

Still a Man's Game: Gender Representation in Online Reviews of Video Games

James D. Ivory

Department of Communication

Virginia Polytechnic Institute and State University

Despite the rising popularity of video games, the majority of the medium's audience continues to be male. One reason may be that character representations in video games are geared toward male players. This content analysis used video game reviews from a heavily trafficked Internet site to investigate the prevalence and portrayal of male and female video game characters. Consistent with the findings of previous studies, female characters were found to be underrepresented and proportionally more often sexualized in comparison to their male counterparts. In addition to these findings, the study's innovative method—the use of online video game reviews as an indirect measure of video game content—shows promise as a tool for future content analyses of video games.

According to the Entertainment Software Association (ESA), fully half of all Americans age 6 or older play video games (ESA, 2005). Despite their popularity, however, a demographic rift continues to characterize the video game audience, with more men playing video games than women. Although the ESA boasts that women make up 39% of video game players (ESA, 2005), sizable gender differences have been found in studies of children's video game play habits (e.g., Braun & Giroux, 1989; Buchman & Funk, 1996; Funk, 1993; Griffiths, 1991, 1997) and their attitudes toward the social acceptability of video game play (Funk & Buchman, 1996a).

Differences between the entertainment preferences of males and females likely play a role in such discrepancies, but the games' content might also share

Correspondence should be addressed to James D. Ivory, 111 Shanks Hall (Mail Code: 0311), Department of Communication, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061. E-mail: jivory@vt.edu

responsibility. Researchers have noted for years that most video games target a male audience (e.g., Cassel & Jenkins, 1998; Provenzo, 1991), and analyses of video game content have found female video game character portrayals to be infrequent and sexually objectified (e.g., Beasley & Collins Standley, 2002; Dietz, 1998; Heintz-Knowles & Henderson, 2002). This content may appeal to some males, but seems poorly suited for female video game players and may account for findings such as Funk and Buchman's (1996b) report of a negative relationship between video game play and self-perception questionnaire scores among adolescent girls.

One obstacle to measurement of gender representation in video games is the fact that video game content is radically different from that of most other entertainment media. Content analyses of media such as books, television, and film examine a uniform and linear media package, which makes measurement relatively straightforward. The precise content experienced by a video game player, however, depends on the experience, skill, and time commitment of the player, among other factors. It is therefore difficult to apply systematic and reliable content analysis to such an inconsistent narrative, and application of traditional content analysis strategies appropriate for older media may often be inappropriate for video games.

Considering the problems inherent in systematic content analysis of video games, research should consider other authoritative sources of information about video games. This quantitative content analysis used an Internet gaming site's video game reviews to indirectly measure video game character representation. Aside from contributing to the literature on gender representation in video games, this study aimed to investigate the potential of Internet video game reviews as a source of systematically and reliably measurable information about video game content.

FEMALE CHARACTERS IN VIDEO GAMES

Though much social scientific research and popular debate has focused on the effects of violent video game content (e.g., Anderson & Bushman, 2001; Anderson & Dill, 2000; Copeland, 2004; Scott, 1995; Sherry, 2001), gender representation in games has received some attention. Content analyses have consistently found that video games include far more male characters than female characters (Beasley & Collins Standley, 2002; Dietz, 1998; Heintz-Knowles & Henderson, 2002; Smith, Lachlan, & Tamborini, 2003). When female characters are included in games, it is frequently as nonessential, passive characters (Dietz, 1998; Haninger & Thompson, 2004), and female characters are often depicted wearing revealing and provocative clothing (Beasley & Collins Standley, 2002; Dietz, 1998; Heintz-

Knowles & Henderson, 2002; Thompson & Haninger, 2001) and indulging in sexually suggestive behavior (Haninger & Thompson, 2004).

The implications of the rarity and negative nature of female portrayals in video games are troubling. Cultivation theory (see Gerbner, Gross, Morgan, & Signorielli, 1994) and social expectancy theory (Jussim, 1990) propose that long-term media consumption can skew media consumers' views of the world toward that represented in aggregate by the media content. These perspectives suggest that a video game landscape where women are represented infrequently and as passive, sexualized beings can precipitate a similar *Weltanschauung* among video game players who consume the message through long and frequent bouts of game play.

ONLINE REVIEWS OF VIDEO GAMES

At present, no clearly articulated and accepted methodology exists to guide content analysis of such a variant and interactive media offering as video games. McMillan (2000) described some difficulties researchers confront in conducting content analyses of the Web due to the malleability and interactivity of its content. These issues are even more prevalent in video game content, and they have yet to be addressed in existing analyses of the medium. Because the actions of a video game player affect characters, behaviors, scenarios, and any number of content features, reliable content analysis of such a responsive medium is difficult. Video game content is also highly contingent on a player's skill and the length of time a game is played, so the validity of analyses conducted for short play periods by researchers who may be less familiar with video game conventions and products than the games' typical audience is also suspect.

Existing studies, though informative in their findings, exhibit problems and inconsistencies regarding reliability, amount of content coded, and the skill of players employed. Dietz (1998) reported that coders played the sampled video games but provides no information about the players' skill, how long the games were played, or any intercoder reliability measure used. The coders' experience with video games in Heintz-Knowles and Henderson's (2002) study was not mentioned, and only an intercoder agreement of "at least 94%" (p. 10) was reported as a reliability measure. Heintz-Knowles and Henderson's coders played each game in their sample through only the first level, and Beasley and Collins Standley (2002) analyzed only 20 minutes of play for each game because "playing the complete game would require more skill than coders had at video game playing" (pp. 283–284).

Other content analyses of video games (Haninger & Thompson, 2004; Smith, Lachlan, & Tamborini, 2003; Thompson & Haninger, 2001) have used videotape

to precisely capture content of games played, but time periods analyzed have been as short as 10 minutes—a sampling frame that is in some ways akin to watching only the first 10 minutes of a film to analyze its characters and plot. Thompson and Haninger (2001), whose 90 minutes of play for each video game is the longest period analyzed by any of the content analyses reviewed here, noted that “not playing these games to their conclusion means that some content is missed” (pp. 592–593).

A possible remedy to some problems facing direct analysis of video game content lies in the proliferation of commercial video game review sites on the Internet. Reviews on some sites are authored by professional full-time staffers who are experienced and knowledgeable video game players. Additionally, video game reviews present a manifest, uniform (albeit subjective) text representation of a video game’s overall content from an authoritative source that lends itself to coding more easily than fleeting and flexible video game content. Though game reviews might not be useful for measurement of some specific game events, they have appeal as a comprehensive resource regarding features such as a game’s plot and characters. Existing studies’ use of video game manuals as an information source (Dietz, 1998; Heintz-Knowles & Henderson, 2002), as well as admissions that sampling short time periods is problematic (Haninger & Thompson, 2004; Thompson & Haninger, 2001), suggest that written game reviews have utility as an additional resource.

This somewhat circumventive approach to content analysis has precedent. For example, researchers interested in films have analyzed film trailers (e.g., Oliver & Kalyanaraman, 2002) and rental box covers (Oliver, Banjo, & Kim, 2003) for relevant insight. The same indirect approach has also been applied to video games. Provenzo (1992) examined 47 video game box covers to compare gender portrayals, finding that male characters were represented over 12 times as often as female characters and that only male characters struck a dominant pose in cover art. Scharer (2004) analyzed 1,054 video game advertisements in three monthly video game magazines, reporting that male characters appeared more than three times as often as female characters in the advertisements and that female characters tended to be significantly more attractive and sexy, more often scantily clad, and less muscular than male characters. Considering the value of these studies, which are consistent with game content analyses’ reports of infrequent, passive, and disproportionately sexualized female character portrayals, a similarly creative effort to examine video game content via video game reviews seems more than justified.

An additional benefit of analyzing review sites is that the attitudes of the reviewers themselves toward gender representations can be examined. Video game reviewers are video game players, and if they are not typical, then perhaps their role as opinion leaders is all the more valuable. Reviews can serve to show not only what trends exist in character representation but also how the game’s reviewers regard these representations in their advice to potential players.

HYPOTHESES AND RESEARCH QUESTIONS

With the guidance of the existing literature on video game content, the following hypotheses and research question were proposed:

- H1: Male character references will outnumber female character references in online reviews of video games, both in text and images.
- H2: Male characters will be described as active and playable characters proportionally more often than female characters in reviews, whereas female characters will be featured as passive objects of game play proportionally more often.
- H3: Female characters will be described and visually depicted in a sexually suggestive manner proportionally more often than male characters in reviews.
- RQ1: How do video game reviewers regard the prevalence and sexually suggestive representations of male and female video game characters in game content?

METHOD

Sample

Gamespot (<http://www.gamespot.com>), a site affiliated with the CNet computer product review service, was used to obtain reviews for sampling. Gamespot was listed as the top site for video game reviews by the Google search engine's ranking feature at the time this study was conducted, a testament to its popularity with players.

To ensure a representative sample of popular and commonly reviewed games, reviews of all games from Gamespot's "Top Rated" (games released in the last year rated highest by reviewers) and "Most Popular" (games whose pages are currently receiving the most site visits) lists were examined during a March 26, 2004, site visit to obtain a cross-sectional purposive sample. From the top 100 games in each list, redundant reviews were removed (some games appeared on both lists), and only the higher rated review was kept when multiple versions of a game for different play platforms were featured (e.g., PC and Sony Playstation 2 versions of the same game).¹ Lastly, all games from the "Most Popular" list that were not yet reviewed (some "Most Popular" games were upcoming releases not yet available) were also culled.

¹Pretesting indicated that game reviews did not differ extensively across platforms, so coding of multiple versions of one game was deemed redundant.

This process of elimination resulted in a sample of 100 games for the final analysis. The games from this group consisted of products released for six different game platforms: personal computer ($N = 35$), Sony Playstation 2 ($N = 28$), Microsoft XBOX ($N = 15$), Nintendo Game Boy Advance ($N = 12$), Nintendo GameCube ($N = 9$), and Sony Playstation ($N = 1$). Game genres were diverse, including sports, action, and strategy games intended for various age groups. Objectives and plots ranged from a railroad planning and construction simulation (*Railroad Tycoon 3*) to a gory narrative game featuring the plight of a doomed convict who escapes justice by grudgingly committing grisly murders for a snuff film distributor (*Manhunt*).

Coding Scheme

The unit of analysis in this study was each one- to three-page Gamespot review, and protocols guiding coder decisions were simple. Appearance of primary (main) characters and playable characters of each gender were indicated by their presence or absence in a review's commentary. Active characters were defined as "characters that are playable or otherwise who have a significant impact on the plot of the game (e.g., as villains, combatants, "aides," etc.)," and passive characters were defined as "characters that don't play an active role are described (e.g., spectators, objects of game's goal that do not play a role themselves in the outcome, etc.)."

Protocols guiding decisions regarding sexual content were also rudimentary: Mentions of character attractiveness were defined as instances where "a character's (passive or active) attractiveness is mentioned, whether tersely (e.g., "dashing," "beautiful") or in detail (e.g., "looks sexy in that revealing outfit")," and sexual depiction in images was defined as instances where "a pictured character is depicted in a sexually suggestive manner, including revealing clothing, suggestive posture, etc." This strategy was used to capture highly overt and relevant content of interest because preliminary examinations of reviews indicated that sexually suggestive content tended to be unambiguous. Although some video game characters were nonhuman (e.g., the alien protagonist from *Ratchet and Clank*), coders used mention of gender-related characteristics or gender-specific pronouns in reviews to determine character gender when possible.

The author coded the entire sample of reviews, with 19% ($N = 19$) of the sample randomly selected for independent coding by a volunteer unfamiliar with the research hypotheses for intercoder reliability analysis.² Reliability testing employed Scott's Pi, a measure that accounts for category prevalence to estimate coder reliability above expected chance agreement (see Riffe, Lacy, & Fico, 1998). An item

²One coder was male and one was female, which may have served as a precaution against relevant standpoint biases. The primary coder's decisions were used in all instances where disagreement occurred.

assessing primary character gender (“male,” “female,” or “no primary character/gender unknown”) yielded a Scott’s Pi value of .82, and 14 dichotomous items indicating presence or absence of the various male and female depictions yielded an overall Scott’s Pi value of .81. In those cases where disagreement between coders existed, the primary coder’s decisions were used in analysis.

RESULTS

Character Prevalence

In general, female characters were represented in far fewer of the sampled game reviews than male characters (Table 1).

Though 75% ($N = 75$) of the reviews mentioned male characters, only 42% ($N = 42$) mentioned female characters in any capacity. Images including male characters appeared in 78% ($N = 78$) of the reviews, whereas female characters appeared in images accompanying only 32% ($N = 32$) of the reviews. Though 54% ($N = 54$) of the reviews indicated no primary characters or left primary characters’ gender unclear, 76% ($N = 35$) of the remainder featured male primary characters. Only a small portion of reviews indicating primary characters named a female lead (10.9%, $N = 5$) or primary characters of both genders (13.0%, $N = 6$). Comparing the 95% confidence intervals for these observed frequencies indicated that all of these differences were statistically significant (i.e., the 95% confidence intervals for the male and female proportions did not overlap for each category), strongly supporting Hypothesis 1.

TABLE 1
Reviews Depicting Male and Female Characters

	Male			Female		
	Frequency	95% CI		Frequency	95% CI	
		Lower	Upper		Lower	Upper
Any Mention ^b	75	66	84	42	32	52
Playable Character(s) ^b	65	55	75	22	14	30
Active Character(s) ^b	75	66	84	33	24	42
Passive Character(s)	8	3	13	9	3	15
Depicted in Image(s) ^b	78	70	86	32	23	41

Note. Figures shown represent both percentages and frequencies because the sample contained exactly 100 reviews.

^a $N = 100$.

^b95% confidence intervals for representation frequencies by gender do not overlap, indicating statistically significant differences in proportions for males and females.

Active and Passive Characters

Comparison of male and female characters' appearance in active and passive roles found similar differences. Active male characters were mentioned in 75% ($N = 75$) of the reviews, whereas active female characters were described in only 33% ($N = 33$) of the reviews. Also, 65% ($N = 65$) of the reviews indicated male playable characters, whereas only 22% ($N = 22$) mentioned female playable characters. These differences were all statistically significant. A small difference in frequency of passive characters, with passive females appearing in 9% ($N = 9$) of reviews and passive males appearing in only 8% ($N = 8$), was not statistically significant.³ Hypothesis 2, therefore, is only partially supported.

Sexually Suggestive Depictions

Though female characters were underrepresented overall, their attractiveness and sexuality were mentioned in proportionally more reviews than that of males (Table 2). Less than 1% ($N = 1$) of the 75 reviews mentioning male characters included a reference to a male character's attractiveness or sexual appeal, but 12% ($N = 5$) of the 42 reviews mentioning female characters included such references to females. This difference narrowly missed this study's threshold of statistical significance because of a small overlap in confidence intervals, largely due to the low frequency of such references in general. Though such a low overall prevalence may suggest a lack of sexualized content, the infrequency might as easily be interpreted as disinterest in such content on the part of the reviewers. Analysis of video game images from the reviews, however, more strongly suggests a gender gap in sexually suggestive portrayals. Of the 32 reviews with pictured female characters, 41% ($N = 13$) contained sexually suggestive imagery of females; only 4% ($N = 3$) of the 78 reviews with pictured males similarly included sexually suggestive male representations. This statistically significant difference provides partial support for Hypothesis 3.

Reviewer Opinions

Comparing the prevalence and nature of review comments about attractiveness and sexual appeal (largely determined by the reviewer) with the prevalence of sexually suggestive video game imagery (largely controlled by game producers) addressed the study's research question regarding reviewers' attitudes toward depictions. Al-

³This lack of notable difference may be an artifact of the reviews themselves. By definition, passive characters would not merit mention unless prominently featured. Additionally, characters not explicitly mentioned as passive may have served such a role but were not coded as such unless explicitly described as a passive character.

TABLE 2
Proportion of Reviews Including Sexually Suggestive Comments
and Images by Gender

	Male			Female		
	%	95% CI		%	95% CI	
		Lower	Upper		Lower	Upper
Reviews mentioning attractiveness or sexual appeal	1	0	3	12	2	22
Reviews with sexually suggestive images ^a	4	0	8	41	23	59

^a95% confidence intervals for representation frequencies by gender do not overlap, indicating statistically significant differences in proportions for males and females.

though our analysis found that reviewed video games’ images portrayed women in a sexualized manner in much higher proportions than men, reviewers mentioned such content only six times regarding either gender. It is possible that reviewers were not particularly interested in mentioning the attractiveness or sexualization of characters, downplaying female sexual depictions in review comments. There is also some anecdotal support in reviews suggesting reviewers’ disapproval of sexualized female portrayals. Consider, for example, Gamespot reviewer Gord Goble’s (2003) take on the selection of the lone female player character featured in the *Tiger Woods PGA Tour 2004* personal computer game: “That the only LPGA personality to make the grade is the young and attractive, but unproven, Natalie Gulbis is interesting, to say the least” (n.p.).

Though comments of this nature and the reviewers’ overall tendency to leave sexualized depictions unmentioned suggests that reviewers may be unenthusiastic about the proliferation of sexualized female images in video games, such a firm conclusion about the game reviewers’ reactions to character portrayals cannot be made from this study’s evidence. This study’s research question regarding reviewers’ reactions to sexually suggestive content thus remains only partially answered: Reviewers mention such depictions rarely, but it is unclear why.

DISCUSSION

In sum, these simple findings clearly suggest an interesting gender dichotomy in video game characters. Though female video game characters appear to be under-represented overall, as active characters, and as playable characters, they are proportionally more likely than males to be portrayed in a sexualized fashion. These results beg the question: If this is the nature of female video game characters, should their number be increased after all?

Also of interest is the video game reviewers' apparent lack of attention to sexualized character portrayals. Though this study did not record reviewers' gender and some reviewers have androgynous first names, most of the Gamespot editorial staff is clearly male (Gamespot, 2004). The possibility that a primarily male group of reviewers is ambivalent or unsupportive toward sexualized portrayals in video games is intriguing. If reviewers are critical of infrequent and sexualized female portrayals, and if there is a corresponding disinterest or disapproval present in the larger video game audience, video game makers might be encouraged to depict female characters differently than they have in the past. Future research should further explore audience and reviewer attitudes toward the prevalence of these portrayals and take reviewers' gender into consideration as well.

The most notable contribution of this study is its method. Although the validity of a video game content assessment based on a secondary source may seem counterintuitive, this method provides some clear advantages over direct video game content analysis due to the manifest and consistent nature of the content analyzed, the expansive scope of the reviews, and the authority and experience of the reviewers. However, measurement of some specific game features may be better accomplished by other methods. For example, the failure of this study to record many references to passive characters suggests that passive characters may be better captured by direct analysis of games. Other content of interest, such as specific occurrences of violent acts measured by Smith, Lachlan, and Tamborini (2003), would also elude a researcher using reviews as an information source. It should be emphasized that this approach to video game content, though promising, is not a panacea appropriate to all inquiries.

That said, analyzing reviews from experienced staffers may produce a better picture of a game's general content features than existing studies' brief sampling of a game's early levels. As has been evidenced here, analyzing online reviews of video games appears to be an effective way to gain insight about some video game content that avoids problems inherent in content analysis of such an interactive and variant medium. Considering the lack of definitive and appropriate guidelines for analysis of video game content, this novel methodological approach should be investigated further.

REFERENCES

- Anderson, C. A., & Bushman, B. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, psychological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science, 12*, 353–359.
- Anderson, C. E., & Dill, K. E. (2000). Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. *Journal of Personality and Social Psychology, 78*, 772–790.
- Beasley, B., & Collins Standley, T. (2002). Shirts vs. skins: Clothing as indicator of gender role stereotyping in video games. *Mass Communication and Society, 5*, 279–293.

- Braun, C. M. J., & Giroux, J. (1989). Arcade video games: Proxemic, cognitive and content analyses. *Journal of Leisure Research, 21*, 92–105.
- Buchman, D. D., & Funk, J. B. (1996). Video and computer games in the '90s: Children's time commitment and game preference. *Children Today, 24*, 12–15.
- Cassel, J., & Jenkins, H. (1998). Chess for girls? Feminism and computer games. In J. Cassel & H. Jenkins (Eds.), *From Barbie to Mortal Kombat: Gender and computer games* (pp. 2–45). Cambridge, MA: MIT.
- Copeland, L. (2004, January 29). Battle over violent video games heating up. *USA Today, 3A*.
- Dietz, T. L. (1998). An examination of violence and gender role portrayals in video games: Implications for gender socialization and aggressive behavior. *Sex Roles: A Journal of Research, 38*, 425–442.
- Entertainment Software Association. (2005). *Game player data*. Retrieved April 24, 2005, from http://www.theesa.com/facts/gamer_data.php
- Funk, J. B. (1993). Reevaluating the impact of video games. *Clinical Pediatrics, 32*, 86–90.
- Funk, J. B., & Buchman, D. D. (1996a). Children's perceptions of gender differences in social approval for playing electronic games. *Sex Roles: A Journal of Research, 35*, 219–231.
- Funk, J. B., & Buchman, D. D. (1996b). Playing violent video and computer games and adolescent self-concept. *Journal of Communication, 46*, 19–32.
- Gamespot. (2004). *About us*. Retrieved December 8, 2004, from <http://www.gamespot.com/misc/aboutus.html>
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1994). Growing up with television: The cultivation perspective. In J. Bryant & D. Zillman (Eds.), *Media effects: Advances in theory and research* (pp. 17–41). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Goble, G. (2003, October 13). *Tiger Woods PGA Tour 2004 for PC review at Gamespot*. Retrieved March 30, 2004, from <http://www.gamespot.com/pc/sports/tigerwoods2004/review-2.html>
- Griffiths, M. D. (1991). Amusement machine playing in childhood and adolescence: A comparative analysis of video games and fruit machines. *Journal of Adolescence, 14*, 53–63.
- Griffiths, M. D. (1997). Computer game playing in early adolescence. *Youth and Society, 29*, 223–237.
- Haninger, K., & Thompson, K. M. (2004). Content and ratings of teen-rated video games. *Journal of the American Medical Association, 291*, 856–865.
- Heintz-Knowles, K. E., & Henderson, J. J. (August 2002). *Gender violence, and victimization in top-selling video games*. Paper presented at the annual conference of the Association for Education in Journalism and Mass Communication, Miami, Florida.
- Jussim, L. (1990). Social reality and social problems: The role of expectancies. *Journal of Social Issues, 46*, 9–34.
- McMillan, S. J. (2000). The microscope and the moving target: The challenge of applying content analysis to the World Wide Web. *Journalism and Mass Communication Quarterly, 77*, 80–98.
- Oliver, M. B., Banjo, O., & Kim, J. (2003, July-August). *Judging a movie by its cover: A content analysis of sexual portrayals on video rental jackets*. Paper presented at the annual conference of the Association for Education in Journalism and Mass Communication, Kansas City, MO.
- Oliver, M. B., & Kalyanaraman, S. (2002, June). Appropriate for all viewing audiences? An examination of violent and sexual portrayals in movie previews featured on video rentals. *Journal of Broadcasting and Electronic Media, 46*, 283–299.
- Provenzo, E. F. (1991). *Video kids: Making sense of Nintendo*. Cambridge, MA: Harvard.
- Provenzo, E. F. (1992). The video generation. *American School Board Journal, 179*(2), 29–32.
- Riffe, D., Lacy, S., & Fico, F. G. (1998). *Analyzing media messages: Using quantitative content analysis in research*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Scharrer, E. (2004). Virtual violence: Gender and aggression in video game advertisements. *Mass Communication and Society, 7*, 393–412.
- Scott, D. (1995). The effect of violent video games on feelings of aggression. *Journal of Psychology, 129*, 121–132.

- Smith, S. L., Lachlan, K., & Tamborini, R. (2003). Popular video games: Quantifying the presentation of violence and its content. *Journal of Broadcasting and Electronic Media, 47*, 58–76.
- Sherry, J. L. (2001). The effects of violent video games on aggression; A meta-analysis. *Human Communication Research, 27*, 409–431.
- Thompson, K. M., & Haninger, K. (2001). Violence in E-rated video games. *Journal of the American Medical Association, 286*, 591–920.