HOW WE CREATE AND EMBODY THE OTHER: IMPLICATIONS FOR DIVERSITY IN CHARACTER-CENTRIC GAMES AND MEDIA

Implications for Diversity in Character-Centric Games and Media

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Abstract

Any act of character creation is likely to entail stepping outside of the self. With regards to diversity and inclusivity in games and other character-centric media, the *outcomes* (e.g., whether certain media are sufficiently diverse, authentic, sensitive and inclusive) receive considerable attention from game designers and researchers; we think it critical to also study and glean insights from the *processes* of character creation. In this paper, we present two complementary studies focused on understanding the role of diversity and identity in character creation. First, we present a qualitative interview study (N=14) with individuals who are deeply involved in character creation processes across various domains. Next, we present a survey study conducted with a more general population (N=101) recruited from Amazon Mechanical Turk (AMT), in which participants were instructed to conceive of and describe a fictional character before completing a parallel self-description task. From this pair of studies, we observed that the ways in which people relate to, understand, and struggle with their characters are deeply intertwined with understandings of the self. Moreover, in defining themselves and others, participants included but often transcended demographic traits, with non-demographic traits such as personality or ways of thinking about the world often outweighing demographic traits. We discuss how our studies can enrich discussions of diversity in games and play, and outline next steps we will pursue in this research.

Introduction

In games, television, movies, literature, and other genres that include elements of play or storytelling, "diversity" is an oft-used buzzword. The term often evokes a sense of social responsibility for inclusive representation, and a need to shed light on or give voice to the marginalized, excluded, or misrepresented. In the context of the U.S., for example, certain identities and experiences have been found to be more prevalent in character-centric media than others, with characters who are white, without mental or physical disabilities, economically privileged, heterosexual, heteronormative, neurotypical, cisgender, or male potentially crowding out other voices and identities (e.g., Kafai, Richard, Brendsha, 2016; Shaw, 2012; Brooks and Hébert, 2006; McInroy and Craig, 2015; Holtzman and Sharpe, 2014).

In their annual Game Developer Satisfaction survey, the International Game Developers Association defines diversity in terms of "demographic characteristics such as sex, gender, race, ethnicity, sexual

orientation, etc.," and found that 81% of developers felt that workplace diversity was "very important" or "somewhat important" (Weststar, O'Meara, and Legault, 2017). However, many researchers, members of the game industry, and game enthusiasts argue that industry practices and game production often do not reflect this value. Studies have highlighted the perils of a lack of diversity in both mainstream and indie games in that they exclude players belonging to minority demographics. For example, a lack of racial diversity in video games has the same impact as everyday racism on minority players (Hester, 2018; Passmore, Birk and Mandryk, 2018; Passmore, Yates, Birk and Mandryk, 2017). We see analogous issues of exclusionary representation practices in other media, such as "white-casting," in which white actors play characters that were written as other races (Chow, 2016), or limited publishing opportunities for writers belonging to minority demographic groups (Shapiro, 2018).

Much of the criticism of character representations in games and other character-centric media focuses on the end product: the character portrayal or representation. By default, the processes that enable problematic character representations are implicitly culpable. These can include hiring practices; if writers follow the adage "write what you know," then for example, an all-male team of game writers may be less likely to include nuanced representations of women. However, hiring practices aside, we argue that any act of character creation is fraught with challenges of representing "the other," a character who is different from oneself along one or multiple dimensions (Shawl and Ward, 2005). Even a large team of game writers, were they to hire one person to fit the demographics for every avatar permutation and non-player character available, could not guarantee authentic representation, or totally avoid misrepresentation or exclusion, as creators will almost always vary from the characters they are creating in any variety of non-demographic and demographic characteristics. Moreover, one person's authentic representation of their own experience of being, for example, black, gay, non-binary, or mentally ill, may be very different and thereby feel inauthentic to someone else who shares the same identity. To avoid speaking about diversity of characters in games and other media in vague brush strokes, we need to dig deep into the tangles of what it means to create characters that are other than the self, and the struggles, hesitations, and disagreements that this may involve. However, relatively little attention has been paid to exploring and understanding how creators and artists struggle with and make sense of character representations and embodiments.

To this end, we discuss the findings from two studies that aimed to shed new light on the process of representing the other via character creation: 1) a semi-structured interview study with character creators and embodiers (N=14), and 2) a survey study investigating character creation with a more general online population (N=101). First, in the interviews, we drew from a convenience sample of people deeply involved in the process of creating others, such as writers, actors, and game masters, designers, and players. Our participants shared their insights about what creating or embodying characters means to them, how they choose who to portray or not portray, what they struggle with, and in what ways they see their characters as similar or dissimilar to themselves.

To follow up on our interview findings, we next conducted a survey on Amazon Mechanical Turk (AMT), an Internet marketplace where employers, businesses, academic researchers, and others can hire contract workers (called "Turkers") for one-off jobs called "HITs" (Human Intelligence Tasks), such as surveys, audio transcription tasks, and image tagging tasks. We surveyed a general population that might not often directly confront issues of diversity in character creation to understand along

what axes people may be inclined to create characters, and how character representations may relate to self-representations. In this survey, we primed participants to imagine crafting a character and a story setting, and then asked them to describe the characteristics that define their main character and themselves, and to evaluate the level of similarity between self and character along a variety of dimensions.

We grounded this work in the premise that, in the space of art and creation, there is no clearly and unambiguously "right" or "wrong" way to create a character that is different (or similar) to the self. Instead, the pair of studies aim to inform more nuanced ways to think about diversity and representation of the other in games and storytelling, from which we can extract takeaways to guide our understanding of how to support humans in creating characters that resonate, engage, and include. In what follows, we present related literature, the study methodologies, the results of both our interview and survey studies, and a discussion of their implications for games and related character-centric media.

Related Work

Our work is guided by literature on diversity in games and related media, on transportation and perspective-taking, and on the psychological and cognitive underpinnings involved in understanding others and the self.

Current Discussions of Diversity in Games and Related MediaGames scholar Adrienne Shaw defines diversity in games as interacting with representations of marginalized (demographic) groups (2010). Often, discussions center around race and gender, though some would argue that diversity does not just mean *if* certain groups are represented, but *how*, and according to what game mechanics (Anonymous, 2015). Meanwhile, many of the more "contentious" demographic markers, such as sexuality and religion, are usually ignored altogether in most existing games (Shaw, 2009). In other media as well, minority groups along axes such as race/ethnicity, gender, and sexuality are often under-, mis-, or negatively represented (Borum Chattoo, 2018; Groom, 2015; hooks et al., 2006; Okoye, 2016; Smith, 2009; Syed, 2016; Tsay, Frain, and Fedorova, 2015).

Although games and other entertainment media are often criticized for their lack of diversity, a number of existing games challenge industry norms, such as in their representations of queerness and non-normative power hierarchies (Jacose, 1996; Ruberg and Shaw, 2017). In their review and analysis of games that "thoughtfully incorporated diverse identities and perspectives, or that explored, challenged, and subverted normative identities" (To, McDonald, Holmes, Kaufman, and Hammer, 2018), media scholars categorize how these games tackle diversity as follows:

1. Tackling stereotypes through visual design elements, such as character aesthetics (Chance and Little, 2014; Cole, Shaw, and Zammit, 2017; Toma, 2015).
2. Using abstract character representations, such as genderless characters (Portal Games, 2012).
3. Subverting assumptions about dominant norms, such as heterosexuality (Game Grumps, 2017).
4. Designing in-game conversations in ways that preclude biased (e.g., transphobic) responses (Bioware, 2009, 2011, 2014).

5. Structuring game play and rules in ways that encourage the introduction of queer content into the game (Adler, 2012).

These promising examples of diverse representations provide starting points for how we might think about nuanced representations in character-centric media. In our survey and interviews, we explore how character creators grapple with the several of the above themes, such as subversion of dominant norms and tackling stereotypes.

Transportation and Perspective-Taking: On Why Diversity Matters

According to transportation theory, when we are immersed in a game or narrative world, we are more likely to identify with characters and view the world and its characters as authentic (Green, Brock, and Kaufman, 2004; Green, Strange, and Brock, 2003; Tesser, Wood, and Stapel, 2005). We also take on the perspective of others, achieve high levels of flow and enjoyment, and even change our beliefs (Berns, Blaine, Prietula, and Pye, 2013; Kaufman and Libby, 2012). However, for players that cannot identify with characters— for example, because the characters are stereotypical, exclude salient aspects of their identity, or misrepresent their identities— the benefits of narrative transportation and perspective-taking become weakened or altogether ineffective, thereby essentially excluding certain groups from fully engaging with and benefiting from games and related media (Gillig and Murphy, 2016; Ritterfeld and Jin, 2006; Slater, Rouner, and Long, 2006; So and Nabi, 2013). Such exclusion can have direct negative impacts; for example, the lack of diversity in video games has the same impact as everyday racism on minority players (Hester, 2018).

Meanwhile, nuanced or counter-stereotypical representations of minority demographic groups can buffer against stereotype threat for minority players (Marx and Roman, 2002). Benefits also accrue to players of majority demographic groups, such as decreasing stereotypes of others and find commonalities between themselves and others (Dasgupta and Greenwald, 2001; Davis, Conklin, Smith, and Luce, 1996; Galinksy and Moskowitz, 200; Kaufman and Libby, 2012). Moreover, interacting with characters that fall outside one's own personal identity, experiences, or social spheres can intensify affective perspective-taking (empathy) (Kidd and Castano, 2013; Mar, Oatley, Hirsh, dela Paz, and Peterson, 2006). The majority of research on perspective-taking focuses on media audiences, but some research has shown that the perspective-taking as part of the authorial process also has key benefits (Harris, 2000). In our present work, we shift the focus to the less-studied question of what processes, strategies, and struggles are involved in perspective-taking from the creator side.

Self-Other Understandings

As we consider how creators construct and relate to their characters, it is also important to understand the cognitive and psychological underpinnings of self-other understandings more generally. From neuroscience, we know that in general, different areas of the brain are activated in conceptualizing the self versus the other (Voegeley et al., 2001). However, for close others (people well known by an individual), the same areas of the brain can be activated (Murray, Schaer, and Debbané, 2012) and it appears humans have a common representation network for distinguishing between the self and other, such that self-awareness and agency are crucial to understanding and interacting with others (Decety and Sommerville, 2003). Indeed, from our infancy, our social interactions with others are rooted in awareness of the self, and "the implicit notion that others are like the self" (Decety and Chminade, 2003). In psychology, the self-expansion model posits that a central human motivation is

to self-expand, and that one of the ways we seek to achieve this is through close relationships with others (Aron, Aron, and Norman, 2001). Related psychological research on self-other inclusion shows how people see more self-other overlap in people they feel particularly close to (Aron and Fraley, 1999), so much so that in rating the traits of themselves and both close and distant others, they will confuse the trait ratings they gave to close others with their own (and vice versa) (Mashek, Aron, and Boncimino, 2003).

Where perspective-taking research would suggest that we anchor on the self-concept in imagining or seeking to understand the other, this psychological and cognitive research suggests there may be a push and pull of projection versus internalization that character creators and embodiers must navigate. What remains unclear here— and what we explore in our two complementary studies— is *how* creators navigate the spaces between the self and others, along what axes they delineate and define ourselves and our characters, and how these processes of creation and embodiment relate to their understandings of and values around diversity.

Study 1: Interviews with Experienced Character CreatorsMethods

In Study 1, we conducted qualitative, semi-structured interviews, each lasting 40-70 minutes, with 14 individuals deeply involved in character creation, including novelists, short story writers, poets, journalists, television and game writers, actors, directors, and role-playing gamers, game masters, and designers (both tabletop and live-action role-playing games). Participants were not compensated for the interviews. These character creators, recruited with the help of professors in relevant departments at our local university, ranged in age from 19 to 62 (average of 45), and held education levels from "some college" to Ph.D. All spoke English as a primary language, and primarily were born and raised in the U.S. Eight identified as male, five as female, and one as non-binary; 11/14 identified as white, one as black, one as Native American, and one as Asian. Whereas some were full-time writers, videographers, professors of drama or literature, and game designers, others were involved in some form of character creation as a passion, hobby, or pastime while also holding another occupation, such as secretary, civil servant, human resources coordinator, or student. With university Institutional Review Board approval, we audio-recorded, transcribed, and qualitatively analyzed the interviews, using open-coding techniques to identify patterns across our participants' responses. One member of the research team coded the text independently, iteratively revising and refining the codes, then shared a sample of 20% of the responses with the other team member. After comparing and reflecting on code disagreements, she iterated on the coding schema, and shared a new 20% sample, and the other team member independently coded the excerpts again. Using Cohen's (conducted using R) to measure the inter-rater reliability from this subset, we measured a score 0.73, which is above the threshold of 0.70 deemed appropriate for exploratory research (Neuendorf, 2016). The final codebook is available in Table 1.

In the interviews, we asked our participants to describe their processes of creating or embodying their characters, what informs the development of their characters, on what axes they identify with or diverge from their characters, and what conflicts or hesitations they have in creating or embodying certain kinds of characters.

ResultsOur analyses revealed that participants' responses clustered around three high-level themes: 1) how creators orient themselves toward the process of character creation, 2) the specific ways in which

creators define their characters, and 3) the ways in which creators navigate challenges in the character creation process.

Orientations toward the process of character creation

In approaching character creation, our participants demonstrated a constant bidirectional pull between self- and other-ness, with orientations and motivations toward excluding and including characters in the self, and vice versa, occurring simultaneously.

Many participants, regardless of their personal demographic identities, spoke to some level of social responsibility in regard to how and who they represent through their characters. At least in part, they felt a responsibility to "give voice to the voiceless" (p02), as a journalist participant explained. As one game designer and player noted, "When you're improving a character, it's so easy to slip into the idea that they are a straight, white, cis man. And you really have to push against that" (p14). In attempt to remedy this, p14 used spreadsheets to track the number of non-player characters (NPCs) present in their work, along a number of different demographic axes, such as gender, race/ethnicity, and sexuality. Participants who identified with a marginalized group expressed similar sentiments. For example, a director/actor participant who identified as African American felt a responsibility to show diversity in his casting, saying, "The theater is in a place that's not as diverse as I'd hoped…I feel very passionately about diversity and inclusion anyway, so I want to make sure that my cast has some color in it in different places" (p03). Likewise, a short story writer spoke of her tendency to write more female characters, explaining, "You would not believe just how many male characters are everywhere for everything in every single way" (p05).

Yet participants did not just represent out of a sense of responsibility; they also wrote about different characters in order to understand and connect to others. Many of our participants explained they had been drawn to their particular form of character creation by an innate curiosity about the experiences of others. As one participant explained, curiosity about others is essentially a prerequisite for anyone involved in character creation and storytelling: "The way you have to position it, emotionally, is you're kind of an open sponge. You're just soaking things in. I mean, you find people fascinating…everyone has a story." A role-playing participant explained how she gained insights into who her characters were, how they processed the world, and what their failures are by embodying them via the game (p08). Another game designer and player explained that it is through playing and directing games and characters that they are able to get close to other people in real life, explaining there are "very few people I managed to get emotionally close to without sharing games" with them (p13). Participants spoke of getting into characters in games and acting by constantly thinking about how their character would feel and react, so much so that they reported breaking into tears mid-game (p11), and they spoke of wanting to create characters in order to arrive at a better understanding of other people's motivations (p06).

In order to understand and connect to others, almost all our participants relied on notions of universality— seeing a commonality of traits or goals shared by everyone (p02) —to find themselves in others. As p06 explained, "I guess my ultimate goal is just to try to find the humanity in all my characters." Role-playing participants especially emphasized this process of finding the self in the other. As p12 explained, "I mean, it's not so much a question of playing something very different from you, as finding a part of you that can play that." A television writer participant emphasized

that universality can transcend demographic variables, saying, "Well, I think, even if you're really extrapolating and writing a character that's not your gender, not your race, at the core, if you want these people to be realistic, living, breathing human beings, there has to be some part of you in these characters" (p07). Our participants projected themselves onto their characters, and also identified universal motivations and concerns in order to create characters they believed were authentic and respectful representations.

Through this process of connecting to the other via the self, participants also reported they learned about themselves. This was especially true for RPG players, game masters, and designers. For example, a role-player participant (p12) explained, "Every character is some lens on myself… There is always some authentic piece of myself in there. And a lot of what I value is dissociating from the self to learn about the self." For participants who had led, designed or played in RPGs, creating characters helped them cope with and process past trauma (p13), and deal with their own fears and insecurities, from issues with body image to extreme stage fright (p11). In this way, we can see that the characters people create and embody reflect back on the self, mirroring and interacting with self-identity and personal struggles.

Ways of defining the other

From out interviews, we also gained insights into the specific axes of identity on which creators choose to define their characters. We found that in defining their characters, more participants spoke in terms of personalities, traits, cognitive orientations, and experiences rather than demographics, with only about half of participants defining their characters in terms of demographics.

Many participants defined and chose characters according to how they think and process experiences. For example, one participant explained that her starting point for characters was considering how that character would react to different forms of suffering (p05). One role-playing participant said she tries to stay away from characters that over-think, as she herself often encounters "analysis paralysis" in real life and wants to avoid it in game environments (p11). Another role-playing participant, p08, explained that social expectations of games are often an inclusion issue; as a person with autism, she does not conceptualize characters via a set of traits or experiences. Rather, she determines whether a character is "play-able" by imagining whether she can project her emotions onto a given character.

Participants also defined and identified with characters according to shared experiences. For example, one participant spoke of his personal journey of going to the Indian Reservation on which he was born to meet his biological family, and his subsequent fascination with family-based stories, saying, "So that's where I start to get a lot of my story lines from. They're family-based, whether it's fictitious, or biographical" (p06). Another participant spoke of a character that shared her personal experience of dealing with a difficult conversation with an imprisoned relative (p05).

At the same time, we should note that demographics still factored into character definitions and how participants related to their characters. For example, p08 formerly did not allow herself to play Chinese characters, as she used to force herself out of her own identity. In more recent years, she realized, "I could design and play a character who's Chinese," and what she calls generally "classically me-favored type characters" (p08). Others looked to age as a defining feature, such as p03, who identified strongly with a character he had played in terms of age, occupation (professor) and general

life experiences, saying, "[The play] was about a professor in his late 30s who had recently moved to a building in Chicago. Which was pretty much me at the time. Trying to kind of navigate his way through class." We note that whether they were defining characters in terms of cognitive processes, experiences, or demographic traits, participants did so through a lens of the self, alternately drawing on the similarities and exploring the differences between self and other.

Tensions in character creation

As with ways of approaching and defining, non-demographic traits and experiences also featured prominently in creators' struggles and apprehension with creating characters that are other. For example, in discussing their reservations about representing or embodying the other, participants said they had apprehension about writing antagonists and sexist characters (p05), and avoided playing confrontational characters, surfers, characters with super powers, or "pan sexual partiers" (p10), writing or playing villains (p09), and writing about characters with military experience (p07) or war experience (p04). These decisions stemmed from participants' desires not to perpetuate certain narratives, or the realization that they did or could not connect with certain kinds of characters.

Along demographic lines, the fear was different; participants were afraid of "messing up." For example, p01 felt very nervous about writing women so as to not misrepresent or stereotype, and p09 felt apprehension in playing characters from different cultures, as she did not want to overstep the line from cultural appreciation to cultural appropriation. One participant explained, "There is a lot of pressure to not appropriate cultures or to 'write race right'" (p05). P11 expressed similar hesitation in role-playing characters of different gender, racial/ethnic and sexual identities, saying, "Hopefully I'm not being horribly insulting to anyone of that ethnicity or sexuality while playing them. I hope I'm not. I think I'm not. I think I'm doing it relatively sensitively" (p11). P01 explained there is disagreement over how to sensitively or "correctly" represent different demographic groups in creative communities. He spoke of a panel he participated in about TV representations of people of color in which many of the panelists were sharply divided on the questions: Is it okay for a character to be universal in identity, such that someone of a different race could conceivably play that character? Or ought characters be steeped in the specifics of their social identities and contexts?

Role-playing participants explained that this debate over what constitutes sensitive and appropriate representation along different demographic lines is often an integral and ongoing negotiation process in games. As p10 described, there are often limits to what forms of projection are allowable: "So generally, you can play any age … On gender, things are a bit different. So it's called cross-casting. So if I am a man who wants to play a woman, for example, some games will let me do that. Some won't. And then things get even more complex if a trans player comes along." As any role-player will know, in most games, such boundaries and limits are defined and negotiated via a game social contract. As p12 explained, the expected norm for conflicts in role-playing game play is, "You gotta talk about it." Such discussions and negotiations might result in substantial changes to the game and characters. As p14 explained, through discussions with game players, he came to realize that a game he set in Vietnam had elements that could be construed as culturally insensitive, and he therefore re-constructed the main character. Participants had personal limits and preferences about who they were willing to create or embody along non-demographic lines. Meanwhile, along demographic lines, they expressed uncertainty and fear about representing different types of "others," and determining what representations were appropriate and authentic involved debate and negotiation.

These findings revealed that considerations and concerns of self-other overlap profoundly impacted participants' approaches to and philosophies of character creation. In order to build on these findings and shed explore how identity influences the definition of self and other, we conducted a follow-up survey with members of a general population,

Study 2: Character Creation Survey with General Population Methods

In this study, we constructed a survey (n=101) using Qualtrics software and deployed it on Amazon Mechanical Turk as a Human Intelligent Task (HIT). Participants completed the survey in 13 minutes, on average, and were compensated $3 for their time.

The survey asked participants to imagine they had been commissioned by a fiction publishing house to write a novel featuring any character they wanted, and set in any time, place, and genre they desired. In designing the prompt, we chose 'novel' because we reasoned that every participant would be familiar with the medium, and participants might already be primed to think of video games and movies in terms of character types associated with the most profitable or well-known titles, or to think more generally about box office and sales, and that this might skew how they approach the process of character creation.

In the survey, we first asked participants to conceptualize a main character, and then fill in five blanks for the sentence stem, "My main character is _____." On the following page, we asked them to repeat the same procedure for themselves, using the stem "I am _____." Next, using a Likert scale from 1 (extremely dissimilar) to 7 (extremely similar), participants rated how similar they felt to their characters. We included a demographics section at the end, asking participants to identify their gender, race/ethnicity, age, nationality, and level of education. The demographic placement was important, so as not to prime participants to be more self-aware when describing their characters; we wanted to observe how they relate to their characters without identity-related priming. We then asked participants which of those demographic characteristics they had considered when creating their characters, and, for each they reported having considered, asked them to rate their similarity levels to the character using the same Likert scale. Access to a full copy of the survey is available upon request.

Overall, participants were extremely thoughtful and creative in their responses, but there were a few participants who merely copied and pasted the questions they had been asked as their responses, appeared to use bots to submit random text scraped from the Internet, or had misunderstood the prompt; we excluded the data from these participants from our analyses, resulting in a final sample size of 101.

To analyze the survey, we used both quantitative and qualitative techniques. We hand-coded the data by categorizing words and phrases used to describe selves and characters into groups, used R for summary statistics and any correlational analyses, and used Python and the Natural Language Toolkit to assist with text and sentiment analysis. To conduct a sentiment analysis of the words participants used to describe their characters and themselves, we used a manually labeled, commonly used dataset called AFINN in which 2,477 words and phrases are rated from -5 (very negative) to +5 (very positive) (Nielsen, 2011). Code for our analyses can be made available upon request.

Results

We designed the survey to complement the insights we gained from our interviews. We aimed to investigate how a broader population orients fictional characters in relation to the self, and along which axes characters may differ or adhere to self-identities. As discussed previously, we primed our participants to consider character creation in the context of a novel, but view the results in the context of character creation more generally. The overarching research questions that guided our survey design and analyses are:

- **Axes of Definition.** Along what axes (e.g., demographics versus personality traits) do participants define their main characters and themselves?
- **Semantic Analysis of Descriptors.** Are there salient differences in the way participants describe their characters versus themselves?
- **Demographic Comparisons.** To what extent do participants think about demographics when defining characters, and how do those definitions relate to their own self-reported demographics?

In rating overall similarity, over half of our participants (N=64) saw themselves as slightly to extremely similar to their characters, suggesting many may be operating under the "write what you know" mantra. We now dig into the specifics of this finding.

Axes of Definition

First, we studied how participants described themselves and their characters by manually coding the words and phrases chosen, and separating them into categories such as non-physical adjectives (personality traits or abilities), physical appearance or style (not including standard demographics), and other demographic and non-demographic characteristics such as age, gender, race/ethnicity, family status, and nationality. The vast majority of respondents described both themselves and their characters using at least one non-physical adjective (93/101 for characters; 95/101 for participants). Other fairly commonly used descriptors included gender (16 for characters; 19 for participants), age (16 for characters; 13 for participants), and family status, such as being a father, mother, spouse, daughter, or son (9 for characters; 14 for participants). Demographics like race/ethnicity (3 for characters; 5 for participants) and nationality (1 for characters; 2 for participants) were much less commonly identified among the five traits. Overall, it appears there are not clear differences in the patterns by which participants defined themselves and others, with many of the numbers ostensibly similar (see Figure 1). That is, participants were not clearly defining their characters on different axes than they were defining themselves. To explore this further, we also ran two-proportion Chi-squared (non-parametric) tests of statistically significant differences, and for the most part, did not find statistically significant differences. We did however, find one statistically significant difference (p=0.02): occupation and/or life experience (13 for characters; 4 for participants). This may be because a) we surveyed a population working on Amazon Mechanical Turk, who may be less likely to identify via their occupation than those who work in more traditional employment settings and 2) the science fiction genre was most popular among our participants in terms of the stories they had in mind, with 32 choosing science f iction as one of the genres. This genre may encourage creators to think more in terms of futuristic or fantastical occupations and roles.

Semantic Analysis of Descriptors

Next, we moved from topical categories to semantics. We used sentiment analysis and the AFINN annotated sentiment dataset, as described in the methods section. After calculating and then averaging the sentiment scores in Python, we conducted a simple t-test, and found a statistically significant difference (p = 0.0013) between the sentiment scores for participants and their characters, with participants assigning to their characters words and phrases that yielded overall lower scores (mean of 2.03) than they did themselves (mean of 3.83) (see Table 2). Recall that these sentiment analysis scores can range from -5 (very negative) to 5 (very positive). In other words, overall, participants used fairly positive terminology to describe both themselves and others, but described themselves slightly more positively than they did their characters.

We next used a simple word cloud algorithm to identify the words most commonly used to describe the self and others. The full results can be seen in Figures 2 and 3. Here, we saw some overlap: word like 'smart', 'intelligent', 'funny', 'honest', and 'strong' commonly described both participants and their main characters. To gain further insight, we next turned to participants' open-ended responses about how they compare to the main characters they created.

A number of participants wrote of demographic features in comparing themselves to their characters. Many female-identifying participants, for example, mentioned their gender identity as a point of similarity with their character, but this was often in the context of other, non-demographic similarities or differences. For example, one participant wrote, "We are both females and what happened to her happened to me when I was that age," and another wrote, "Like me, she is an older woman who isn't happy with her life and she is disappointed in how things have worked out for her. Both of us have gone through shit, but she is much more capable of getting on with life than me."

We posit that the difference in sentiment scores (with characters having lower positive valence than participants) may stem in part from storytelling conventions; more conflicted characters may lead to more interesting stories. As one participant wrote, "I [like my character] am an intelligent doctor in the Midwest. However, I am somewhat typically boring and I would have to intentionally give the character more interesting character flaws to make them more compelling." However, there could be other reasons for making a character "worse off" than the self, such as a need for dissociation. As another participant explains, "We are both short statured and depressed (the character more than me). I wanted the character to be lonelier and slightly worse off than me so I can feel more detached from her if I were to write her."

As reflected in the overall Likert scale averages, many participants described their characters as similar along various axes, with personality and experience featuring prominently. As one participant explained, "I am basing this fictional character off myself. It may be just slightly exaggerated but it's not far from who I really am." Other participants more heavily emphasized personality traits, saying, "We are similar in that we are both not afraid to take risks when we believe in something. We are both willing to stand up for what is right and to do the right thing," and "Like my character, I have personality traits that make me feel attracted to the world and that make me want to hide from it." In a tongue-in-cheek response, another participant explained their similarities despite very different circumstances: "I share a few qualities with the character, such as being determined and good at bringing people together. However, I'm not being chased by zombies."

Demographic Comparisons

In the demographic section, we found that when conceiving of their main characters, participants had been thinking about age (n=69), and even more had gender in mind (n=87). However, they often were *not* identifying with characters along these lines. For example, 40/69 (58%) saw their own age as dissimilar to their character's age, and 67 out of 87 (77%) reported that their character had a different gender than their own. Meanwhile, the majority of respondents weren't even thinking of nationality, race, or education when coming up with their characters. For example, 70/101, 64/101, and 78/101 were *not* considering race/ethnicity, nationality, and education, respectively when creating their characters. We note that although 31 participants *did* consider race/ethnicity in defining their characters, as we saw previously, only three participants chose race/ethnicity as one of the five important ways to define their character in the first part of the survey, suggesting that other aspects of character identity may be more meaningful for character creators than demographics. Moreover, across the various demographic axes, we did not find any statistically significant connections (using Fisher's exact test) between participants' self-reported demographics and the level of reported similarity along that demographic axis. For example, based off our survey, we have no reason to believe that participants identifying as a minority race or ethnicity are more likely to create characters that share that race or ethnicity. See Table 3 for the participants' self-identified demographics, which we collected through open-ended questions to allow for non-standard responses.

Discussion

Taken together, our interview and survey studies emphasize three important themes that can inform the design of games, play, and other forms of entertainment with prominent character-based components, and can enrich discussions of diversity in gaming and playful experiences.

On (Not) Solely or Even Primarily Defining People and Characters through Demographic Markers

In both the interviews and the survey, we saw that character creators have desires and tendencies to write about the "other," and that although discussions of inclusion often center on demographic axes of diversity, this otherness is often expressed and manifested in terms of experiences, personality traits, and ways of thinking about and relating to other people and the world. When identifying who characters are and who we ourselves are, we identify primarily through personality traits and experiences, *not* physical appearance. So although discussions of diversity often hinge on demographic diversity as reflected in physical appearances, both deeply invested and layperson character creators alike placed a relatively low premium on these factors in conceiving of the other.

Of course, this by no means suggests that demographics are not important; far from it. For example, if we are to say that people identify by and with characters, and differentiate themselves according to their experiences, than we must also acknowledge that there are myriad ways in which demographic features can impact one's life experiences; race/ethnicity, gender, and sexuality, for example, can have tremendous cultural impacts on how we are viewed and treated throughout our lives. Discussions of difference and convergence in demographic terms emerged in both the interviews and the surveys. However, we think it is notable that demographics did *not* emerge as the most prominent differentiator. Thus, as we consider our relationships to characters, and what inclusivity in media can mean, we should keep in mind that demographics are not the sole definers of ourselves or our characters, and that inclusivity in terms of demographics may not signify inclusivity in other

important areas. Giving a woman a female avatar in a game does not necessarily mean she can also see other aspects of her identity, such as beliefs or experiences, reflected in the game world.

On (Not) Solving Diversity Issues

In our interviews, we saw that there was great apprehension about creating characters that are "other," be that in terms of experience, personality traits, demographics, or other characteristics. As our character creators attested, diversifying characters along demographic lines does not necessarily make for more inclusive stories, as we may be creating inauthentic characters, or misrepresenting characters. In this paper we do not make any recommendations as to the "right" way to render stories, characters, games, and forms of more play and entertainment more "diverse" and inclusive, but we do hope to enrich the discussion on what needs to be done to promote diversity and combat the persistent issues of character representations stemming from the absence or misrepresentation of particular axes of identity in character-driven media.

Although conversations about diversity in games often center on demographics, issues of diversity may not be as neat and clean as increasing demographic diversity in hiring and development. We saw in both the interviews and the survey that even when creating characters ostensibly similar to the self along demographic lines, participants purposefully chose to diverge from their characters in other ways, or might recognize multiple ways in which they were still "other" in relation to their characters. In the survey, we saw that regardless of their personal demographic identities, participants often chose to create characters that differed along various demographic lines. Thus, in considering representation and industry hiring, it is important that we not rely on having members of certain groups present and involved as "solving" issues of diversity, or require that creators (writers, game designers, players, etc.) be forced into boxes where they must "represent" their particular demographic groups, particularly if they are a minority in the domain. Instead, we must be cognizant that any act of character representation is a creation, not a facsimile, or a reflection; regardless of demographics (even when creating characters that share one's demographics), people will be creating characters that are different than the self along multiple dimensions.

On Reflection through Character Creation

Lastly, our work builds on previous work that highlights the benefits accrued to character creators, including perspective-taking and empathy building. In digital and non-digital games and other playful media, the characters that are created are not necessarily outward-facing. For example, a role-playing game might take place in a small group that is not demographically diverse, or demographically diverse in some ways but not others, or demographically diverse in various ways but homogeneous in terms of traits, abilities, experiences, or predilections; the permutations are virtually without end.

We can look at character creation not in terms of diverse representation, but in terms of self-exploration and -reflection. When we initially implemented our survey, we expected to see patterns of self-other divergence in the survey, such as identifying the self primarily through personality traits, and identifying others (characters) primarily through demographics. However, what we actually saw is that participants defined the self and the characters in their stories along similar, primarily non-demographic axes, but that they also frequently created characters that were different from themselves along demographic axes like gender and race. In this way, there are opportunities to

integrate reflections on how our characterizations of others reflect the self in game play. Here, we can draw from feminist film theory; bell hooks (1992) spoke of the oppositional gaze, by which black female spectators can derive pleasure and shift the balances of power by critically viewing and dissecting film representations of femininity and blackness— or the lack thereof— propagated by mainstream film. In a similar vein, in *Playing in the Dark: Whiteness and the Literary Imagination* (2017), Toni Morrison discusses how to change the critical gaze from the racial object to the racial subject, explaining that viewing U.S. literature from a lens of blackness is crucial to understanding U.S. literary identity, regardless of whether an individual text overtly deals with themes of race and racism. Although hooks and Morrison focus on race (specifically, black and white) and gender (specifically, female and male), we can also think in terms of other axes of identity, such as sexuality, other races and ethnicities aside from blackness or whiteness, and a larger range of gender identities. This also can include points of identity we may be more apt to ignore, including neurodivergence and neurotypicality, and non-demographic markers of identity, such as personality traits or ways of processing the world and connecting to others.

In game play and other interactive narrative and character creation media, where players may be both creators and audiences at once, the challenge then becomes twofold. First, as we critique media representations through a diversity lens, we can challenge ourselves to view representations in terms of the creator as object, analyzing and dissecting how creators reveal and define themselves through the characters they create, rather than focusing on the created manifestations. Second, from the perspective of self as both creator and player, we can add an additional layer of critique and self exploration; we can challenge ourselves to view what our own representations of characters that are "other" than the self have to say about the self, viewing our own character representations oppositionally. Again, using Morrison's framework and drawing inspiration from bell hook's notion of the oppositional gaze, the goal would then be to look at the creator-self as the object of critique and analysis, rather than the representation itself.

Limitations

Although this work provides insights about how we can think about diversity in character-centric media from more nuanced perspectives, our results and analysis are limited by our sample, our study methods, and our own cultural perspectives and biases. To start, we did not specifically recruit from minority perspectives along different demographic lines. In this way, more of our participants in both studies were, for example, white than non-white, and only one participant identified as non-binary in gender. Our findings may be more generalizable to how people as a whole create and embody characters, but may miss out on nuances of how members of demographic minorities approach the process. Moreover, in our survey and in the demographic questionnaire portion of our interviews, we chose to ask people about standard U.S.-based demographics, and almost all our participants were U.S.-based; although open-ended and interview components allowed participants to self-identify as they desired, our work may not adequately explore important identifiers such as sexuality, neurotypicality and divergence, employment status, or religion, to name a few, and our findings are more appropriately confined to a U.S. cultural context. The authors of the paper are also biased and informed by their own identities and experiences.

Next Steps

This interview and survey work is part of a larger exploration of inclusivity, otherness, and perspective-taking in character creation within games and storytelling media, especially digital media. In the next steps of this broader project, we look forward to doing some (and hopefully all) of the following:

- Developing and testing a pilot prototype character flagging tool to help character creators identify and remedy where they may be creating flat, inauthentic, and/or stereotypical characters.
- Incorporating storytelling techniques to create more meaningful experiences into modern platforms where it may be lacking, such as crowd work.
- Exploring how we can balance perspective-taking with both cognitive and affective understandings of the self and "others" in relatively new media like virtual reality.

As attested by the responses in both our interviews and our survey, issues of diversity and misrepresentation or lack of representation of minority demographic groups, or otherwise minority, under-heard, or unprivileged perspectives in games and other character-centric media need nuanced critiques and reflections. Through this work, we hope to broaden the conversation about what diversity in character-centric media means and entails.

Acknowledgements

We are indebted to the National Science Foundation Graduate Research Fellowship Program for their financial support, to Judy Oden Choi for all the conversations, insights, and suggestions; and to all our thoughtful and insightful interview and survey participants.

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Tables and Figures

Table 1

Code and Explanation

differentiatingSelf: Discusses the concept of creators purposefully distinguish characters from themselves, and the importance to them of self-differentiation.
charDemographics: Identifying who characters are through demographic variables.
charPersExpCog: Identifying who characters are through experience, personality, cognition (e.g., way of thinking about or experiencing the world).
app_persExpCog: Expressed some hesitation about or discussed avoidance of writing/creating different due to gaps in personality, cognition, and/or experience.
limitationsOfFeedback: Discusses types of feedback received (on character creation), and ways in which that feedback might be lacking in certain ways.
app_dems: Hesitates in or avoids writing/creating different due to not sharing the same demographics (e.g. race, gender).
negotiatingCharacterBoundaries: Includes determining what is allowed, how people interpret differently (e.g., in scripts, games), and how characters are re-shaped.
divisionsWritingOther: Discussion of ways in which people directly disagree about limits of writing the other, how characters should be written, etc.
socialResponsibilityRepresentation: Discusses ideas of duty, obligation and guilt regarding broadening representation along demographic and socioeconomic lines.
selfExplorationThroughCreation: Discusses ways in which creators modeled character using self, told own story, or otherwise explored the self through creation.
understandingAndExperiencing: Uses imaginative perspective/experience taking to explore what it means to be someone else, or to become closer to other people.
humanityAsUniversal: Espouses the attitude of there being universal aspects of humanity, such that no experience or person in inaccessible.
groundingThroughResearch: Conducts research to make characters more authentic.

Full codebook used for interview analyses

Table 2

T-statistic	Degrees of freedom	P-value
-3.26	199.54	0.0013**
Mean SAS: characters	**Mean SAS: participants**	**95% Confidence Interval**
2.03	3.83	-2.89 to -0.71

*T-test results for differences in sentiment analysis scores, abbreviated as "SAS," averaged per participant (for character traits and participant traits, respectively) **Indicates statistical significance at the 0.05 level, meaning we can reject the null hypothesis that there is no difference between the two average (mean) sentiment scores. Sentiment analysis scores range from -5 (very negative sentiment) to 5 (very positive sentiment).*

Table 3

Age	
Average: 35.9; Median: 33	Range: 23-63
Gender	
Female: 43	Male: 58
Nationality	
non-U.S.: 9	U.S.: 92
Race/Ethnicity	
Multiple or non-white: 30	Caucasian or white only: 71

Overview of participants' demographics. Note: Eight of the nine non-U.S. participants came from India; 1 identified nationality as simply "Asian." For race/ethnicity, 7 identified as black or African American, 4 as Hispanic or Latin@, 11 as Asian, 2 as Native American, and 5 as other/preferred not to answer.

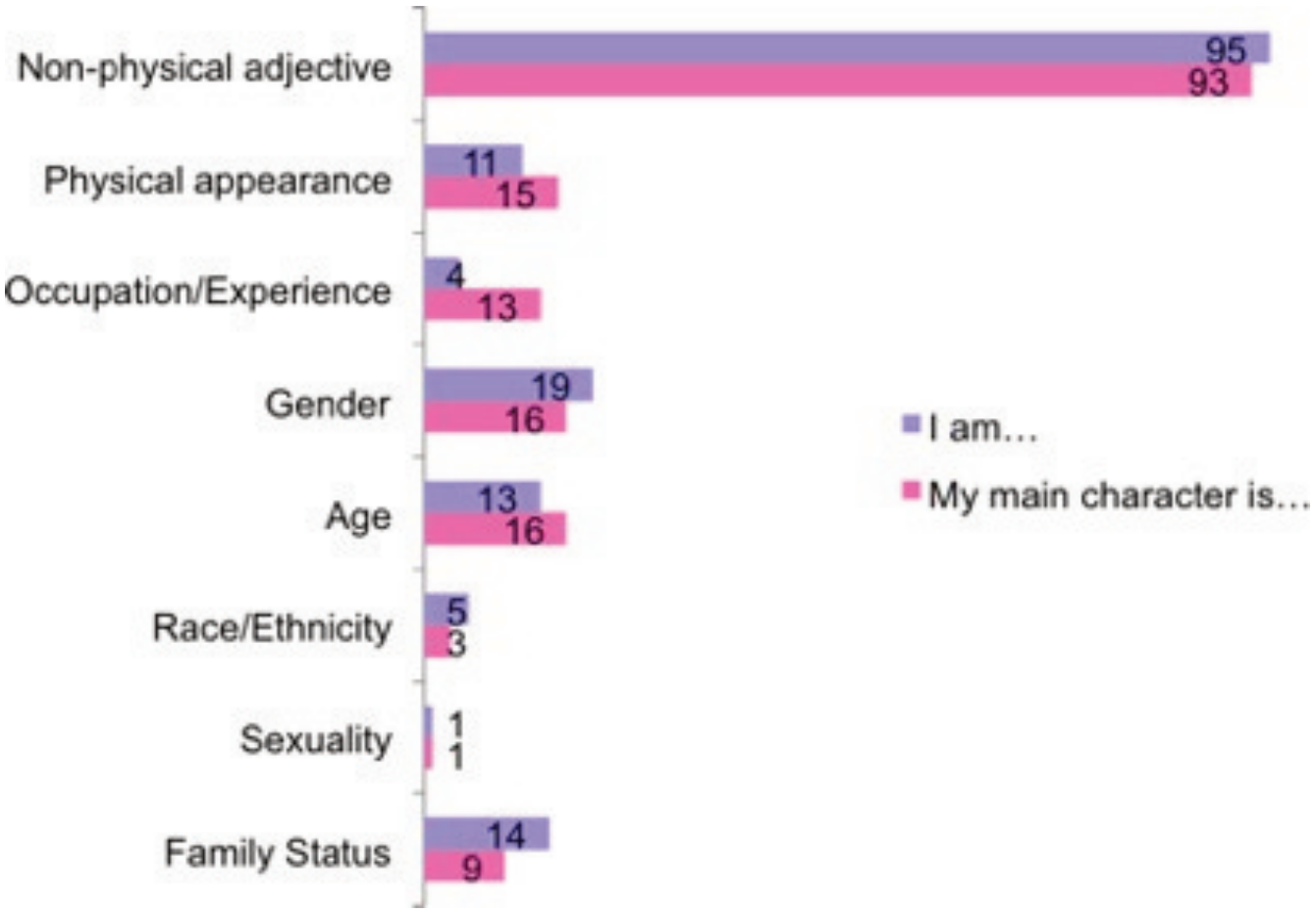

Figure 1. Number of participants choosing one or more words of the following categories to describe themselves and others (not exhaustive)

Figure 2. Characters: Most common descriptors used

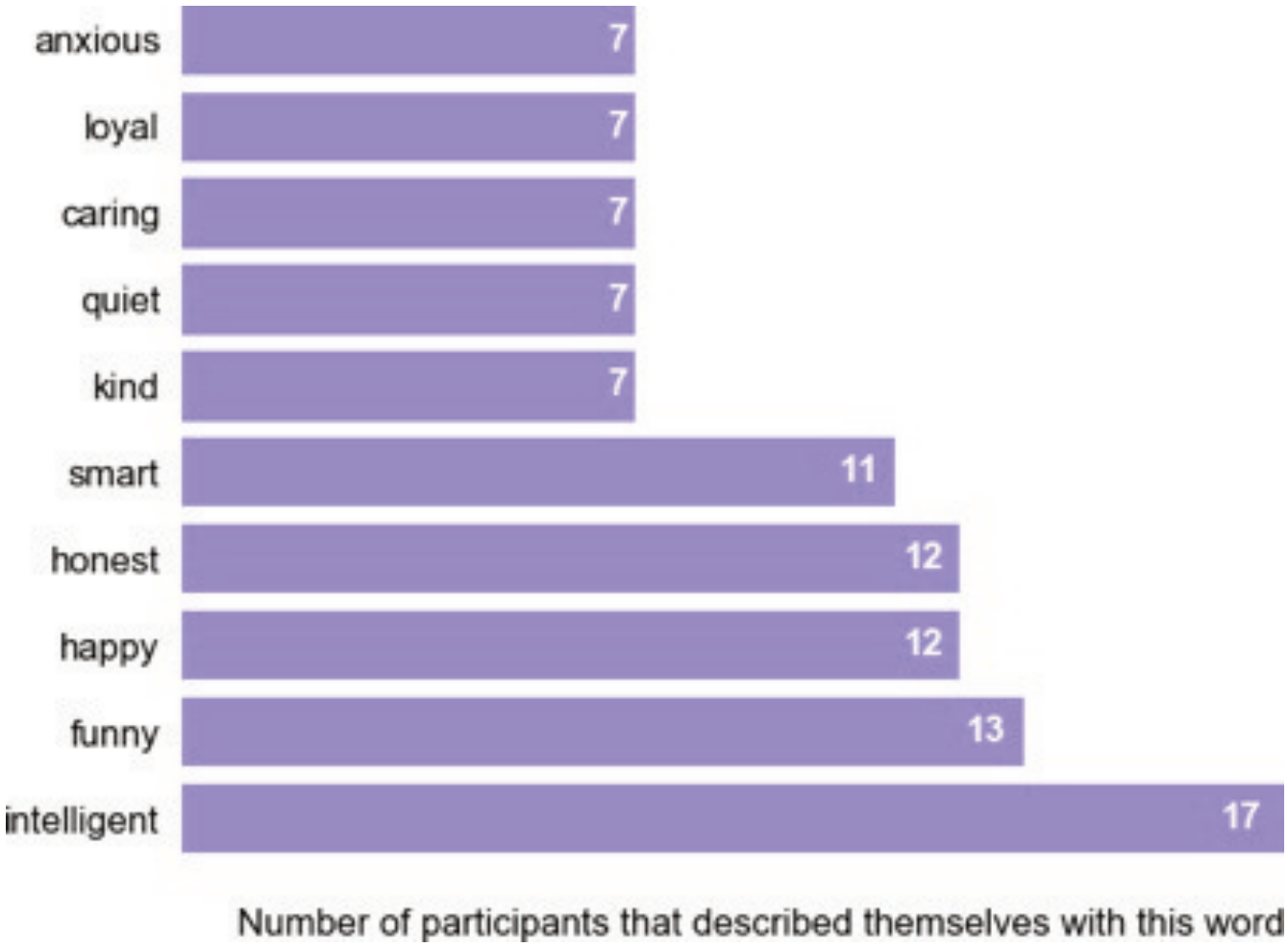

Figure 3. Participants: Most common descriptors used