

SeX-Box: Exposure to Sexist Video Games Predicts Benevolent Sexism

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We examined the association between playing sexist video games and sexist attitudes. Undergraduate students (61 men and 114 women) indicated the level of perceived sexism present in their most frequently played video games. Students also completed the Ambivalent Sexism Inventory (Glick & Fiske, 1996), which measures both hostile and benevolent sexism. As predicted, men who played video games perceived to be high in sexism showed higher levels of benevolent sexism, compared with men who did not play such games. This relationship was not evident for women. Importantly, our study provides the first known evidence of a link between long-term exposure to sexist video games and sexist attitudes. Although correlational, these data are consistent with the notion that sexist video games encourage and reinforce sexist attitudes. Our findings have important real-world implications for video game researchers, parents, and game players themselves.

Keywords: video games, sexism, sex role attitudes, mass media, popular culture

Video games are the fastest growing media in the United States, exceeding \$15.4 billion spent on video games in 2010 (NPD Group, 2011). Statistics indicate that children (mean age = 14) play video games an average of nine hours a week (Gentile, Lynch, Linder, & Walsh, 2004), and 70% of college students indicate they play video games (Weaver, 2003). Given this popularity, there has been much debate surrounding the potential negative consequences of playing video games. The majority of research on this topic has focused on video games' propensity for violent content, demonstrating a causal link between playing violent video games and aggressive behaviors, thoughts, and emotions (see Anderson et al., 2010, for review). Violence, however, is not the only negative aspect of modern video games; many of these games are also sexist.

From their inception, video games have consistently portrayed women in sexist ways. Of-

tentimes, this portrayal comes in the form of the "damsel in distress." In one of the earliest arcade video games (*Donkey Kong*, 1981), players were charged with rescuing Mario's girlfriend, Pauline, from her primate kidnapper. Thirty years later, not much has changed in terms of how women are portrayed in the gaming world. For instance, in the most recent *Mortal Kombat* game (2011), Princess Kitana requires assistance from the male leaders, and despite her fighting abilities, she is portrayed as reliant on the male characters. Despite this consistent trend, little research has examined whether regular exposure to sexist video game portrayals is related to real world attitudes toward women.

The majority of work conducted on sexism in video games has been in the form of content analyses. These studies indicate that women in video games are consistently treated as second-class citizens (e.g., Beasley & Collins-Standley, 2002; Dietz, 1998; Dill, Gentile, Richter & Dill, 2005; Dill & Thill, 2007; Downs & Smith, 2010; Miller & Summers, 2007). According to these reports, most female video game characters serve a submissive role, especially when interacting with the dominant male characters, and they are often treated as rewards for male characters. As an example of this subservience, consider the recently released game, *Duke*

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Nukem Forever (2011). In this game, a game-play mode called “Capture the Babe” requires that players compete to catch a woman dressed as a school girl whose only dialogue involves sexually suggestive phrases. When the woman is uncooperative, the player must spank her to “put her in her place.” Even in the rare occurrence when the game’s lead role is a woman (e.g., Lara Croft in *Tomb Raider*), she is still treated as an object of men’s fantasies (Dill & Thill, 2007; Jansz & Martis, 2007). Furthermore, this sexist representation of women also extends to the packaging and advertising of video games (Burgess, Stermer & Burgess, 2007; Dill & Thill, 2007). For example, an advertisement for *Bayonetta* encouraged people in a Japanese subway tunnel to remove fliers from a poster that advertised the game’s website. As the fliers were removed, they revealed an image of the main female character seated in a provocative pose, her naked body only covered by her long hair. Taken together, these studies show that video games paint a very narrow view of women, depicting them as subordinate to men and suggesting their primary role is as the object of men’s desires.

Thus, it is clear that modern video games portray women in sexist ways. However, the question that remains is whether there is a relationship between this sexist content and players’ attitudes. Such sexist content may produce a number of negative outcomes, with a major concern being that it may encourage and perpetuate sexist attitudes toward women. To date, only a handful of studies have examined the psychological effects of sexist video games, yet there is no direct evidence to indicate that regular exposure to such games is associated with sexist attitudes. In the present study, we sought to fill this void by examining whether choosing to play sexist video games is associated with sexist attitudes.

Sexist Depictions in Traditional Forms of Media

Several theoretical models have been used to explain how more traditional forms of sexist media (e.g., TV, magazines) perpetuate sexist responses. Cultivation theory states that repeated exposure to media messages fosters beliefs that are analogous to these messages (Gerbner, Gross, Morgan, & Signorielli, 1999).

This approach argues then that, over time, the viewer’s worldview becomes more consistent with the media’s distorted portrayal of reality than of reality itself. According to this theory, people frequently exposed to sexist media messages will gradually come to adopt these sexist beliefs as their own.

Similarly, social-cognitive theory argues that people’s knowledge acquisition often occurs from observing others within the context of social interactions and media influences (Bandura, 2001). According to social-cognitive theory, observing others’ behaviors impacts the way people think, and mass media are considered a major source of such sociocognitive changes. As a result, media have the ability to shape an audience’s thoughts, attitudes, and behaviors regarding any topic.

Finally, objectification theory (Fredrickson & Roberts, 1997) more directly addresses the effect of sexist media representations. According to this theory, the media often depict women in ways that emphasize their sexual and submissive attributes, and such depictions can influence society members’ thoughts and behaviors in ways that reinforce rigid gender stereotypes and communicate women’s inferiority.

Collectively, these theories agree that sexist media do not generally reflect reality; rather media can create perceptions by communicating messages that reinforce sexist attitudes and rigid gender roles. In support of these theoretical models, a wealth of research has examined how more traditional forms of sexist media influence gender-relevant responses. For example, frequent exposure to sexist TV has been linked to greater endorsement of gender stereotypes and greater objectification of women (Ward, 2002; Ward & Friedman, 2006). This effect even occurs when the sexual image is of an agentic woman who takes charge of her sexuality, (Halliwell, Malson, & Tischner, 2011). Furthermore, experimental research indicates that men who are briefly exposed to objectifying images of women from movies are more likely to endorse gender role stereotypes than men not exposed to such images (Milburn, Mather, & Conrad, 2000). Similar experimental effects have also been found for sexist magazine ads, music videos, and primetime TV programs (Lanis & Covell, 1995; Ward & Freidman, 2006). Finally, it is worth noting that many of these studies show that the effect of sexist media on

sexist perceptions is stronger among male viewers (e.g., Milburn et al., 2000). This work clearly shows that exposure to traditional forms of sexist media is associated with elevated sexist attitudes and gender stereotype endorsement. However, it is largely unknown whether such effects will extend to the realm of video games.

Sexist Depictions in Video Games

It has been argued that video games contain some of the most blatantly sexist depictions of women to be found in popular mass media today (Dill & Thill, 2007). It is therefore surprising that few empirical studies have been conducted on this potentially harmful aspect of video games. To date, only a handful of known studies has systematically examined the effects of sexist video game on gender-relevant responses (Behm-Morawitz & Mastro, 2009; Dill, Brown, & Collins, 2008; Stermer & Burkley, 2012b; Yao, Mahood & Linz, 2010).

One noteworthy finding from this literature is the demonstration of a relationship between sexist depictions in video games and men's support for violence against women. Stermer and Burkley (2012b) found that men who frequently played violent sexualized video games were higher in rape proclivity and rape myth acceptance compared with men who did not frequently play such games. Furthermore, in a follow-up study, they found that men who played a sexualized video game later judged a rape victim more negatively than men who played a nonsexualized video game. Similarly, Dill and colleagues (2008) found that men who viewed photos of sexualized male and female video game characters were more tolerant of sexual harassment than men who viewed photos of real U.S. senators and congresspersons. In both research programs, women were not influenced by the media exposure conditions.

More relevant to the current discussion, three video game studies have recently examined the link between short-term exposure to sexist video games and sexist responses. Yao and colleagues (2010) examined how sexually explicit video games impact the cognitive accessibility of sexual and objectifying thoughts. Results indicated that men who played a sexualized video game showed quicker RTs to sexual words and were more likely to perceive women as sex objects, compared with men who played a con-

rol game. Similarly, Behm-Morawitz and Mastro (2009) examined how playing a video game with sexualized female characters impacts gender-relevant attitudes and stereotyping. In their study, men who played as a sexualized female character were more likely to judge a woman's cognitive capabilities as inferior, compared with those who played as a nonsexualized female character.

In sum, research on more traditional forms of media indicate a relationship between sexist media exposure and sexist responses. Recent experimental evidence has shown that short-term exposure to sexualized video games primes sexual thoughts (Yao et al., 2010) and increases endorsement of some gender stereotypes (Behm-Morawitz & Mastro, 2009). What remains unclear is whether regular exposure to sexist video games, rather than short-term laboratory exposure, is associated with sexist attitudes.

Duration of Exposure

Recently, Anderson and colleagues (2010) made an important distinction between short-term and long-term effects of video games. Short-term effects involve playing a video game for a brief time (e.g., 15 min.) and are the type of game play used in experimental studies. Long-term effects involve outcomes that accrue over time as a result of repeated or "regular" exposures (e.g., months or years) and are the type of game play assessed in correlational and longitudinal studies. According to these researchers' assessment, the effects of video games may differ depending on whether a researcher is examining short- or long-term effects. For instance, research using short-term exposure requires that participants play a game of the experimenter's choosing, but this procedure neglects the fact that game choice plays a major role in people's real-life video game play (e.g., Olson, 2004). In terms of the present topic, the only known studies that have examined the effects of sexist video games have done so within the context of short-term exposure (i.e., laboratory experiments). Therefore our study was designed to extend this work by examining these effects within the context of regular video game exposure.

Measuring Sexist Attitudes

When it comes to measuring sexist attitudes, there are a number of different methods available. However, according to the theory of Ambivalent Sexism (Glick & Fiske, 1996), modern sexism is separated into two distinct but related attitudes: hostile and benevolent sexism (for review, see Lee, Fiske, & Glick, 2010). Both forms of sexism reinforce traditional gender roles but in different ways. Hostile sexism is the more familiar form of sexism and is characterized by feelings of antipathy toward women and often involves a fear that women will leverage feminist ideology to take away men's power (Becker & Wright, 2011; Glick & Fiske, 1996). For example, sexist jokes, discrimination in job hiring, and sexual harassment are forms of hostile sexism. Benevolent sexism is instead associated with perceptions of rigid gender roles and is characterized by protective, patronizing attitudes toward women. For example, the perspective that women are too delicate to play sports or that they are more morally pure than men are forms of benevolent sexism. At first glance, benevolent sexism could seem like a positive set of attitudes (Glick & Fiske, 1996). However, such beliefs still represent sexism because they relegate women to an inferior societal standing. Furthermore, benevolent sexism encourages discrimination and punishment toward women who do not adhere to rigid gender roles.

The Current Investigation

In our study, we investigated whether regular exposure to sexist video games (SVG) was associated with players' hostile and benevolent sexism. Our study is unique because it is the first known to examine the effects of regular, rather than short-term, exposure to sexist video games on sexist responses. It is also the first known study to examine the relationship between video games and hostile and benevolent attitudes toward women.

Our prediction was that SVG content would predict benevolent, rather than hostile, sexism. This prediction was based on several considerations. First, benevolent sexism is more strongly associated with rigid gender roles and the perception of women as subservient to men (Glick & Fiske, 2001). Benevolent sexists consider women to be childlike and incompetent,

resulting in the firmly held belief that women need men's protection (Becker & Wright, 2011; Glick & Fiske, 1996; Jost & Kay, 2005). As previously stated, the majority of video games depict women in this subordinate "damsel in distress" manner (Burgess, Stermer & Burgess, 2007; Dill & Thill, 2007; Jansz & Martis, 2007); therefore we expected exposure to such games to be more predictive of benevolent sexism. Second, prior research by Swami and colleagues (2010) found that benevolent, but not hostile, sexism correlated with exposure to more traditional forms of media (e.g., TV, movies). We therefore predicted that benevolent, but not hostile, sexism would be associated with sexist video game exposure.

Furthermore, we assumed that this relationship between SVG content and benevolent sexism would be more evident for male players. As previously stated, the effect of traditional forms of sexist media on sexist responses is often stronger among male viewers (e.g., Milburn et al., 2000). Furthermore, evidence from our own lab (Stermer & Burkley, 2012b) and other labs (Behm-Morawitz & Mastro, 2009; Dill, Brown & Collins, 2008) has shown that the effect of sexist video games tends to be stronger among male players. Thus, we hypothesized that men (but not women) who played video games high in sexist content would be higher in benevolent (but not hostile) sexism than men who played games low in sexist content.

Method

Participants

One hundred seventy-five (61 male, 114 female) undergraduate students from a large Midwestern university participated for course credit. Participants ranged in age from 18 to 27 ($M = 19$, $SD = 1.56$). The sample was 81% ($n = 143$) White, 5% (8) Native American, 5% (8) Hispanic, 5% (8) Multiracial, 2% (4) African American, and 2% (4) Asian American. There were no significant differences between genders in terms of racial distribution, $\chi^2(5, n = 175) = 4.12, p = .53$, or mean age, $t(94) = -1.41, p = .16$.

Materials and Procedure

All participants completed an online survey for partial fulfillment of course requirements in an

introductory psychology course. First, participants completed our adapted version of the video game questionnaire (Anderson & Dill, 2000) to measure perceived sexist video game (SVG) content. Anderson and Dill's (2000) measure is typically used to assess people's exposure to violent video games and has been shown to be a significant predictor of real-world behavior (e.g., aggression). As evidence of the validity of this measure, prior research has shown that self-reported evaluations of video game content are highly correlated with expert evaluations of the same content (Gentile, 2009). In our version, participants were asked to name the three games they played the most and to indicate the extent to which the game contained sexist content, using a seven-point Likert scale from 1 (*little sexist content*) to 7 (*extremely sexist content*). These three ratings were then averaged to create an overall composite score for perceived SVG content.

Next, participants completed the Ambivalent Sexism Inventory (Glick & Fiske, 1996; Glick & Fiske, 2011). The Hostile Sexism (HS) subscale consisted of 11 items designed to measure antipathy toward women (e.g., "Women seek to gain power by getting control over men"). The Benevolent Sexism (BS) subscale comprised 11 items designed to measure the perception of rigid gender roles (e.g., "Women should be cherished and protected by men"). Responses were made on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) rating scale. Both subscales demonstrated moderate internal consistency in our study (HS: $\alpha = .77$; BS: $\alpha = .75$). The items for each subscale were averaged to create a separate composite score for HS and BS, with higher values representing greater sexism. Consistent with prior research, HS and BS were moderately correlated in our study, $r = .20$, $p = .01$. Finally, participants responded to questions assessing their gender, race, age, and hours per week spent playing video games.

Results

Descriptive Statistics

Men reported playing games with more perceived sexist content ($M = 1.87$, $SD = 1.01$) than women ($M = 1.54$, $SD = .84$), $t(159) = -2.10$, $p = .04$. There was no difference between men and women in their endorsement of benevolent sexism, $t(173) = 1.01$, $p = .31$. However, consistent with prior research, men

did report higher hostile sexism ($M = 4.21$, $SD = .82$) than women ($M = 3.86$, $SD = .78$), $t(173) = -2.83$, $p = .005$.

The most popular games reported included *The Sims*, *Mario Kart*, *Call of Duty*, *Grand Theft Auto*, *Halo*, and various sports games. In support of the validity of this measure, games rated highly sexist on this scale did contain more sexist content. For example, the game participants consistently rated as highly sexist was *Grand Theft Auto*. This game is rated *Mature* by the Entertainment Software Rating Board (ESRB) for strong sexual content and partial nudity. Participants consistently rated sports, puzzle, and card games as not very sexist. These games are generally rated *Everyone* by the ESRB and do not contain objectionable content.

Hypothesis Testing

To determine whether gender and perceived SVG content uniquely predicted hostile and benevolent sexism, we used hierarchical regression analyses. As suggested by Blanton and Jaccard (1991), we selected hierarchical regression so we could sequentially examine our theoretical variables in terms of their main effects and interactions. For each sexism subscale, gender and SVG exposure were entered in the first step. Next, the two-way interactions with gender were entered in the second step. Consistent with prior recommendations (Aiken & West, 1991; Blanton & Jaccard, 1991), all continuous predictors were mean centered before conducting these analyses.

For benevolent sexism, the main effects of gender, $\beta = -.11$, $t(155) = -.83$, $p = .41$, and SVG content, $\beta = .02$, $t(155) = .31$, $p = .76$, were not significant. However, as predicted, there was a significant Gender \times SVG interaction, $\beta = .35$, $t(157) = 2.44$, $p = .02$, $d = .35$. Simple slope analyses (Aiken & West, 1991) revealed a significant relationship between perceived SVG content and benevolent sexism for men, $\beta = .21$, $t(157) = 2.00$, $p = .05$, $d = .32$, but not for women, $\beta = -.14$, $t(157) = -1.41$, $p = .16$, $d = .23$. The greater the perceived sexism in video games played, the higher men's benevolent sexism. Because men typically play video games more often than women (Stermer et al., 2006), some may be concerned that gender is simply serving as a proxy for frequency of

video game play. However, even when entering hours per week spent playing video games as a covariate in the above analyses, the results remain significant $\beta = .31$, $t(156) = 2.16$, $p = .03$, $d = .35$.

For hostile sexism, we found the main effect for gender, $\beta = .35$, $t(157) = 2.65$, $p = .009$, $d = .47$, noted above. Both the main effect of SVG, $\beta = .01$, $t(157) = .10$, $p = .92$, and the Gender \times SVG were not significant for HS, $\beta = .01$, $t(155) = .07$, $p = .95$.

Discussion

A wealth of research has demonstrated an association between long-term violent video game exposure and aggressive responses (Anderson et al., 2010). However, to our knowledge, no studies have examined the association between regular sexist video game exposure and sexist attitudes. The present study sought to fill this void in the literature. Importantly, our study demonstrated that men who played video games high in perceived sexism were higher in benevolent sexism than men who played games low in perceived sexism. The same effect was not apparent for women. These results suggest that sexist video game play is related to men perceiving women in a stereotypic and sexist way.

This gender difference is consistent with prior media studies that used both traditional media and video games to demonstrate that the association between sexist media and sexist responses is often only evident in men (e.g., Behm-Morawitz & Mastro, 2009; Dill, Brown & Collins, 2008; Stermer & Burkley, 2012b). One possible explanation may have to do with the fact that men's sexist attitudes are geared toward an out-group whereas women's sexist attitudes are geared toward their own in-group. A wealth of research supports the idea that people show a strong in-group preference (e.g., Turner, 1987), and as a result it may be harder to shift women's beliefs about their gender group than it is to shift men's beliefs. Another possible explanation for this gender difference may be that men are more likely than women to become transported into the video game world, a pattern that we have demonstrated in our own work (Stermer & Burkley, 2012a). Furthermore, prior research shows that such immersion encourages people to adopt the attitudes present in the media world (e.g., Green & Brock, 2000).

Thus, if men are more easily transported into video games, they would also be more likely to adopt the sexist attitudes present in such games. Future research should explore the exact underpinnings of this gender difference, but this question is beyond the scope of the present study.

Men who rated their most frequently played games as *sexist* were higher in benevolent sexism. This indicates that when it comes to predicting sexist attitudes, quality of video game exposure is more influential than quantity of exposure (Bandura, 2001). The present results advance current theories of sexist media and female objectification by extending these concepts into the realm of video games. This study demonstrates that even objectifying *virtual* images of women is associated with greater levels of sexism. To our knowledge, this study provides the first empirical demonstration that these theories can be extended to the realm of sexist video games. Such an extension is greatly needed, especially given the increasing popularity of computer-generated characters not just in video games but in film, TV, and even men's magazines (e.g., October 2004 issue of *Playboy*).

One limitation of this study is the small number of men ($n = 61$) compared with women in our sample ($n = 114$). Future research should seek to recruit a more balanced sample. A second limitation is that our study used a correlational design; therefore, it is not possible to determine the causal link between the variables in our study. For instance, it is possible that men high in benevolent sexism are more likely to play sexist video games. However, we believe it is unlikely that our results are a result of such reverse causality. Prior research using experimental designs has already established a causal link between acute exposure to sexist video games and sexist responses (Behm-Morawitz & Mastro, 2009; Yao et al., 2010). When our results are combined with these studies, a clearer picture emerges. Across both correlational and experimental designs, it does appear that sexist video games encourage and reinforce sexist responses. However, it must be noted that experimental research has yet to examine whether sexist attitudes cause people to prefer sexist video games. Therefore, reverse causality still remains a possibility. For this reason, future research should explore this possibility within the context of a longitudinal study to determine

the exact nature of the association between sexist video games and sexist attitudes.

A third limitation of the present study is that the measure we used to assess sexist video game content relied on participant's own ratings. This decision was made based on the fact that this is common practice in the video game literature and also on empirical studies demonstrating high correlations between self-report and expert ratings of video game content (Anderson & Dill, 2000; Gentile, 2009). Nevertheless, it is possible that these self-ratings were biased. For instance, it could be that people who frequently play sexist video games are desensitized and therefore have a different perception of sexist content compared to infrequent players. Although this is possible, it is unlikely to account for the effects demonstrated here and would actually suggest our effects would be even stronger if such desensitization were controlled for. Even so, future research should use different measures of sexist video game content to confirm and generalize our findings. Furthermore, one might ask why video game players who rate their favorite games as containing high amounts of sexist content would actually endorse sexist attitudes. While we did not test this explicitly, it could be related to propensity to become transported into video game world. Research indicates that when highly transported, attitudes will shift to become more in line with attitudes consistent with the virtual world, a finding we have demonstrated with aggressive cognitions after playing a violent video game (Stermer & Burkley, 2012c). Additionally, while our measure did not explicitly assess duration of play for each video game rated, we do believe that the measure of sexist content does examine long-term or regular video game exposure. Our measure examined participants' most frequently played video games. As such, the most frequently played games were likely the games played over a longer period of time than nonrated games.

Scientists, journalists, and even Congress have focused a great deal of attention on video games' excessive use of violence. However, equally concerning is these games' excessive use of sexist imagery. Although this topic has received far less scrutiny, our results indicate there is a need for concern. Given that video games are so popular among young men, and that such games consistently present women in

sexist and subordinate ways, our results are particularly concerning. Importantly, the present study contributes to a small but growing body of work that investigates the association between sexist video games and men's sexist attitudes toward women.

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