

What's in a Name?

Naming Practices in Online Video Games

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ABSTRACT

Recent research suggests that participation in online video games allows players to create an “idealized self” through their characters, that is, a character perceived to be more attractive or interesting than the player. However, our research indicates that players use carefully created character names to develop a persistent, pragmatic identity to maintain social relationships across games and related sites, and to express their personalities by incorporating elements of popular culture, literary references, and aspects of their own personal histories. Identity in gaming is thus more complex than identification with the physical representation of the character.

Author Keywords

Identity; Handles; Names; Player-Character Relationship; Online Video Games

ACM Classification Keywords

K.8.0 PERSONAL COMPUTING; Games

INTRODUCTION

In previous exploratory interviews with video gamers, we found that players considered their character names a critical aspect of their identity. We decided to systematically study naming practices to understand why players felt that character names were so important. This paper reports the results of that research. We define *identity* as a representation of the self comprised of personal experiences and interactions that players construct for functional, pragmatic purposes.

Previous research suggests that the player-character relationship provides an opportunity to create a better version of the player through the character [5, 8]. For example, Bessière et al. [5] reported that players used their characters to construct an idealized self, i.e., “[a] physical or psychological self that the player wishes to be.” The authors emphasized that the fantasy elements of online

video games “free players from the yoke of their real-life history and social situation, allowing them to be more like the person they wish they were” [5]. Ducheneaut et al. [8] analyzed the relationship between online and offline identities, and determined that players perceived their video game characters to be more attractive and socially adjusted than the players perceived they themselves were. In contrast, our results suggest that players used their character names as *sincere* representations of their identities, that is, expressive of who they felt they actually were as revealed by character names that embedded bits of a player’s experiences, interests, and preferences. Our findings do not suggest that arguments about the character as an idealized self are wrong, but that they are not the entire story. Players expressed their identity through character names for various pragmatic reasons that we will discuss.

Digital embodiment, or the physical representation of a person in a virtual space, has been a research concern since early studies of online social interaction [4, 19, 24, 25; see also 3, 26]. These studies pushed research on player identity towards a focus on the character’s graphical representation, but have not yet addressed naming. Our research begins to fill this gap by examining practices surrounding the creation and use of character names in online video games.

In addition to the undeniable importance of names in all of our interactions with others [16, 28], we note that in video games, many social interactions take place when the physical representation of the character is absent. For example, in global chat, private messages, and in-game mail, a player is identified by their character name, not by their embodied character. As one of our study participants said, “*And like, you’re always in general chat or a chat, so your [character] name’s pretty important.*” The importance of a character name frequently extends beyond the game-world into related contexts. For example, in many online games players identify each other in game, on the official game forums, and on private guild forums by their character names.

A few studies have begun to consider the functions of character names [7, 10, 11, 27]. Guitton [10] examined naming patterns for characters of different genders and races in World of Warcraft, and found that female characters had a higher concentration of vowels in their names. Building on Guitton’s work, Thurau and Drachen [27] recorded the names of over eight million World of Warcraft characters and 3,000 first-person shooter

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gamertags. With big-data methodologies, they discovered where character names originated, and which names players used more frequently for certain races or classes. Drachen et al. [7] reported that character names had rich semiotic meaning influenced by the aesthetics and lore of a game world.

Hagström [11] examined character names and their relation to player identity in World of Warcraft. She found that players had clear understandings of what constituted a game-appropriate character name, and outlined many aspects of character naming that players considered important. For example players argued that character names that included race- or class-specific components showed a player was uncreative and had an inappropriate name [11].

Building on previous research [7, 10, 11, 27], we sought to contribute to the current understanding of the functions of names in the player-character relationship. In our interviews we examined *why* players chose particular character names and *how* character names contributed to a player's identity. To address these questions, we used Gottlob Frege's theory of reference and sense. Frege defines *reference* as the object or subject to which a word points, and *sense* as the meanings, connotations, and associations of a word [9; see 16, 17]. As we will discuss, maintaining a character name as a referent allows a player to establish a persistent identity across games and related contexts, and embedding sense in a character name allows a player to represent aspects of himself to other players.

METHODS

We conducted semi-structured, audio-taped interviews with 20 gamers. Interviews took place in-person (9 participants) or remotely via Skype (11 participants). Players who participated in interviews in-person met with the interviewer at public locations such as coffee shops and restaurants.

Interviews

Players discussed their video game naming practices, where their character names originated, and reported their opinions about different name types and stylistic choices within a name, such as use of accented letters, punctuation, numbers, and misspellings. We asked players about any game that required them to create a unique character name. Players discussed naming practices in Massively Multiplayer Online games, i.e., World of Warcraft, EVE Online, Guild Wars 1, Guild Wars 2, Final Fantasy XIV: A Realm Reborn, Star Wars the Old Republic, Star Wars Galaxies, Path of Exile, Asheron's Call, Secret World, Dragon Court, Day Z Elder Scrolls Online, Holy Beast Online, Aura Kingdom, Dragon Nest, Spirit Tales, Planetside 2, Dark Ages of Camelot, Everquest, Aion, and City of Heroes; and online arena or strategy games, i.e., Dota2, Hearthstone, League of Legends, Civilization 5, Team Fortress 2, Starcraft, and Starcraft 2.

While offline gaming was not the focus of the study, many players discussed their naming practices in offline role-playing games as well, i.e., Mass Effect (1, 2, and 3), Diablo (2 and 3), Borderlands, Borderlands 2, Elder Scrolls: Fire Emblem: Awakening, Skyrim, Monster Hunter, Pathfinder, Shadowrun, and Dungeons and Dragons.

Participants

We recruited participants via email, Facebook, and snowball sampling. Participants contacted via email were involved in one of the first author's previous studies, and had requested to participate in future research. Participants contacted through Facebook were members of gaming-related interest groups. Our sample included 6 females and 14 males aged 19-62 (\bar{X} =29.2; $M = 27.5$). Eligible participants were required to currently play at least one online video game and/or self-identify as someone with a history of online gaming. We did not recruit participants based on information about their naming practices. All participants consented to the use of their actual character names for this paper. We anonymized any other names mentioned in the interviews during transcription.

RESULTS

We examined why players maintained a persistent referent through their character names, and how they embedded meaning into character names to represent and distinguish themselves within and across social contexts.

Reference

Frege observed that, "The reference of a proper name is the object itself which we designate by its means" [17]. We discuss how names functioned as identity objects and as persistent referents of identity online and offline.

Names as identity objects

Just as we quickly become accustomed to nicknames in offline life, players found it natural for others to refer to them by their character names in-game. One participant explained: "*I think it's almost become like, my online identity where it like, just becomes natural. When like, I introduce myself in real life I say, 'My name's [my real name]'. When I introduce myself online I say Venusa.*"

Many participants considered their character name as important to their identity as their real name: "*It's as much a name for me as my name in real life...It's part of my name, part of my identity.*" Players often maintained their character names in other online contexts as well: "*All forums or anything I sign up for it'll be Skrunk, and if that's taken, just some variation of it.*" Many players reported feeling happy when they were able to reuse a name in a new context: "*If I can get just 'Drain', like without any modifier on it, then I am super happy.*"

What happens if a favorite name is unavailable when a player joins a new game? Some players reported agitation after discovering "their" name was taken: "*I would be really frustrated and then I would have to go back and think about it for an hour. Like, the naming is so important, if it's*

not right...I'll delete the character." Players invested time in name creation because they knew it would become the means by which others identified and referred to them. They were aware of the risks of losing a well-used name, and sometimes devised solutions to the problem. For example, some players used phonetically similar letters across names e.g., Zythan and Xythen. Some doubled the name e.g., Skrunk and Skrunkskrunk, or added additional letters e.g., Treasure and Treasurez. Others embedded the name in a longer name e.g., Venusa and VampireVenusa. Some players took more extreme measures to secure a character name: *"I'm usually pretty careful to make sure that when I play a game to get in as early as possible to make sure I get that name."*

Sometimes players were misidentified by a character name that shared similarities with another name. One player was confused with someone else who shared his naming motif. He had to explain this coincident to others to prevent identity confusion:

...When I first joined up with my Ragebarf character on World of Warcraft I was mistaken for a very prominent member of the server who had recently left. And people were messaging me like, "Oh are you this guy?" Whose name was Rage...something. And I was like "No I have no idea what you're talking about. Sorry." That happened a few times...people just thought I was [his] alt.

Some players were critical of others who did not, in their opinion, choose their names carefully enough. One player criticized the use of common names from fantasy literature such as Legolas or Gimli: *"Why call yourself something that you could get mixed up with somebody else? You can do it if you want, but...you [might] get mistaken for a person...they [might] get mistaken for you."* Common fantasy names defeated the purpose of using names to accurately identify others in-game.

Fear of identity confusion sometimes arose when accounts were hacked. One player explained:

It feels almost as if there's somebody else running around in your own skin. Because when I play a character I'm scared about when, like, if somebody were to hack my account...And just [be] in my body running around. Our reputations could get mixed, our personalities could get mixed, just, the whole identification. It's not so much the items that I care about, but more like, if somebody else got into my account and starting saying things to my friends and my guild mates. It would just feel weird that somebody else could do that and basically take on that persona.

Anxieties about names included identity confusion, identity theft, and having a favorite name taken by another player. Players worked hard to make sure their names did not misidentify them to others.

Names as persistent referents of identity in online gaming

Cultivating a persistent identity helped players recognize each other in-game and provided the opportunity for players to sustain relationships across contexts. Maintaining reference allowed players to establish continuity between characters and across games:

Errant Venture is the main character I have in every game as long as it's available...It was a good way to like, carry some continuity through to different games. Like, I'd build a community of friends in one game and when some of them moved to another and I moved to the same game, then it was nice to keep that continuity.

Another player explained:

I have had people recognize me across games. So like, I've been in one game, like I was in a big guild when I played Dark Ages of Camelot for a long time. And in both World of Warcraft and in, when I played Warhammer Online I had, I ran across other payers who saw my name and were like, "Oakbeard, did you play Dark Ages of Camelot? Were you in this guild?" who like recognized me and then I fell in with them, you know?

This player was able to reconnect with other players when he joined a new game by maintaining a name from a previous game.

Many players believed once they chose a name it stuck with them, sometimes even after the player deleted or stopped using the character with that name. One player described how a name could stick with a player long after a character no longer existed:

There were lots of people who [had character names]...we knew each other by, that we called each other by even though we no longer had any characters named that anymore...So someone new would join the guild or something, or was new to the scene, and you'd know, "Okay, this guy is Menos, even though he doesn't have any characters named that" because that's what everyone was calling him.

In this sense, the name, unlike the physical representation of the character, had a life of its own. The name carried a player's history across contexts, and became associated with the player himself in a way that the physical representation did not. Players emphasized the importance of choosing the "right" name initially: *"Because, you know, the name is something you're stuck with for a long time. You can cover yourself with armor if you're hideous."* Players could change the character's physical appearance ("cover yourself with armor"), but a name persisted. Though character name changes are now a common feature in online games, they frequently require a player to pay in offline currency. We address character name changes more in-depth in the Discussion.

How did players approach naming multiple characters? Many games allow players to create several characters for different purposes or roles. For example, a player may have one character for healing and another for maximizing damage. Often players have one “main,” or most frequently used character, and several “alts,” or alternative characters. While main character names were generally those players identified with the most, they also used alt character names to represent aspects of their identity to other players. One player discussed a problem that arose when he named an alt that subsequently became his main:

My main character was actually going to be...It was going to be my alt. So I kind of just gave it a random, stupid name that I didn't think was going to stick and now I'm stuck with it and I hate it. It's uh, Stinkypeen... I hate it. It's kind of embarrassing, I don't want to be, I don't want that to be associated with my name.

This player created a name that reflected his somewhat lewd sense of humor. He assumed his character would be an alt he only played in certain contexts, such as player versus player combat where vulgar names are more acceptable. Once he started using the character as his main, he became concerned that it reflected poorly on him as a player.

Names as persistent referents of identity in non-gaming contexts

Reference established through a character name sometimes extended to offline and social media interactions. Many players reported that when online relationships moved to non-gaming contexts, the player's character name, not their real name, prevailed as the form of identification. One player explained how her character name in World of Warcraft, a game she had not played for several years at the time of the interview, had become a referent for her in offline conversations, in social media, and on the phone:

Kotomi, my main character in World of Warcraft, people still like, a lot of people still refer to me as Kotomi or Koto or variations of that name. Real life friends, and you know people I text often and etcetera. I know I'm in people's phones as Kotomi still. Even after like the advent of Facebook.

Some players bridged the gap between online and offline referents by referring to themselves as their character names in offline contexts:

I actually use my online moniker in real life a lot. There's people who know me as Clockwork in real life, like I see on a weekly basis. When I introduce myself to people I say, you know "I'm [real name], but all my friends call me Clockwork, and whichever's easier for you to remember."

Summary

In the same way a person develops an attachment to their real name [12], players frequently developed strong

emotional attachments to their character names. The importance of character names was apparent in several ways: the care with which players created identity objects which they expected to be persistent, their sense of ownership of particular names, their anxieties about what could happen to their names, and even taking character names offline and to social media.

Sense

Reflecting on the nature of sense, Frege said, “It is natural...to think of there being [meaning] connected with a sign (name, combination of words, letter), besides that to which the sign refers...what I should like to call the *sense* of the sign” (emphasis in original) [17].

We discovered that players developed rich meanings through their character names by embedding connotations and associations with a specific word, concept, media reference, or style into the name itself. Players considered a name the most customizable part of a character, and thus the appropriate vehicle with which to express meanings. As one player said:

[Your name] gives an impression in people's minds about who you are beyond like, when you're playing World of Warcraft or something there's a finite number of characters you can play and items to wear, and so the whole idea of customization, really honing your character, is somewhat limited. So you know, when you have a character name, it's like one of the first things you see and you see it all the time and it's one of the few things that you can completely customize, barring offensive language. It's of larger importance than other aspects of customization.

We identified two key practices for creating sense in names: alluding to other media and creating a name that “fit” a game or character. Allusions to other media showed others how the player identified herself with respect to common shared media so that they would immediately know something about her. Players deepened identification with their characters by carefully “fitting” their names to lore or other aesthetic aspects of a game.

Allusions to other media

Players sometimes drew inspiration for their names from sources external to a game, such as foreign languages, literature, and pop-culture references. One player who used Japanese names for all her characters had “Hikario,” a Japanese phrase that the player translated as “For the light!” Another player named his characters after Shakespearean figures, taking “Lafeu” from *All's Well That Ends Well*. Many players used fantasy literature such as Tolkien's *The Lord of the Rings* or Rowling's *Harry Potter* to find character names. One player named her character “Cercie,” an edited spelling of a character from the *Game of Thrones* television show.

Books, comics, TV shows, music, and other popular media were frequently source materials for creating names.

Players found that allusions to popular media could be useful for social interactions:

If I think someone within WoW will understand or know the fandom, like it'll be close enough to the actual name that they'll get it...Just like hoping that they'll maybe chat about it if we happen to be in a party together or if you're just walking around in the main city maybe someone will like bring up the topic. Or sometimes it's to show that I'm a fan.

This player embedded meaning in her character names to start conversations with others and to find players who shared her interests.

Creating sense was not always easy to accomplish. Unintentional allusions were a concern for many players. One player explained why he stopped using a name that contained an unintended allusion to other games:

I don't tend to use Morrigan online because it's become a little bit clichéd...I know there was a character in Dragon Age that used that name...I think because a lot of people have played Dragon Age they'll see that name and...they'll think that's where I got the name from. But also, it sends a slightly different signal...perhaps it would evoke understandings of characters from the game rather than from the goddess.

“Morrigan” evoked a different sense than he originally intended. Since the allusions to more recent characters overshadowed his allusion to the goddess, the named ended up sounding clichéd.

Players believed that others formulated impressions about them based on their character name even before any social interaction:

[A name] is what you're projecting to the rest of the world. By definition with MMOs you're playing amongst a bunch of other people ...If you call yourself "Teatpuppies" that sets a different impression than like, "reallycoolguy97" or whatever. People see that and they think certain things before you even get a chance to direct them in any other way.

Some players used allusions to reflect personal interests: “Stormwitch was my mage...Stormwitch is the name of a song by The Sword and it's really, really good and I really like it. But I figured it was relevant because she's a mage, and it just sounded cool.” This player was able to incorporate a song he liked into his character name to reveal his musical preferences to other players.

Creating a name that “fit”

Players often took game aesthetics into account when creating a name. They worked to create character names that “fit” with the contextual aesthetics of a game world; a name that did not break immersion and could plausibly occur somewhere within the game world. Some players made their names fit the lore: “I think the priority for me is

that it sounds exotic but realistic and that it fits the lore.” Other players created names that fit their character’s attributes such as race and class: “I try to make [the name] fit...like based on what they look like, and what their class is.” One participant reflected on how he created a name in Guild Wars 2 for a character whose class relied on illusions and mind-manipulation for combat:

I try to figure out what the class is or what I'm going to do with that character and then try to think of words that are associated with that. So like, for my Mesmer there's a lot of illusions and clones so I figured “Geist” because a geist, like a ghost and something that's illusive and isn't exactly tangible... [Those are some game] lore and class specifications I tend to go with.

Players frequently used descriptors in a name to establish a good fit based on the character’s function: “[I create names based on] whatever the class or race brings to mind. Just make it have thematic integrity.” Players took into account a character’s race, class, or crafting profession to create a sense of that character’s purpose through the name. The popularity of names with race- or class-specific identifiers contradicts what players in Hagström’s study considered to fit with game aesthetics [hagstrom]. Many players in our study argued that using race- or class-specific material in a name provided information to other players who could see the name but not the embodied character. For example, Table 1 shows a list of names one participant emailed us showing his characters’ names, races, and classes in Guild Wars 2.

Name	Race; Class
Penelope Soulbinder	Human; Necromancer
Penelope Soulshield	Human; Guardian
Penelope Twoblades	Human; Thief
Pennie Chancer	Norn; Mesmer
Penumbra Ghostclaw	Charr; Ranger
Tinkah Pendix	Asura; Engineer
Penelope Thorn	Sylvari; Elementalist

Table 1. Character names and corresponding races and classes.

When asked about his naming process, he said, “It’s finding a way that I can still include [Penelope] or Pen, and come up with a name that fits the lore.” The player continually used the name “Penelope” to identify himself, differentiating his characters by a surname that reflected the character’s race or class. The sense of these names fit each character’s attributes. For example, the surname Twoblades is an obvious allusion to a rogue-like character who would use knives.

Another player mentioned the importance of game genre and character class for creating fit for a name:

I won't name a super robot something high-fantasy sounding unless it's also a high-fantasy setting, and then, by reverse, I won't name a high fantasy character something robotic sounding or, you know, use terminology that wouldn't be used for that setting. So lore is a big part. The style of character is important [too]. So, if I'm playing a sneaky character I try to find a sneaky name. If I'm playing a big, strong character I do something that sounds like a big, strong character.

Creating a name that fit displayed a player's seriousness about immersive game play, and gave the impression to others that the player was familiar with, and knowledgeable about, the game.

Sometimes previous experiences with similar games influenced whether or not players deemed certain names to fit:

I feel like a lot of the games I play are similar when it comes to the fantasy setting, and then names that I come up with in World of Warcraft might also fit into the fantasy of, you know, like, say I'm going to create a character in World of Warcraft, it will fit into the Skyrim universe or the Diablo universe, or something like that.

Players also assessed fit with regard to a name's subjective appeal, that is, the pleasing look, sound, and "feel" of a name: "I want it to sound good to me...It has to sound right. Which is obviously a purely subjective thing." Another player said:

Like when I named Pewdew I was like, "Oh I want to think of a silly name that looks like it would fit a fat little panda bear." You know? Or I had a rogue named BoneyJones and I thought it fit an undead rogue perfectly...I don't RP [role play] or anything, but I still like to have an aspect of realism when I name my characters for something that would fit into the universe that I'm playing in.

Players frequently mentioned names that broke game immersion as detracting from the gaming experience: "[I don't like] names that don't, like aren't immersive. So they have to have, they have to make sense to the character that the name is associated to...[Or] it breaks the immersion of the game that I'm playing."

Sometimes players did not know enough about a particular game world or element of the game prior to creating a name. In this case, they set aside time to do some research during the naming process: "I had to sit there for like an hour trying to figure out [how to make the name appropriate for my character's race]." One player reflected on her experiences engaging with unfamiliar aesthetics when creating a character name for a Pandaren, a race from World of Warcraft with distinctively Chinese cultural elements:

I spent, for example, on the Pandaren, I spent probably two nights working on those names...I wanted the names to fit them, and I'm not very familiar with Chinese, and then I wanted to make sure the Chinese names that I looked up were accurate and not, you know, something else entirely. Because, you know, you never want to offend somebody by picking something that means something awful...or look like an idiot.

After realizing she was unable to create a name with a good fit for her character, she took time to research Chinese words to find a name that would appropriately represent her and her character. She was preemptively anticipating impressions players might develop if her character name was not well-chosen. Creating a name with a good fit was a way for her to display competence and creativity.

Summary

Why were players so concerned with having a name that fit? Fit allowed players to maintain a degree of immersion in-game for themselves and others: "So, I think that's part of the immersion not just for me, but for other players. So, yeah I don't want to see a character with, with a name that doesn't fit the setting of the game."

Naming allows a character to become more than an assortment of pixels that result from customization sliders and pre-set facial options. By giving a character a name, players have creative control over the creation and customization of the sense a name evokes for others. Players incorporated elements in character names that represented information about themselves. They tailored this information in a way that fit the aesthetics and lore of the game world.

DISCUSSION

Previous research has demonstrated that physical character creation and customization are important aspects of the video gaming experience [5, 8, 25, 26]. But these studies concern only one aspect of the player-character relationship, and there has perhaps been a tendency to equate player identity with the physical representation of the character. We found that players used character names to develop a sincere, rather than idealized, identity in order to create a consistent, representative identity useful in interacting with others. Taylor [25, 26] discussed how characters' virtual bodies facilitated social engagement, and we found that naming was also critical to building and sustaining social relationships.

Character names function in ways digital embodiment cannot. Names allowed players to develop a unique identity that persisted over time. A persistent identity made sustaining social relationships across games easier, as players were able to identify other players. Names allowed players to make visible aspects of their identity such as their creativity, their favored media, and their personal interests. Character names sometimes even became part of players'

offline and social media lives. Character names afforded players the ability to cultivate an identity that consistently referenced them, sincerely represented them, and persistently identified them, regardless of context.

Other contexts such as forums, voice over IP applications, and some third-party sites require players to use a name for identification. For example, sites such as Arena Junkies, draw information about player versus player (PvP) ratings, team compositions, and win/loss ratios from the World of Warcraft Armory, a database of World of Warcraft characters that is accessible to anyone. It is beneficial for a player wishing to participate in the Arena Junkie forums to use her World of Warcraft character name to identify herself to other players. These contexts encourage players to identify themselves by their character names to establish credibility associated with their posts, provide continuity between games and related sites, and build a community of identifiable individuals. As a player travels between different game-related contexts, his character name becomes a central piece of his identity and links information about him to a single identifier.

Character name creation has its own set of norms and appropriate behaviors. Game developers create some norms, such as whether or not the game allows for surnames, numbers, and profane language in a character name, while the player community creates others, such as what names are appropriate or creative. There is, however, some overlap. Name generators, for example, are tools provided by game developers or third-party sites to help players who are unfamiliar with a game create a name that fits within the game world. While this seems like a beneficial feature, many of our participants believed that using a name generator indicated a lack of creativity: *"I'm creative enough to come up with my own names. I'm not super lame."* Some players mentioned using name generators were as a source of inspiration, but rarely used an unaltered, generated name: *"I've just never felt the need to use [name generators]. If there's like, 'click here to randomly generate a name' I might click it a couple of times to get an idea of what the developers thought an in-lore name should sound like."* Current name generators may not be useful to players with longer histories in the gaming community. Instead, they may be oriented towards newer players who are looking to create their first name in an online game.

Conversely, character name changes, a feature rapidly gaining popularity, appear to benefit long-time players looking to alter their character names. Games have monetized the name-change process, allowing players to rename a character they may have significant play time on for a small fee. Stinkypeen, one participant's unlikely main character, was already maximum level, but had a name the player resented: *"I've got a lot of whispers, like people that think it's humorous...but I still don't like it, and I'm probably going to [purchase a] name change."* As several

of our participants explained, a name alone was often justification to delete a character: *"Like, whenever I chat...I see my name pop-up, and if I don't like that name then I will go back and delete [that character]."* Name generators and name changes are two features of character name creation and cultivation that provide a unique angle to online identity development oriented towards new players and veteran players, respectively.

Our research shows that players of social video games often went through a lot of trouble to maintain names across games and related sites. They sometimes even became quite upset when their names were taken or they could not use them for some other reason. However, in some contexts, such as reddit, the opposite is true. Reddit participants deliberately create multiple names to hide personal information from others [22]. Shelton et al. [22] found that participants preferred to keep social spheres such as work, family, and friends separate through the use of multiple account names. Sometimes participants created "throwaway" accounts used for a small number of posts before discarding the account, or they created work-safe-accounts for posting conservatively [22].

What causes naming practices to differ between video games and sites such as reddit? Participation in online video games encourages collaborative practices and interpersonal interactions because players enjoy playing with others [20, 21, 23, 29]. Players facilitated social relations by maintaining a consistent character name. Reddit participants did not build relationships on the site itself because they often wanted anonymity to post things they did not want to be held accountable for, such as revelations of an extremely personal nature, off-color jokes, or material others might consider inappropriate [22]. Participants viewed reddit as a place to write without restraint, and thus did not want their identity associated with a recognizable name.

Our research suggests that proposals insisting that users use their real names online miss such nuances of online life. Requiring users to identify themselves by their real names would squelch important affordances of online communication. Given the ways gamers manage character names and reddit participants use a series of pseudonyms to enhance online experiences, proposals such as those of Mark Zuckerberg seem dubious. He argues that maintaining a single persistent identity online is important for developing transparency in self-representation. He has said, "You have one identity...having two identities for yourself is an example of a lack of integrity" [14]. Similarly, Jonathan Zittrain argued for the use of real names online:

When we participate in other walks of life—school, work, PTA meetings, and so on—we do so as ourselves, not wearing Groucho mustaches, and even if people do not know exactly who we are, they can recognize us from one meeting to the next. The same should be possible for our online selves [30].

But these arguments misconstrue the complexities of identity and politics in everyday life, and the difficulties that may accompany the use of real names. For example, one of our study participants elaborated on how he explored his gender identity online and offline. He found the process fraught with enormous difficulty offline, but easier in online gaming contexts because he could choose how to identify himself through his character names. He reflected on the affordances the use of character names provided that were impossible offline:

After thinking about how I felt about my gender for a long time I realized that I wanted to be, or felt, male and soon identified as transgender. Being around the community in th[e] game offered me the opportunities I could [use to] express myself [that] real life couldn't.

His character name did not restrict and misgender him the way his real name did offline. He chose names that reflected his identity as he perceived it: *"I always try to either keep [my character names] gender neutral or male."* Online, this player could not only present to others as his chosen gender, he could switch between gender-neutral and male choices that made him comfortable, and allowed for "opportunities to express himself."

Such identity concerns are common for different kinds of people. One of the redeeming qualities of the internet is that it affords the possibility to carefully manage identity. For example, some countries monitor and regulate people with certain sexual orientations, religious affiliations, political opinions, racial backgrounds, or gender expressions. Individuals with the "wrong" characteristics may be subject to legal action if their identity is revealed. Online, pseudonyms allow a person to protect himself, and to express aspects of his identity, such as our transgender player did. Nardi [21] found that Chinese World of Warcraft players sometimes used character names to express dissatisfaction with the Chinese government, a form of free expression that would be near impossible using real names. Our own society may criticize people who identify, or are identified, as gamers. During state Senator Colleen Lachowicz's campaign in 2012 in Maine, her opponents used her participation in World of Warcraft to attack her qualifications for office [13]. Opponents posted Lachowicz's character name and excerpts of her online chats on a website with a header that read: "In Colleen's online fantasy world, she gets away with crude, vicious and violent comments like the ones below. Maine needs a State Senator that lives in the real world, not in Colleen's fantasy world." [31] While Lachowicz won the election, her case shows why people may prefer to manage their identity through pseudonyms to avoid senseless trouble such as that created by Lachowicz's opponents. It is unclear who revealed her real name, but proposals to enforce real name use online make situations like that Lachowicz experienced more probable and more acceptable.

Real names may put female users at risk for harassment in gaming communities and elsewhere [2, 15, 18]. For example, Kuznekoff and Rose [15] used pre-recorded voices in online game matches to measure player reaction to gendered voices. They found that female voices received more hostile, negative, and sexist comments [15]. Female players should be able to choose whether or not to reveal their gender identity, not have it revealed de facto, without their consent, through a real name.

In 2010, Blizzard Entertainment introduced a Real-ID system that would identify players in-game by their real names, not their character name or another pseudonym. Albrechtslund [1] analyzed player quotes from the official thread where Blizzard proposed the change and found that players were outraged. The thread had almost 50,000 posts from players protesting the implementation of the Real-ID system [1]. Players' concerns ranged from identity theft to harassment to backlash from employers. A 21-year-old player communicated her concerns with the prospect of players being able to identify her gender without her consent:

By revealing my name, you can now find out everything about me. What does that do to a 21-year-old disabled woman? It makes me a target. Now, obviously not everyone is going to go insane and start going on WoW murdering sprees, but I have already had some pretty unkind things said about me when people do find out. I'm not going to stand for this. I will not yet again be taunted and harassed by ignorant, uncaring jerks, just because they're able to see who I am. [1]

The nuanced ways in which our study participants managed their online identities argues that we should allow users to choose whatever names they choose online, and to craft their identities according to the specific venue they are in (whether games, reddit, or anywhere else). An appropriate naming convention in one context is not necessarily appropriate in another. Gamers are aware of the power of names, and our study has shown how much work a carefully chosen name does for a player in terms of social relationships and personal expression. We advocate that internet policy take a page from gaming and give users free rein to call themselves whatever they prefer, within the bounds of acceptability in the particular communities in which they participate.

We found that players used their character names as a means to sincerely represent aspects of their identity, such as personal interests and individual creativity. Such practices would not even be possible were users required to use their real names. Donath [6] argued that the use of pseudonyms can be beneficial for both the individual and the community: "A persistent pseudonym establishes a local identity: you always use it on a certain site or sites, and you build up a history and reputation under that name..." Our study indicates that players had many legitimate reasons for maintaining and using freely chosen

character names for their online identity, and we agree with Donath that the use of pseudonyms is a positive aspect of online culture.

CONCLUSION

In this paper, we analyzed players' practices for creating character names in online video games using Frege's semantic theory of reference and sense. We examined the pragmatic and personal functions names served for players. Players viewed character names as a means of representing a unique identity for themselves, developing persistent relationships with other players, and starting conversations about common interests with others. The care with which players created and managed their character names indicates their value to the gaming experience, and suggests a broader importance of naming practices online.

This exploratory study of naming practices and identification in online gaming opens new research venues for online identity. Several of our older participants mentioned a dramatic shift in their naming practices at some point during their adolescent years. Many players mentioned it was possible to identify younger players based on names or naming styles. How do players identify which names and naming patterns younger players use? Are the stereotypes associated with the names of younger players accurate? What factors contribute to better understandings of acceptable naming practices in online games? A cohort or longitudinal study of online names could provide insights into the temporal differences in naming practices based on a player's age.

While the current study focuses on naming practices in online games, several participants mentioned extending these practices into offline games. Why do players choose to use their online names in offline games? Are there instances where this pattern is broken, such as when a character has a canonical name in a game world (e.g., Link from Legend of Zelda, Lightning from Final Fantasy, etc.)? What purpose does using an online name in an offline game serve for players? Examining player behaviors in offline games may provide better insights about how character names contribute to players' concept of themselves and their identity beyond online interactions.

Finally, a more inclusive examination of identity in online contexts ranging from online gaming to social media to online dating could provide a better understanding of how a user connects or separates his identity across contexts. In what spaces do users reuse a name? When do users create a new name? Determining the factors encourage users to reuse a name in a new context could provide important information about overlapping online social spheres and spaces users wish to keep separated.

The current study extends existing research on player identity by examining the practices and behaviors surrounding creating character names in online games. We have demonstrated that character naming is frequently a

time-consuming and intensive process and functions as a way for players to convey information about their identities to others.

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