offensiveness of the pictures. For that ANOVA, however, there was only a main effect of benevolence on ratings of offensives, $F(1, 109) = 4.067, p = .046$. That effect occurred, however, because people high in benevolent sexism reported being more offended ($M = 4.27$) than did people low benevolent sexism ($M = 2.82$). Table 5 presents a breakdown of the descriptive statistics for each of the participants by sexism split, VG type, and sex.
Discussion

It was hypothesized that video game players high in hostile sexism would rate sexually charged messages sent to women gamers as more amusing and less offensive than those rated low in hostile sexism. It was also hypothesized that individuals low in hostile sexism, or high in benevolent sexism would interact with gender to affect ratings. Lastly, it was hypothesized that individuals high in hostile sexism would interact with gender such that hostile men would accept the mistreatment of women more than others. Unfortunately, the data did not support the first hypothesis, but there was some support for the second hypothesis. One of the reasons that some of the hypothesized results may have not been supported could be due to the fact that static images were used for the study. It may be that participants may actually have to directly be exposed to the video games themselves for an effect to take place. Another reason could be that the images were also used as a way to prime participants. That is, for some participants the images grew more or less offensive over the presentation of the seven images rather than an independent rating of each (a trend that was supported by the direction of the ratings over time in the present study, and consistent with prior studies on priming (see Bargh & Pietromonaco, 1982). It may have been better to have used videos of gameplay as stated before, rather than have relied on images sent to women. This could be a factor as to why there was not much difference compared to participants who indicated they played video games and those who do not.

The support for video game players who scored high in hostile sexism, and found the images amusing does line up with available literature about video game content. Female characters are reported as being overly sexualized in games, and also regulated to
miniscule roles, used as a prop, or that of a supporting role (Burgess, Dill, Stermer, Burgess, & Brown, 2011). Also, it has been suggested that media is a source of influence in the development of the cognitive schema (Potter, 1999). Media and gender stereotypes have been shown to influence male subjects who viewed sexually objectified depictions of women in the media were more likely to display behavior seen as inappropriate when interacting with women (Mulac et al. 2002). Male gamers have been reported to endorse aspects of sexism ideals in online communities, showing a strong desire for women to serve as mascots, viewing women as less superior to themselves (Gray, 2012).

Despite the limited findings of this study, there is still a need to investigate these issues further. The design and number of participants involved in this research was limited due to many constraints, and may have had an impact on the results. There is a need to assess the experiences of those involved in online communities revolving around video games. This involves more research into video games themselves examining stereotypes and sexism within video games themselves. Increased and repeated exposure to these games may lead to activation of thoughts that utilize negative gender roles and stereotypes. Especially, considering how violent most video games are today, and how the violent behavior within video games is encoded through the use of rewarding for winning through killing and attacking. Video games featuring violent male characters that build on stereotypes that men are violent may lead to an increase in aggressive behavior in all players in general, and an acceptance of this behavior. This can already be seen in some online communities on the Xbox live network, with women acting as passive bystanders, sometimes avoiding men altogether, or just accepting the behavior as part of a male universe (Gray, 2012).
Future research should consider replicating this study, but adding an additional priming of participants by either having them play an actual video game with female characters depicted in an objectifying manner, or viewing recorded gameplay of the same nature. The images used might also be given a more detailed backstory, as some participants may have been confused while reading the screenshot messages used in this study, due to unfamiliarity with online video game messaging. Participants should also be doubled in size, as the numbers of males in this study were significantly lower than the number of female participants.

**Conclusion**

In this study it was shown that hostile sexism correlates with less offensiveness and more with amusement. It was also shown that people high in benevolent sexism were more offended and less amused at the messages. It is believed that this is the first study that compared ambivalent sexism traits with video game players, and views on the harassment of women in video games. With video games becoming more realistic, with 3D environments and more interaction among users, questions on how they influence individuals is something that must garner more focus in research. It is entirely possible that the realism in video games may influence the attitudes and behavior of game players, and with the objectification that these games portray women, it is even more essential that research be done to help determine what effects these may have on individuals, especially men. The results of this study will hopefully help extend the current literature on video games and sexism, and help inform future policy on the regulation of video games in sales.
References


Effects of Video Games on


Effects of Video Games on


Table 1. Correlations between focal outcome variables of Total Rated Amusement and Offensiveness to the images with test variables.

<table>
<thead>
<tr>
<th></th>
<th>ASI Mean</th>
<th>ASI Hostile</th>
<th>ASI Benevolent</th>
<th>Gender</th>
<th>Violent Video Games</th>
<th>Video Game Categories</th>
<th>Total Offensiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASI Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASI Hostile</td>
<td>.829**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASI Benevolent</td>
<td>-0.038</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.130</td>
<td>-0.152</td>
<td>0.084</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violent Video Games</td>
<td>0.025</td>
<td>0.044</td>
<td>-0.042</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video Game Categories</td>
<td>-0.158</td>
<td>-0.143</td>
<td>0.028</td>
<td></td>
<td></td>
<td>0.696**</td>
<td></td>
</tr>
<tr>
<td>Total Offensiveness</td>
<td>-0.208</td>
<td>-0.299**</td>
<td>0.235*</td>
<td>0.174</td>
<td>-0.087</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>Amusement</td>
<td>0.252**</td>
<td>0.332**</td>
<td>-0.230*</td>
<td>-0.144</td>
<td>0.184*</td>
<td>0.172</td>
<td>-0.624**</td>
</tr>
</tbody>
</table>

Note: *** indicates p < .05.

Table 2. Mean rated offensiveness to the images for Hostile sexism differences in women and men who do and do not play violent video games.

<table>
<thead>
<tr>
<th></th>
<th>Low Hostile Sexists</th>
<th>High Hostile Sexists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NVG</td>
<td>VVG</td>
</tr>
<tr>
<td>Men</td>
<td>4.43</td>
<td>4.43</td>
</tr>
<tr>
<td></td>
<td>(.63)</td>
<td>(.61)</td>
</tr>
<tr>
<td>Women</td>
<td>4.33</td>
<td>4.25</td>
</tr>
<tr>
<td></td>
<td>(.91)</td>
<td>(.62)</td>
</tr>
</tbody>
</table>

Note: SDs are in parentheses.
Table 3. Mean rated amusement to the images for Hostile sexism differences in women and men who do and do not play violent video games.

<table>
<thead>
<tr>
<th></th>
<th>Low Hostile Sexists</th>
<th>High Hostile Sexists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NVG</td>
<td>VVG</td>
</tr>
<tr>
<td>Men</td>
<td>.17</td>
<td>.69</td>
</tr>
<tr>
<td></td>
<td>(.28)</td>
<td>(.75)</td>
</tr>
<tr>
<td>Women</td>
<td>.55</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>(.87)</td>
<td>(1.05)</td>
</tr>
</tbody>
</table>

Note: SDs are in parentheses.

Table 4. Mean offensiveness ratings of chat-room captions of men and women who were high and low in benevolent sexism.

<table>
<thead>
<tr>
<th></th>
<th>Low Benevolent Sexists</th>
<th>High Benevolent Sexists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NVG</td>
<td>VVG</td>
</tr>
<tr>
<td>Men</td>
<td>4.02</td>
<td>3.05</td>
</tr>
<tr>
<td></td>
<td>(.76)</td>
<td>(1.38)</td>
</tr>
<tr>
<td>Women</td>
<td>4.05</td>
<td>4.15</td>
</tr>
<tr>
<td></td>
<td>(.98)</td>
<td>(.74)</td>
</tr>
</tbody>
</table>

Note: SDs are in parentheses.

Table 5. Mean amusement ratings of chat-room captions of men and women who were high and low in benevolent sexism.

<table>
<thead>
<tr>
<th></th>
<th>Low Benevolent Sexists</th>
<th>High Benevolent Sexists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NVG</td>
<td>VVG</td>
</tr>
<tr>
<td>Men</td>
<td>.26</td>
<td>1.59</td>
</tr>
<tr>
<td></td>
<td>(.39)</td>
<td>(1.22)</td>
</tr>
<tr>
<td>Women</td>
<td>.74</td>
<td>.75</td>
</tr>
<tr>
<td></td>
<td>(.84)</td>
<td>(.61)</td>
</tr>
</tbody>
</table>

Note: SDs are in parentheses.
Effects of Video Games on

Research Materials.

Sexiest Images Presented to Participants (images were extracted from: Jasper, 2015).

0 (disagree strongly) to 5 (agree strongly)
This picture is amusing
0 1 2 3 4 5
This picture is offensive
0 1 2 3 4 5

0 (disagree strongly) to 5 (agree strongly)
This picture is amusing
0 1 2 3 4 5
This picture is offensive
0 1 2 3 4 5
Effects of Video Games on

0 (disagree strongly) to 5 (agree strongly)
This picture is amusing
0 1 2 3 4 5
This picture is offensive
0 1 2 3 4 5

0 (disagree strongly) to 5 (agree strongly)
This picture is amusing
0 1 2 3 4 5
This picture is offensive
0 1 2 3 4 5
0 (disagree strongly) to 5 (agree strongly)
This picture is amusing
0 1 2 3 4 5
This picture is offensive
0 1 2 3 4 5
Figure 2. Example of Study Survey (ASI Questions are in bold)

The Ambivalent Sexism Inventory

1. No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman.
   0 (disagree strongly) to 5 (agree strongly)
   0 1 2 3 4 5

2. My main concern in life is my GPA
   0 (disagree strongly) to 5 (agree strongly)
   0 1 2 3 4 5

3. Many women are actually seeking special favors, such as hiring policies that favor them over men, under the guise of asking for "equality."
   0 (disagree strongly) to 5 (agree strongly)
   0 1 2 3 4 5

4. Video Games are an important part of my day.
   0 (disagree strongly) to 5 (agree strongly)
   0 1 2 3 4 5

5. In a disaster, women ought not necessarily to be rescued before men.
   0 (disagree strongly) to 5 (agree strongly)
   0 1 2 3 4 5

Voting is something I consider very important.
   0 (disagree strongly) to 5 (agree strongly)
   0 1 2 3 4 5
6. Most women interpret innocent remarks or acts as being sexist.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

7. Women are too easily offended.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

8. I regularly enjoy playing video games online
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

9. People are often truly happy in life without being romantically involved with a member of the other sex.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

10. If I do not play video games I become depressed.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

11. Feminists are not seeking for women to have more power than men.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

12. I participate actively in my class discussions.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5
13. Many women have a quality of purity that few men possess.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

14. I enjoy playing massive multiplayer online games (MMO)
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

15. Women should be cherished and protected by men.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

16. I am a member of Xbox Live
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

17. Most women fail to appreciate fully all that men do for them.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

18. I am a member of the PlayStation Network
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

19. Women seek to gain power by getting control over men.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

20. I do not enjoy playing games offline
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5
21. Every man ought to have a woman whom he adores.

0 (disagree strongly) to 5 (agree strongly)

0 1 2 3 4 5

22. I think Barack Obama is a fine president.

0 (disagree strongly) to 5 (agree strongly)

0 1 2 3 4 5

23. Men are complete without women.

0 (disagree strongly) to 5 (agree strongly)

0 1 2 3 4 5

24. I prefer watching television more than video games.

0 (disagree strongly) to 5 (agree strongly)

0 1 2 3 4 5

25. Women exaggerate problems they have at work.

0 (disagree strongly) to 5 (agree strongly)

0 1 2 3 4 5

26. I grew up in a home with both of my parents.

0 (disagree strongly) to 5 (agree strongly)

0 1 2 3 4 5

27. Once a woman gets a man to commit to her, she usually tries to put him on a tight leash.

0 (disagree strongly) to 5 (agree strongly)

0 1 2 3 4 5
28. I am confident that I have a bright future.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

29. When women lose to men in a fair competition, they typically complain about
being discriminated against.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

30. Sometimes I am depressed thinking about my future
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

31. A good woman should be set on a pedestal by her man.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

32. There are actually very few women who get a kick out of teasing men by seeming
sexually available and then refusing male advances.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

33. I regularly get in arguments with people online
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

34. Women, compared to men, tend to have a superior moral sensibility.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5
35. I enjoy trolling people online.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

36. Men should be willing to sacrifice their own wellbeing in order to provide financially for the women in their lives.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

37. Sometimes I blow off class work to play video games
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

38. Feminists are making entirely reasonable demands of men.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

39. I think women are represented well in video games.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5

40. Women, as compared to men, tend to have a more refined sense of culture and good taste.
0 (disagree strongly) to 5 (agree strongly)
0 1 2 3 4 5
Figure 3. Demographic Survey

1. How often do you play video games?
   a. Rarely
   b. Occasionally
   c. Often
   d. Never

2. How violent is the context of these games?
   a. None
   b. Little of no violent context
   c. Extremely violent content

3. Which of the following categories best describe the games you enjoy?
   a. Education
   b. Fighting with hands
   c. Sports
   d. Fighting with Weapons
   e. Fantasy
   f. Skill

4. Please indicate your gender.
   a. Male
   b. Female
   c. Other

5. Please write in your ethnicity

6. Please describe your political orientation.

7. Please indicate your class standing