

# Exploring the Perceptions of Race on Video Game Covers

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**Abstract.** This study compiled the 20 best-selling games from 2010 to 2015 from Steam250 to build a survey to examine potential game players' perception of video game cover art. The survey was distributed to potential players through snowball sampling, yielding 298 submissions with various ethnicities for analysis. All participants felt non-White representation was inadequate. Non-White participants felt that self-representation of their ethnicity on video game covers to be significantly more important than White participants. Non-White participants did not feel demographically represented by many individuals in the compilation of video game covers, while White participants did feel represented. Our results give insight into the intersection of video game studies and paratextual representation.

**Keywords:** Representation in Games, Paratext, Video Games, User Perspective.

## 1 Introduction

In 2018, the United States video game industry generated 43.4 billion dollars with over 164 million American adults playing video games [7]. Video games are widespread and a major mainstream medium of entertainment. Given their prevalence, video games have real social repercussions and impact players in numerous ways. For example, game scholars have highlighted how a lack of diverse representation in games may affect players [19, 20]. Passmore et al. argue the “underrepresentation of

characters of color can be viewed as a signal to players of color that the content is not 'for them,'" and can have negative psychosocial effects [19].

While most previous research on representation in games focuses on the role of representation in games [5, 9, 11, 13, 14, 17, 18, 21, 22], more analysis of representation in official paratexts is needed. Paratexts are the materials, advertisements, systems, and other elements of games that surround and support them, influencing our experience. Several scholars have written about how paratext serves to present games and influence how games are played, perceived, and experienced and may even introduce games to potential players [3, 4, 6, 8, 10, 12, 16]. Trailers, advertisements and other media, as well as components of the actual product such as covers and packaging, are all forms of paratext.

Game "covers" are a form of paratext directly attached to and presenting the game. For players encountering a game for the first time in a physical store, digital distribution platform, or even advertisements, covers shape expectations of games. Cover art is traditionally an actual physical cover on the packaging a game is sold in. However, due to shifts toward digital video game sales, we argue video game cover art now encompasses imagery featured in online stores and digital delivery platforms such as Steam. In 2018, 83% of computer and video game sales in the United States were in a digital format [7].

Covers may create a player's first impression of a video game. How players feel about representation in games is important because being able to see oneself reflected in media is important. As Shaw in *Gaming at the Edge* observes, representation shows players what is possible for people that look like them in games [20]. According to *What Does a Gamer Look Like? Video Games, Advertising, and Diversity* [2], many people consider gamers to be White, but in reality, many "gamers" are women and people of color. According to a 2015 study by the Pew Research Center, 83% of African American teens reported playing video games compared to 71% of White teens [15].

To get a better understanding of the potential impacts of covers on potential players, we gathered perspectives on a selection of video game covers. In this poster, we present survey results on differences in how participants of color and White participants report perceiving representation of non-White and White characters on video game covers. These participants' feelings provide insight into potential players' perception of video games.

## 2 Method

To explore how potential players perceive the portrayal of different ethnic groups on video game cover art, we created a survey via Google Forms and distributed it to potential gaming consumers through snowball sampling, a nonprobability sampling technique where existing study participants recruit future subjects from among their acquaintances. To be eligible to take the survey, participants needed to be at least 18 years of age. The survey was distributed to online undergraduate Facebook groups (various class pages, such as "Class of 2020"; gaming clubs; minority-interested organizations), Facebook groups for minority gamers, such as "Gamers Latino," private Snapchat stories, and other various social medias. We aimed for participants from

undergraduate Facebook groups, Facebook gaming groups, and various social media avenues because it allowed us to reach a diverse audience. These spaces allowed us to gain insight from various demographics from our desired audiences. For example, “Gamers Latino” allowed us to reach Latino gamers who may have otherwise not be reached through undergraduate college pages. The research team is composed of undergraduate students which allowed us to post into undergraduate Facebook pages, a demographic that may have otherwise been missed.

We developed our survey in three sections. The first section asked participants five questions about their demographics and gaming habits. The second section asked participants to answer the same series of six questions about a collage of game covers containing the top 20 selling games (on Steam) for each year from 2010 to 2015. These six questions asked participants to indicate on Likert scales whether they agreed or disagreed with statement about representation of non-White and White characters on these images, how positive or negative they felt about the nature of this representation, and whether they felt demographically represented themselves. For analysis purposes, we assigned response values on 1 to 5, with 1 being strongly disagree or extremely negative and 5 being strongly agree or extremely positive. The final section of the survey asked one Likert scale question about whether it matters to participants that they can self-represent, and two open-ended questions about general feelings toward representation in game cover art. In total, the survey featured 14 unique questions, and a total of 44 questions.

In line with Downs and Smith [5], this study used the top 20 video game covers for each year sampled, totaling 100 images included in the survey, which was sampled from Steam250, a site that ranks sales on popular distribution platform, Steam. These questions aimed to gain insight on potential players of different demographic groups and how they perceived White and non-White representation on video game covers. The survey was designed to gain both qualitative and quantitative data and featured a combination of closed-ended and open-ended questions asking demographic details about participants as well as their perceptions about a sample of game covers. We conducted two-tailed independent sample t-tests to verify significance between the responses of non-White and White self-identified participants.

Based on the answer analysis of players' indications on Likert scales about their perceptions, we provide results of non-White participants and White participants to see if there were disparities in perception. Our methods do have limitations (e.g., question design, the majority of our participants were Asian, and the lack of coding for the open responses), but still allows for further discuss on representation on video game covers.

## **3 Results**

### **3.1 Participants**

Out of 332 total responses, only 298 responses were fully completed or met the requirement of being over 18 years of age. The breakdown for racial demographic self-identification within our responses is as follows: 112 (37.6%) identified as Asian, 73 (24.5%) as White, 21 (7%) as Black, 21 (7%) as Hispanic or Latinx, 14 (4.7%) as

South-East Asian, 42 (14.1%) as Bi/Multiracial, 9 (3%) as South Asian, 1 (0.3%) as Middle Eastern, 2 (0.7%) as Native American or Alaska Native, and 3 (1%) prefer not to identify.

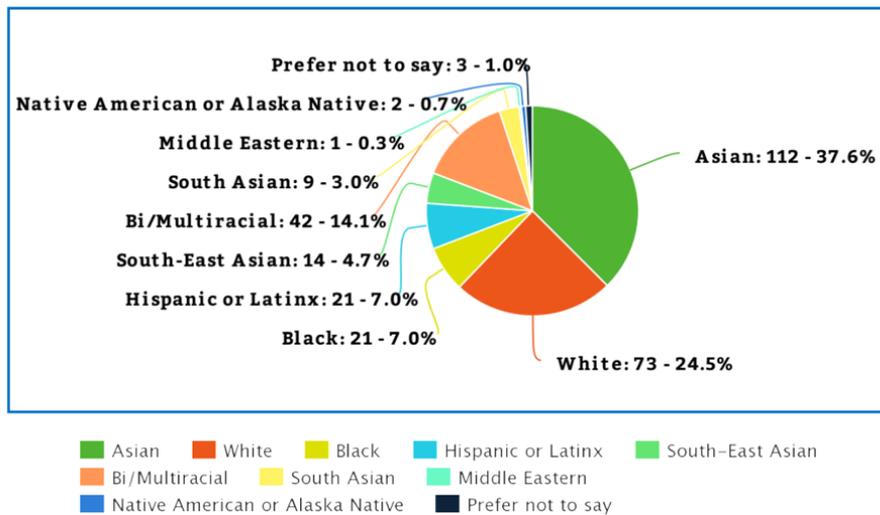


Fig. 1. Racial demographics of participants

### 3.2 Perceptions of Participants

The following findings represent the average for each question across the 6 years. Each provides a breakdown of total participants, and a comparison between non-White (N = 225 participants) responses and White (N = 73) responses.

#### Representation of Non-white Characters on video Game Covers.

*Amount of representation:* As seen in Table 1, 66.42% of total participants did not agree that there was an adequate amount of representation of non-White characters on sampled video game covers (33.56% strongly disagreed and 32.86% disagreed). 20.64% neither agreed nor disagreed. 12.92% agreed that there is an adequate amount of representation of non-White characters (8.46% agreed and 4.47% strongly agreed).

There was no significant difference between how white and non-white participants felt about the amount of representation of non-White characters on the sample video game covers, with a P-value of .4308. On average, participants agreed there was an inadequate amount of representation of non-White characters on the sample video game covers.

*Quality of Representation:* As seen in Table 2, 51.90% of total participants felt the representation of non-White people on these covers was neither positive nor negative. 33.39% felt the representation of non-White people was negative (25.56% responded negative, 7.83% responded extremely negative). 14.71% felt the representa-

tion of non-White characters was positive (12.02% responded positive and 2.68% responded extremely positive).

We found no significant difference between how non-white and white participants felt about the quality of the representation of non-white people on the sample video game covers, with a P-value of .4260. On average, participants agreed that the representation of non-White people on video game covers was neither positive nor negative.

### Representation of White Characters on Video Game Covers.

*Amount of representation:* As seen in Table 1, 78.58% of total participants agreed the representation of White characters on these covers was adequate (43.12% strongly agreed and 35.46% agreed). 16.55% neither agreed nor disagreed. 4.86% did not agree with the representation of White characters on these covers is negative (2.68% strongly disagreed and 2.18% disagree).

We found no significant difference between how non-White and White participants felt about the amount of representation of White people on the sample video game covers, with a P-value of .7580. On average, participants agreed that the representation of White characters on video game covers was adequate.

*Quality of Representation:* As seen in Table 2, 59% of total participants felt that the representation of White characters on these covers was positive (39.93% felt it was positive and 19.07% felt it was extremely positive). 34.17% felt it was neither positive nor negative. 6.82% felt the representation of White characters was negative (4.98% responded negative and 1.85% responded extremely negative).

We found no significant difference between how non-White and White participants felt about the quality of representation of White people on the sample video game covers, with a P-value of .2695. On average, participants agreed that White characters are represented positively on the sample video game covers.

**Table 1.** Responses of non-White and White participant groups on adequateness of representation on sample video game covers.

	I feel there is an adequate amount of representation of non-White characters on these video game covers			I feel there is an adequate amount of representation of White characters on these video game covers		
	Overall opinion	non-White participants opinion	White participants opinion	Overall opinion	non-White participants opinion	White participants opinion
Strongly disagreed	33.56%	33.04%	35.16%	2.68%	1.85%	3.20%
Disagreed	32.86%	31.93%	35.84%	2.18%	3.11%	1.40%
Neither	20.64%	20.96%	19.63%	16.55%	16.59%	16.44%
Agreed	8.46%	9.85%	4.11%	35.46%	36.37%	32.65%
Strongly agreed	4.47%	4.22%	5.25%	43.12%	42.07%	46.35%

**Table 2.** Responses of non-White and White participants on the quality of representation on sample video game covers.

	I feel the representation of <b>non-White</b> people on these video game covers is generally...			I feel the representation of <b>White</b> people on these video game covers is generally...		
	Overall opinion	Non-White participants opinion	White participants opinion	Overall opinion	Non-White participants opinion	White participants opinion
<b>Extremely positive</b>	2.68%	2.74%	2.51%	19.07%	19.85%	16.67%
<b>Positive</b>	12.02%	11.78%	12.79%	39.93%	41.19%	36.07%
<b>Neither</b>	51.90%	50.37%	56.62%	34.17%	32.52%	39.27%
<b>Negative</b>	25.56%	26.88%	21.46%	4.98%	4.67%	5.94%
<b>Extremely negative</b>	7.83%	8.22%	6.62%	1.85%	1.78%	2.05%

### **Do Participants Feel Demographically Represented on Video Game Covers?**

*By at least one character:* As seen in Table 3, 56.21% of total participants did not agree with the statement: “I feel that I am demographically represented by at least one individual in this compilation of video game covers” (36.58% strongly disagreed and 19.63% disagreed). 27.29% agreed with this statement (14.6% agreed and 12.7% strongly agreed). 16.5% neither agreed nor disagreed.

We found a significant difference between how demographically self-represented by at least one character on the sample video game covers non-White participants felt ( $M=2.06$ ,  $SD=1.20$ ) compared to White participants ( $M=3.73$ ,  $SD=1.31$ ), with a P-value  $<.0001$ . Non-White participants felt significantly less represented by at least one character than white participants.

*By many characters:* As seen in table 3, 63.53% of total participants did not agree with the statement: “I feel I am demographically represented by many individuals in this compilation of video game covers” (45.81% strongly disagreed and 17.73% disagreed). 17.00% neither agreed nor disagreed. 19.46% agreed with this statement (9.96% strongly agreed and 9.51% agreed).

We found a significant difference between how demographically self-represented by many characters on the sample video game covers non-white participants felt ( $M=1.81$ ,  $SD=1.09$ ) compared to white participants ( $M=3.39$ ,  $SD=1.45$ ), with a P-value  $<.0001$ . Non-White participants felt significantly less demographically self-represented.

**Table 3.** Responses of non-White and White participants on feeling demographically self-represented on sample game covers

	I feel that I am demographically represented by at least one individual in this compilation of video game covers			I feel I am demographically represented by many individuals in this compilation of video game covers		
	Overall opinion	non-White participants opinion	White participants opinion	Overall opinion	non-White participants	White participants
Strongly disagreed	36.58%	45.33%	9.59%	45.81%	55.70%	15.30%
Disagreed	19.63%	23.33%	8.22%	17.73%	19.26%	13.01%
Neither	16.50%	15.19%	20.55%	17.00%	15.41%	21.92%
Agreed	14.60%	12.22%	21.92%	9.51%	7.26%	16.44%
Strongly agreed	12.70%	3.93%	39.73%	9.96%	2.37%	33.33%

**Do Potential Players Value Representation of their Ethnicity?** This finding is not an average. It is based on a single question from the final section of the survey.

As seen in Table 4, 44.63% of our total participants agreed with the statement: “When a character who shares my ethnicity is portrayed on video game covers, it matters to me” (23.49% agreed and 21.14% strongly agreed). 33.89% did not agree with this statement (18.12% strongly disagreed and 15.77% disagreed). 21.48% neither agreed nor disagreed.

We found a significant difference between how much non-White participants ( $M=3.43$ ,  $SD=1.33$ ) and White participants ( $M=2.23$ ,  $SD=1.21$ ) valued characters representing their ethnicity on video game covers, with a  $P$ -value  $< .001$ . Non-White participants valued the representation of their ethnicity on video game covers significantly more than White participants.

**Table 4.** Responses of non-White and White participants on the value of demographic self-representation on video game covers

	When a character who shares my ethnicity is portrayed on video game covers, it matters to me		
	Overall opinion	non-White participants	White participants
Strongly disagreed	21.14%	25.33%	34.25%
Disagreed	23.49%	29.78%	28.77%
Neither	21.48%	20.44%	24.66%
Agreed	15.77%	11.56%	4.11%
Strongly agreed	18.12%	12.89%	8.22%

## 4 Conclusion

Through our study, we extend existing studies of representation in games and game paratext by examining how players perceive representation on popular game covers. Video games are a multibillion-dollar industry and have immense cultural influence. Our research shows how potential consumers of different demographics are impacted

by the visuals shown on these covers. We found that racial representation on video game covers is more valued by people of color than White participants. This may be in part because of what Passmore et al. call the “Privilege of Immersion” [19], in that White players do not feel the lack of representation as personally as players of color. We draw attention to video game covers because of how their visuals may influence consumers and non-consumers’ perception of various ethnic groups in games. By becoming more aware of the sorts of themes we identify in this poster, scholars may be better positioned to address representational inequalities in games and how these changes can impact everyone.

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## References

1. Burgess, M.C., Stermer, S.P., Burgess, S.R.: Sex, lies, and video games: The portrayal of male and female characters on video game covers. *Sex roles*, 57(5-6), pp. 419-433 (2007).
2. Chess, S., Evans, N.J., Baines, J.J.: What does a gamer look like? Video games, advertising, and diversity. *Television & New Media*, 18(1), pp. 37-57 (2017).
3. Consalvo, M.: *Cheating: Gaining advantage in videogames*. Mit Press (2007).
4. Consalvo, M.: When paratexts become texts: de-centering the game-as-text. *Critical Studies in Media Communication*, 34(2), 177-183 (2017).
5. Downs, E., Smith, S.L.: Keeping abreast of hypersexuality: A video game character content analysis. *Sex roles*, 62(11-12), pp. 721-733 (2010).
6. Dunne, D.J.: Paratext: The In-Between of Structure and Play. In *Contemporary Research on Intertextuality in Video Games*, pp. 274-296. IGI Global (2016).
7. Entertainment Software Association. *Essential Facts About the Computer and Video Game Industry*. Entertainment Software Association (2019).
8. Fiadotau, M.: Paratext and meaning-making in indie games. *Journal of Comparative Research in Anthropology and Sociology*, 6(01), pp. 85-97 (2015).
9. Gardner, D.L., Tanenbaum, J.G.: Dynamic demographics: lessons from a large-scale census of performative possibilities in games. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, p. 93. ACM (2018, April).
10. Gray, J.: *Show sold separately: Promos, spoilers, and other media paratexts*. NYU Press (2010).
11. Higgin, T.: Blackless fantasy: The disappearance of race in massively multiplayer online role-playing games. *Games and Culture*, 4(1), pp.3-26 (2009).
12. Jones, S.E.: *The meaning of video games: Gaming and textual strategies*. Routledge (2008).
13. Kafai, Y.B., Heeter, C., Denner, J., Sun, J.Y.: *Beyond Barbie and Mortal Kombat: New perspectives on gender and gaming*. The MIT Press (2008).
14. Kafai, Y.B., Cook, M.S., Fields, D.A.: “Blacks Deserve Bodies Too!”: Design and Discussion About Diversity and Race in a Tween Virtual World. *Games and Culture*, 5(1), pp. 43-63 (2010).
15. Lenhart, A. Smith, A., Anderson, M., Duggan M., Perrin, A.: *Teens, Technology & Friendships: Video games, social media and mobile phones play an integral role in how teens meet and interact with friends*. Pew Research Center, August, 2015 (2015).

16. Lunenfeld, P. ed.: *The digital dialectic: New essays on new media*. Mit Press (2000).
17. Malkowski, J., Russworm, T.M. eds.: *Gaming representation: Race, gender, and sexuality in video games*. Indiana University Press. Asfas (2017).
18. Passmore, C.J., Yates, R., Birk, M.V., Mandryk, R.L.: Racial diversity in indie games: patterns, challenges, and opportunities. In *Extended abstracts publication of the annual symposium on computer-human interaction in play*, pp. 137-151. ACM.Fasf (2017, October).
19. Passmore, C.J., Birk, M.V., Madryk, R.L.: The privilege of immersion: Racial and ethnic experiences, perceptions, and beliefs in digital gaming. *CHI 2018* (2018).
20. Shaw, A.: *Gaming at the edge: Sexuality and gender at the margins of gamer culture*. U of Minnesota Press (2014).
21. Shaw, A., Friesem, E.: Where is the queerness in games?: Types of lesbian, gay, bisexual, transgender, and queer content in digital games. *International Journal of Communication*, 10, p.13 (2016).
22. Williams, D., Martins, N., Consalvo, M., Ivory, J.D.: The virtual census: Representations of gender, race and age in video games. *New Media & Society*, 11(5), pp. 815-834 (2009).