What's 'Choice' Got to Do With It? Avatar Selection Differences Between Novice and Expert players of World of Warcraft and Rift

Kelly Bergstrom
York University
Toronto, ON, Canada

kelly_bergstrom@edu.yorku.ca

Jennifer Jenson
York University
Toronto, ON, Canada

jjenson@edu.yorku.ca

Suzanne de Castell
Simon Fraser University
Burnaby, BC, Canada

decaste@sfu.ca

ABSTRACT
It's a now familiar refrain among both players and academics that healing is a 'feminine' activity and tanking a 'masculine' one within Massively Multiplayer Online Games. In this paper we present data from a multi-site study of *World of Warcraft* and *Rift* that examines this stereotype across novice and expert players. Our findings suggest that gender role stereotyping is progressively internalized as players become more competent in their gameworld of choice, with experts being more likely than novices to adopt this convention in their avatar selection.

Categories and Subject Descriptors
K.8 [**Computing** Milieux]: Personal Computing – Games; J.4 [**Computer Applications**]: Social and behavioral sciences – Sociology.

General Terms
Human Factors, Theory

Keywords
Non-Player Characters, NPCs, World of Warcraft, Rift, Massively Multiplayer Online Games, Gender stereotypes, Expertise

1. INTRODUCTION
Massively Multiplayer Online Games (MMOGs) are set apart from other types of games by virtue of their shared, collaborative online environments. In most MMOGs, play is initiated through the creation of a character or avatar. To encourage group play and to allow for a variety of play styles, each avatar class has its own unique strengths and abilities, which, for fantasy-based MMOGs like *World of Warcraft* (*WoW*), *Rift*, and *Guild Wars*, borrow heavily from offline role-playing genres like *Dungeons & Dragons*. These strengths and abilities form a key part of group play, with each class having a complementary skill set necessary for collaborative encounters within the game. While individual preferences might appear most likely to be what guides a player's decision to choose between playing a Mage verses a Rogue, DiGiuseppe and Nardi [12] argue that stereotypes about who 'should' play what class need to be taken into account when discussing player avatar class choices. In other words, avatar

selection may be less an individual choice, than a decision guided more by stereotypes, community norms, and developer representations.

In this paper we present data from a longitudinal, multi-site study that asks whether and how players' offline characteristics are recognizable in their online interactions in MMOGs, focusing on avatar class choice in two virtual worlds (*WoW* and *Rift*). In addition to the avatars created by participants, we also analyze *WoW* non-player characters (NPCs) responsible for training class-specific skills. We sought to determine whether a stereotypical division of labour is constructed at the server level for male and female roles within *WoW*, and to see if these stereotypes are mirrored in the playable class-choices of our research participants. Our goal was to find what, if any, patterns existed between male and female participants, the class they choose to play, and the sex of their avatar; specifically, whether avatars conformed to stereotypically feminized and masculinized representations..

1.1 The MMOG 'Trinity'
Like many other MMOGs, *WoW* and *Rift* rely on the 'MMOG trinity': tanking, damage dealing and healing. For the most part, players are expected to fulfill one of those three roles in a group play formation. For example, the tank is responsible for taking the brunt of the damage from the monster being attacked (the mob); the damage dealer (or DPS, for damage per second) is responsible for inflicting high damage to quickly bring down the health of the mob, but is not able to take much damage (unlike the tank); and the healer restores the health of other players who have suffered damage in combat (usually the damage dealer and tank). Successful group play, particularly in more difficult scenarios, requires each of those character classes.

1.2 Playable Classes in *World of Warcraft*
When sitting down to create a new character in a MMOG, one of the first choices a player must make is what class they wish to play. Each class has its own unique set of spells and abilities, as well as different armor and weapon specializations. In the current expansion ("Cataclysm"), *WoW* has ten playable classes covering all aspects of the trinity, and the possible roles for each of these classes are broken down in Table 1. At level 10 players are given the choice of three 'talent trees' to pursue: damage, healing and tanking. These talents allow each player more options to customize their avatar's abilities as they progress towards level 85 (the maximum level in the game currently). Not all classes are capable of performing all of the roles of the trinity. For example, some classes, such as Paladin or Druid (typically referred to as 'hybrid' classes) can train talents in each role – damage, healing and tanking – while others only focus on dealing damage or tanking. At level 40, players can purchase the 'dual-spec' (specialization) ability, which allows them to have two separate

saved talent trees that they can switch between. For instance, someone may choose to have a healing/damage dealing dual-spec when playing a Priest. This allows for a greater degree of flexibility in their play, as they can fulfill different roles depending on group need and player preference. Perhaps on some nights of the week they would play as a Holy Priest with powerful healing spells as part of their guild's raiding group, but on non-raiding nights they play in Player verses Player (PvP) battlegrounds as a damage-dealing Shadow Priest. Only one talent tree is active at any given time, and players must be out of combat before they can switch between specs. In order to activate the dual-spec ability, or train new spells and abilities opened up as they progress through the game, players visit class trainers. Each class has their own set of trainers and they are found in major cities and towns throughout the gameworld.

Table 1: Class roles in *World of Warcraft*. Numbers indicates how many talent trees each class has for each role.

Class	Damage	Healing	Tanking
Death Knight	2	-	1
Druid	1	1	1
Hunter	3	-	-
Mage	3	-	-
Paladin	1	1	1
Priest	1	2	-
Rogue	3	-	-
Shaman	2	1	-
Warlock	3	-	-
Warrior	2	-	1

1.3 Playable Classes in *Rift*

In *Rift*, there are only 4 playable classes, or 'callings' to choose from: Cleric, Mage, Rogue, Warrior. A newer addition to the MMOG market, *Rift* breaks (somewhat) from the *WoW* talent tree format and allows players to choose three 'souls' instead of talents.[1] Each calling has eight souls to choose from, allowing for more flexibility in play – for example a Cleric can have both healing and damage dealing souls, or a Warrior can have both damage dealing and tanking souls. Like talents trees in *WoW*, souls allow for a degree of avatar customization, and unlike *WoW*, after the player has earned all three souls through low-level quests, each soul's abilities and spells are available for use at all times. Table 2 breaks down the roles for each of these specializations. In addition to tanking, damage dealing, and healing, Rift adds a fourth role, "enhancement". Players with an enhancement soul provide buffs (beneficial magical spells, such as increased spell casting speed) to other players and/or debuffs (for example curses and spells to increase the amount of damage taken) to mobs under attack. New spells and abilities are unlocked as players level up, but in order to train more powerful versions of these abilities and spells, as in *WoW*, they must visit their class trainer located in major cities in the gameworld.

1.4 Context for Study

A stereotype often repeated among player communities and in turn investigated by academics is that healing is a female role and

tanking is a male role. It is our intention to fill in some of the gaps in this growing body of literature, but also to offer some critical reflections on the gendered assumptions that are inevitably tied up with these sorts of investigations.

Table 2: Calling roles in *Rift*. Numbers indicate how many souls are available for each role.

Calling	Damage	Enhance	Healing	Tanking
Cleric	3	-	4	1
Mage	5	3	1	-
Rogue	6	1	-	1
Warrior	4	-	-	4

A recent exploration of stereotypical gender roles in MMOGs can be found in Yee et al.'s [22] paper, "Do Men Heal More When in Drag?" where the idea that healing is "women's work" is explored directly. Starting with a web-based survey to determine what players felt were stereotypical male and female roles in *WoW*, the researchers used the *WoW* Armory[2] to collect player participation in healing or PvP activity. While their original intention was to investigate tanking as a stereotypically male role, they instead investigated PvP, explaining "we did not select Tanking for the male activity to analyze because it is much more difficult to create a metric for Tanking from the current database of player activities [in the *WoW* Armory]" (p. 774). In this paper we are drawing from data we collected in lab-based play sessions and are therefore not limited to the automated data collection of Blizzard Entertainment (*WoW*) or Trion Worlds (*Rift*). We do ask a similar question to the one that Yee et al. weren't able directly to answer, however, and that is: who tanks in our population of players and under what conditions?

Also concerned with mapping in-game avatar preferences to everyday gender stereotypes, Williams et al. [21] argue that player decisions about their online play can be traced back to offline gender role expectations, using gender role theory as a framework for their analysis. Similarly Huh and Williams [13] have argued that female players behave differently when playing with male avatars, apparently acting out stereotypically masculine traits, so that, as they put it, "these women were 'out manning' the male players" (p. 171). Given that our own dataset consists of participants with a range of MMOG experience (from first time players to those who have played multiple MMOGs for many years), we can extend these investigations. The ability to contrast novice and experienced MMOG players with respect to their choice of avatars and classes in this dataset allows us to see whether preferences and behaviours are ingrained in players by larger social forces before they even enter a gameworld, or if these preferences and behaviours are picked up and internalized as players become 'acculturated' in their MMOG.

While Yee et al. and Williams et al. seem to stress the larger social forces that may or may not reinforce one's choices in the game, DiGuiseppe and Nardi [12] argue that that gameplay mechanics (and other players) influence avatar decisions too. They sought to determine if stereotypes of male and female play could be seen in player's class choice within the game. In their interviews with *WoW* players, only one of their female

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[1] A fourth PvP soul can be purchased using special currency earned when defeating other players in a battleground.

[2] As Yee et al. [22] explain the Armory is a publically accessible database where information about activities of all *WoW* characters is updated daily (p. 774).

participants played a warrior, but many men and women played healers and did so citing a desire to be helpful/desirable in a group situation. Taking up DiGuiseppe and Nardi's assertion that player choices can be influenced by larger gameplay mechanics, in the next section we consider how Blizzard Entertainment and Trion Worlds represent healing and tanking within their respective gameworlds.

1.5 Sex-Stereotyping in and out of Games

1.5.1 In-game stereotypes

In their pretest to determine what sort of stereotypes are held by *WoW* players, Yee et al.'s [22] survey found that many players held the belief that healing is a female behavior, and tanking is a male behavior (p. 774). Questioning if perhaps the developers are helping to reinforce these stereotypes, we investigated the ways in which Priests/Clerics and Warriors are depicted by Blizzard Entertainment and Trion Worlds Inc. on their websites.

The descriptions for Priests and Warriors on the official *WoW* website very clearly distinguish their roles. For example: "*Warriors combine strength, leadership, and a vast knowledge of arms and armor to wreak havoc in glorious combat. Some protect from the front lines with shields, locking down enemies while allies support the warrior from behind with spell and bow. Others forgo the shield and unleash their rage at the closest threat with a variety of deadly weapons*" [6]. There is nothing subtle in this description: Warriors "rage" at their enemies and engage in "glorious combat". Priests, by contrast, are described as "*devoted to the spiritual, and express their unwavering faith by serving the people. For millennia they have left behind the confines of their temples and the comfort of their shrines so they can support their allies in war-torn lands*" [5]. "Strength", "leadership," "knowledge" and "protection" describe warriors, while "devoted", "serving", and "support" are used to describe priests. In fact, there is no mention of the combatant role of Priests (although they are able to cast offensive damage spells) until the third paragraph on the page devoted to them [5]. We found that the artwork on the official *WoW* website helps reinforce stereotypes: a fierce male Orc is depicted as a Warrior, while a more demure female Dwarf is depicted as a Priest. While occasionally roles are reversed, the vast majority of visual depictions reinforce the stereotype that melee combat (especially tanking) is best represented by male figures, and casters (including healers) by female figures.

In *Rift*, both Clerics and Mages heal; however the most powerful healing roles are assigned to Clerics. The single Mage healing soul ("Chloromancer") is a hybrid healing and damage role, where the amount of healing done is dependent on the amount of damage done in combat [9]. Similarly, the Cleric tanking soul ("Justicar") provides healing based on the amount of melee damage they cause in combat [10]. Despite offering what seems like a novel choice for MMOG players, a healer that is also able to deal or absorb damage, *Rift* ultimately replicates the same pattern as *WoW* in that it still offers a single class (Cleric) as primarily associated with healing.

That said, *Rift* does stray somewhat from the formulaic description that *WoW* deploys for its Priests, describing its Clerics as "*...renowned for their powerful support magic, able to repair the most grievous injuries or cure the deadliest diseases… Many Clerics are also capable combatants who rain divine wrath from afar, or wade into the thick of battle, warhammer swinging*" [19]. There are still echoes here of service, but it is qualified as "powerful" and there is mention of "swinging warhammers" which calls to mind a very different kind of character than one that "leaves the comfort of their shrine". While this might seem like a refreshing enhancement to a healing classes' set of skills, it is still the case that the chainmail-wearing Clerics of *Rift* are the game's primary healing class.

Hybridity of the limited kind afforded to Clerics is also available to Rogues for tanking if a player selects the Riftstalker soul, but only for short periods of time [11]. Sustained tanking in *Rift*, as in *WoW*, still falls to Warriors. The official *Rift* website's gameplay description for Warrior echoes WoW: "*Front-line combatants without peer, Warriors reliably make up the core of any fighting force. These hardened and disciplined fighters never falter, and can be counted on to protect those weaker than themselves*" [20]. There is, in these examples, a similar division of labour in the word choices used by Trion Worlds to describe healers and tanks: Clerics take a healing role and are there to "support", "repair", or "cure", while Warriors are described as "front-line", a "fighting force" and are directly positioned as the protector of weaker classes. The artwork that accompanies the descriptions of Warriors and Clerics follows the same pattern as the *WoW* website featuring drawings of an intimidating (male) Warrior and a scantily clad (female) Cleric. While there are other roles available for Clerics, Priests, and Warriors, then, it remains a rather traditional, conservative interpretation of those roles that the developers choose to highlight on their official websites.

In both MMOGs, players who select a class that is capable of healing are not necessarily limited to healing-only roles. However, as we have tried to show in this section, there are predefined expectations constructed by the developers of the games and the larger lore that the games build on and inherit that attaches certain archetypical meanings to Priests/Clerics and Warriors. Even in *Rift*, which offers multiple play options, including the option for a Cleric to play as a tank, players still gravitate towards (and indeed seem to enforce in the gameplay we have observed) the traditional divisions of roles (see for example, a fairly typical guild recruitment policy [17] and forum discussions about calling specs [1][7]). In the next section, we situate this overview of character classes and the descriptive framing of their roles within MMOG research generally, showing how stereotypes are produced and reinforced by the game, player communities and research to date.

1.5.2 Sex-stereotyping in a larger social context

It has elsewhere been argued [22] and we have attempted to show in the preceding examples, that the roles and duties associated with the MMOG trinity are substantially informed by sex-based stereotypes, with males taking on tanking roles (Warrior) and females taking on healing roles (Cleric/Priest). This mirrors offline stereotypes about gendered divisions of labour that cast males as protectors or leaders, and females as better suited to the tasks of caretaker and nurturer.

The stickiness of these stereotypes should not be underestimated; Simon Baron Cohen [2], a psychologist at Cambridge University, has recently argued in his book *The Essential Difference*, "The female brain is predominately hard-wired for empathy. The male brain is predominantly hard-wired for understanding and building systems" (p. 185). He goes on to state that "People with the female brain… make the most wonderful counselors, primary school teachers, nurses, carers" (p. 185). Such stereotypes are pervasive, continually reaffirmed by 'hard' science, and, we argue here, very much in evidence in digital games. However, it remains the case that these are *designed* worlds, and ones that therefore need not necessarily perpetuate stereotypes, especially as they claim to be first and foremost *environments for play*.

In many MMOG group situations, a sex-based division of labour in the game is reinforced. For example, it is often the tank that

runs into the pack of mobs, to get their attention (gaining 'aggro' in MMOG slang), setting the pace for how quickly the group moves through an area and generally given the job of leading the way. The healer is expected to follow the group, mirroring the movements of the tank, and keeping a constant eye on the party's health. The healer must also stay out of harm's way, on the edges of the battle because if they die, the group will likely quickly follow in what's commonly referred to as a 'wipe'.

The presumption both in the literature on MMOGs and in the world writ large, then, is that healing is a feminized role and tanking is a masculinized role. But how often do people actually choose those stereotypical roles? What role do developers play in supporting this division of labour (or not)? It is with these questions in mind that we interrogate a dataset of player-created avatars and existing in-game NPCs, with the goal of shedding further light on assumptions about what constitutes "male play" and "female play" within MMOGs. As noted, this dataset consists of a mix of experienced MMOG players, and those who have never played a MMOG before coming in to our lab. This allows us to ask the question of what kinds of choices experienced versus less experienced players make. By investigating whether novices make the same stereotypical selection as more expert players have been shown to do in other studies [21][22] we hope to strengthen the groundwork to support future studies that disrupt, rather than reinforce gender stereotyping, both in-game, and in games research [15].

2. DATA AND METHODS

The data discussed in this paper draws from two sources. First, we present avatar data collected from participants in the study described in section 2.1. Second, we draw from data collected about NPC class-trainers in *WoW*. The goal of this analysis was to see if a relationship could be found between participants' sex and the class and/or sex of avatars those players created or used in our lab study. We also sought to determine if there are differences in the avatar sexes and classes created in a lab setting, as compared to avatars that were created on a player's own account outside of the research setting. Additionally, we sought to determine if there were instances of stereotypical divisions of labor between male and female NPCs in *WoW*, what those divisions are, and if there are exceptions—and to look for relationships between gendered representations of NPCs and gendered choices of novice versus experienced players. The underlying hypothesis here is that experienced players' avatar choices may more strongly reflect the sexed-based division of labour enacted by NPCs in the gameworld and reinforced through game-related websites and fora – in other words, that players are schooled by these MMOGs into stereotypical notions of male and female avatar's 'proper place'.

2.1 Participant Data

Ranging from ages 18 to 55, participants were recruited on two Canadian university campuses and at LAN events in Canada and the UK. Participants were asked to take part in an intake interview, an 88-question survey, 45 minutes to an hour of *WoW* or *Rift* play, and approximately 30 minutes of play in an online game that was specifically created for this study. They were then invited to play their own *Rift* or *WoW* accounts, and if they did not have one (or their account was currently inactive), they were given the opportunity to create a new character on the lab account. Researchers did not disturb the participants as they made new avatars, and did not make suggestions about races or classes played. If the participant was playing on their own account, we asked them to show us what they would do when they would normally sit down for a 45-minute play session at home. In the case of multi-participant sessions, the researchers asked them to all play on the same server and faction (Alliance or Horde for *WoW*, Guardian or Defiant for *Rift*), but made no suggestions for avatar classes or races to be played.

As both of these games allow players to have multiple avatars on one account, we did not limit analysis to the single avatar a participant identified as their main character ("main"). Instead, we asked players with active accounts to share multiple avatars with our research assistants. These multiple methods of data collection were used to get a wide range of player experiences, rather than being limited to lab-only data or anonymous large-scale data scrapes of game server data (e.g. *WoW* armory data). The dataset has the added advantage that members of the study's research team have met and interacted with each one of these participants.

Our dataset consists of 304 *WoW* avatars (both pre-existing and created in the lab) and 82 *Rift* avatars created by participants specifically for this study. Table 3 gives a breakdown of participants' *WoW* avatars and Table 4 gives a breakdown of the avatars created in *Rift*.

Table 3: Percentage of *World of Warcraft* avatars broken down by participant's sex and the sex of their avatar/s. The final column represents the overall percentage of each class type in our dataset.

Class	Male/ Male Avatar (%)	Male/ Female Avatar (%)	Female/ Female Avatar (%)	Female/ Male Avatar (%)	% of overall classes
Death Knight[3]	4.3	0.7	1.3	0.3	6.6
Druid	4.9	0.7	2.6	0.7	8.9
Hunter	7.6	1.3	3.3	0.7	12.8
Mage	4.3	1.6	4.6	0.3	10.9
Paladin	7.2	3.3	3.3	0.3	14.1
Priest	1.3	3.0	4.6	0.0	8.9
Rogue	4.9	2.6	1.0	0.3	8.9
Shaman	3.6	1.3	3.3	0.0	8.2
Warlock	1.6	2.0	4.3	0.3	8.2
Warrior	8.2	0.7	3.3	0.3	12.5

2.2 NPC Class Trainer Data

After compiling information about the avatars created by participants of this study, we also set out to determine the sex ratio among class trainers in *WoW*. *WoW* continues to be the most popular MMOG on the market, has been highly influential in this particular genre of games and is currently viewed as "the game to beat", as illustrated by how much speculation exists about what the "*WoW*-killer" might be. As each new addition to the MMOG market is inevitably compared to *WoW*, we investigated what sort of norms *WoW* may be setting among MMOG developers.

Table 4: Percentage of *Rift* avatars broken down by participant's sex and the sex of their avatar/s. The final column represents the overall percentage of each calling our dataset.

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[3] Participants were not able to create a Death Knight on our research accounts, so the number of Death Knights is only reflective of pre-existing characters and is therefore artificially low.

Class	Male/ Male Avatar (%)	Male/ Female Avatar (%)	Female/ Female Avatar (%)	Female/ Male Avatar (%)	% of overall callings
Cleric	11.9	1.2	6.0	2.4	21.4
Mage	10.7	2.4	4.8	0	17.9
Rogue	13.1	1.2	3.6	4.8	22.6
Warrior	25.0	2.6	7.7	3.6	38.1

Information on *WoW* trainers was collected from wowhead.com, a community-generated database for game-specific information. Wowhead.com was selected over similar community-generated databases (such as wowpedia.com or wowwiki.com) as wowhead.com is the website that Blizzard Entertainment links to from the official *WoW* website and the *WoW* Armory. We complied a list of all class trainer NPC names, sex, faction (Alliance, Horde, or neutral), their location in the game, and any specific titles or affiliations attributed to the NPC. This list was sorted according to class, and after duplications were removed, we had a dataset containing information on 486 NPCs: 295 males, 188 females, and 3 others.[4] Table 5 gives a breakdown of NPCs by class. A multinomial test was performed to see if the breakdown of male/female/other for each individual class conformed to the expected breakdown of class trainers of 60.7% male, 38.7% female, and 0.6% other, and the resulting p-value is also included in Table 5.

Table 5: Breakdown of *World of Warcraft* NPCs by class. The multinomial p-values are included and the bolded text indicates statistical significance on the 5% level

Class	M	F	Other	P-Value
Death Knight	2	1	1	0.0238[5]
Druid	19	14	0	0.7725
Hunter	38	27	0	0.7994
Mage	38	38	0	0.1499
Paladin	29	11	0	0.3302
Priest	**29**	**35**	**0**	**0.0385**
Rogue	40	12	0	0.0693
Shaman	18	20	1	0.0513
Warrior	**46**	**14**	**1**	**0.0177**

Given that *Rift* is a relatively new entry to the MMOG market, the community-generated knowledge databases are still very much works in progress. The same group responsible for maintaining wowhead.com also runs a *Rift* database (rift.zam.com), and competitors such as Telarapedia exist, but contain conflicting and/or incomplete information. Given the recent appearance of the game when this study was conducted, none of the participants were experienced *Rift* players. Only a handful had experimented with the *Rift* beta, but many had at least a passing familiarity with

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[4] "Other" was used as a catchall category for three NPCs that are ambiguous or non-gendered: a Lich Death Knight trainer, a Furbolg Shaman trainer, and a robotic Warrior trainer.

[5] While the p-value indicates that Death Knights should be considered statistically significant, we ignore this class as there are only 4 trainers – far too few to draw meaningful conclusions.

WoW. Therefore we decided to limit our analysis of in-game NPCs to *WoW*.

3. DISCUSSION

Overall the findings support the investigations of stereotypes discussed earlier in this paper. For many male participants, Warrior was their class of choice, while female participants tended to play casters and support classes.

While participants often took the time to customize their avatars to their liking, the majority created avatars that reflected their self-identified real world sex. Much of the literature on gender-swapping[6] focuses on self-report data [4][13][14][22], and these discussions often draw on a population of current players who are more likely to be experts. We argue that newer players are easily overlooked in such studies, and that these newer players may be less confident in their ability to make these so-called non-normative choices of avatar sex. As players progress through a MMOG they will inevitably become exposed to the norms and conventions of their gameworld of choice. If continually confronted with stereotypical messages about gender roles (in the game's promotional material, structure of the in-game world, or other influences like player communities and guilds), these stereotypes can be reasonably expected to become internalized, normalized, and eventually be seen as how players 'should' play a MMOG. We argue that players *do,* indeed, internalize these stereotypes over time, as illustrated by the significant differences between novice and expert participants in this study.

3.1 Trends in *World of Warcraft*

3.1.1 World of Warcraft NPCs

As stated previously, of the *WoW* class trainers 60.7% were male, 38.7% female, and 0.6% other. This is comparable to the studies of *WoW* NPCs done by Bergstrom et al. [3] who report that 37% of profession trainers are female, and by Corneliussen [8] who reports that one third of city guards are female. Corneliussen has theorized that this ratio was decided on because it reflects the ratio of male to female *WoW* players, but to date Blizzard has not commented on their reasoning for this ratio.

The p-values in Table 5 indicate that there are two outliers in this data set of *WoW* NPCs: there are more female Priest trainers and more male Warrior trainers than we would expect based on the overall average of male/female/other of all class trainers. While Blizzard has never publically made available their reasons for NPC distribution, it is unlikely that this distribution determined algorithmically. Taylor [18] argued some time ago that while it can be tempting to think of the virtual worlds of MMOGs as springing forth fully formed, their design and construction are actually the work of human agents. While the playing out of stereotypical gender roles may not be reflective of a company-wide policy at Blizzard Entertainment, we stress that this same stereotyping is retained in the most-recent version of the game, and can be seen as setting a 'norm' for views about Priests and Warriors (and who should be playing them).

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[6] While much of the literature continues to use 'gender-swapping' to describe males playing female avatars and vice versa, we use 'sex-swapping' to refer to our own data in this paper. Jenson et al. [16] argue this is actually 'sex-swapping' as most MMOGs rely on a sex binary and do not offer a range of 'gendered' interactions.

MMOGs such as *WoW* and *Rift* draw from a long history of fantasy role-playing games, with their own parallel histories of gender stereotyping. Game designers presumably navigate the norms and assumptions of the genre they are working within, as well as the perceived wants and expectations of their consumers. However, as Corneliussen [8] and Bergstrom et al. [3] argue, these are fictional worlds that offer the opportunity for experimentation with gender roles, and this opportunity is lost when the status quo is reproduced. As it stands, players and developers find themselves in a self-referential cycle where both parties look to the other for guidance about norms and deviance, and so in the end merely replicate these stereotypical roles.

3.1.2 World of Warcraft participant data

In this exploration of gender normativity in promotional material and *WoW* NPCs, we found Warriors largely portrayed as males engaging in 'masculine' behaviours. On our analysis, this trend persists among *WoW*-playing participants, with the majority of male players choosing Warriors, and those male participants playing Warriors being the least likely to sex-swap and play a female avatar. In these ways, participants fell in line with the stereotype that Warriors are gendered as male in MMOGs.

In looking over the dataset for information about who plays Priests, we observe the reverse, but equally stereotypical, trend. Female Priest avatars account for 85.2% of the priests in the *WoW* dataset, but in terms of the sex of participants, only 51.9% of priests were played by women. These findings are similar to that of Yee et al. [22]. Rather than arguing, as they do, that men heal more "in drag", we'd argue that not only are they NOT in drag when playing as female avatars, but in fact they are playing as female avatars precisely because the gender norm is that the role of a healer is assumed by a female character. In other words, men who play a female when healing are conforming to the game's gender stereotype and are not 'transgressing' at all, as the ascription of their being 'in drag' suggests, except insofar as they are men playing as a female avatar, something which is clearly not a transgression give almost one in five of the total avatars in this study were female avatars played by males – hardly a rare occurrence.

Since *WoW* players are not given the ability to specialize in a talent tree until level 10, we wish to avoid ascribing any particular play style to our participants who created avatars in our lab. Very few of participants making new avatars for the study made it past level 5 in their play sessions, and none got far enough to pick a talent tree and specialize in a healing, tanking, or damage dealing role. However, we can still interrogate gendered stereotypes in a more general way. Priests are not the only class relegated to the outskirts of the combat zone, and Warriors are not the only class that engages in hand-to-hand combat with a hostile mob. In Figure 1 we break down the *WoW* dataset by "type" of class selected by participants: caster (magic-only ranged combat; mages, priests, warlock), melee (physical damage, often focused on close combat; death knights, hunters, rogues, warriors), or hybrid (both magic and physical damage; druids, paladins, shamans).

After breaking down our data into the three types of classes, we found that female participants tended to play caster classes, while male participants tended to play melee combat classes. The sex choice for these avatars followed the same pattern: female avatars were more frequently selected for casting classes, and male avatars were more frequently selected for melee combat classes. Hybrid classes were played by a nearly equal ratio of male and female participants. Avatar sex was for hybrid classes were also close to evenly split between male and female. It seems then, that even if the stereotypical breakdown between healing and tank cannot be observed, we can still see evidence of gendered play within our *WoW* dataset: females are on the periphery of the combat zone, and males in close-range, melee combat roles.

Figure 1: Percent of male and female avatars and players for caster, melee and hybrid classes in *World of Warcraft*
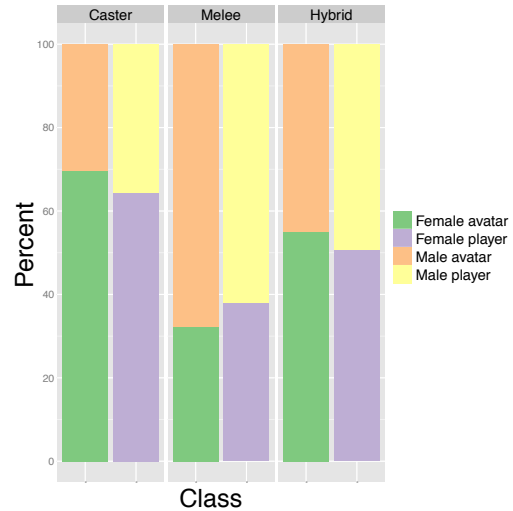
3.2 Trends in *Rift*

3.2.1 Rift participant data

All 82 *Rift* avatars were created in lab on a research account. While a handful of participants had played the beta, none of them had an active *Rift* account at the time this research was being conducted. For the majority of participants, this was their first time playing this particular MMOG. As with the *WoW* avatars created in our lab, we found that while players would spend a significant amount of time customizing their avatar's physical appearance, this customization rarely extended to changing their avatar's sex. In the *Rift* dataset, only 14.8% of participants sex-swapped, and this group was made up of an equal number of male and female participants. When this is broken down by participant experience level, we find that of the females who sex swap (6), all but two participants were novices. On the other hand, we see the exact opposite among male participants: all but two sex-swapping males were experts (6). Warriors were the most frequently created class, making up 38.1% of the *Rift* dataset, with far more males making warriors than females. Not only is this the class that was favoured by male participants, but also it is the class with the highest number of male avatars in the entire dataset. Clerics, Mages, and Rogues, by contrast are relatively equally divided between sexes.

3.2.2 Soul selections in Rift

While *WoW* does not allow players to specialize their avatar until level 10, *Rift* has players select their first of three souls as a reward for completing their very first quest. This provides us with the advantage of being able to observe participants' preferences after only a short duration of gameplay.

36.6% of participants obtained one soul, 48.9% obtained two souls, and 11.0% obtained all three souls (3.5% did not complete the first quest). Of the participants who completed the first quest and selected at least one soul, 73.4% selected a damage dealing soul. The majority of participants, even MMOG novices, spent time reading all of the soul descriptions for their calling before

making a selection. While DiGuiseppe and Nardi [12] reported that *WoW* players might consider group utility when making a decision about what class and/or spec to play, this was not in evidence in our data. Despite all *Rift* participants playing in groups of 2-4 players, only 12.7% picked healing, 10.1% picked tanking, and 3.8% picked enhancement as their first soul. Based on these results, it may seem that group utility may not be a not a deciding factor for participants deciding between the soul options for their avatar's calling.

While damage souls were popular across the *Rift* dataset, they were not nearly as popular among participants who played Clerics. Of the participants who created Clerics and finished their first quest, 56.3% selected healing as their first soul. Of the participants who completed enough quests to select two souls, 50% of those playing Clerics selected healing for both their first and second soul. Despite having the option to do so, none of the participants selected the healing soul option for their Mage.

On the other hand, of the participants who created Warriors and completed the first quest, only 20% selected tanking and the other 80% were DPS. As stated earlier, Warriors were the most popular calling in our *Rift* data, and it would seem that unlike the Cleric players gravitating towards healers, those who played Warriors did not so readily conform to the stereotype that a Warrior's primary job is tanking. In the next section we will interrogate this dataset further, comparing expert and novice choices of callings and soul selections.

3.3 Experience level and avatar creation

Our dataset allows for comparisons across experience levels, something similar studies have not been able to accomplish. To make these comparisons, participants were grouped according to experience with MMOGs (*WoW* or other MMOGs such as *EVE Online*, *EverQuest*, etc.), using the following categories:

Low: Novices with little to no gaming and/or MMOG experience

Mid: Some familiarity with MMOGs; have played MMOGs previously or have recently started playing less than one year ago

High: Current MMOG players or have recently quit; at least one year worth of MMOG experience

3.3.1 Callings in Rift by expertise level

Of the participants who played *Rift*, 45.7% were considered novices, 21.0% intermediate, and 33.3% experts. A comparison of Callings across expertise level is included in Figure 2.

The majority of female participants were novices. We see that both male and female novices were drawn towards playing Warriors. Expert males continued to make Warriors, and yet none of the female experts selected this calling. We see the opposite trend among female participants in regards to Cleric play: very few novices played a Cleric, but a high number of experts chose to play this calling. Male novices were heavily skewed towards Warriors, but among experts we see a more balanced ratio between Warriors and Clerics – with male experts more likely to sex swap their avatars. As with the *WoW* dataset, we wish to avoid prescribing a particular style of play to Clerics and Warriors. In the next section we discuss the soul selections made by participants to determine if Clerics intended to heal, and Warriors intended to tank.

Figure 2: Percent of Clerics, Mages, Rogues, and Warriors by male and female participants across experience levels
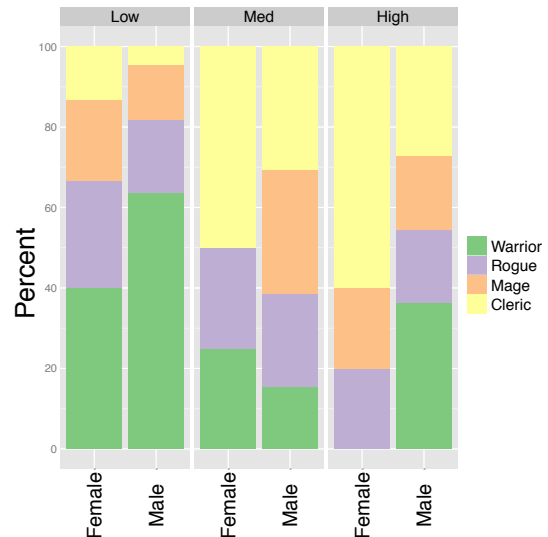
3.3.2 Soul selections in Rift by expertise level

Because the majority of participants chose at least one soul, we can make preliminary inferences about participants' preferred orientations to gameplay within a MMOG. Our primary interest is to see if novice gameplay replicated the same sort of stereotypes that was present in previous studies of experienced players. Overall, we found that participants across all expertise levels heavily favoured DPS souls, but expert players were more likely to make choices conforming to the stereotypical roles discussed throughout this paper.

Novices of either sex were the least likely to pick a healing soul, and yet tanking was selected almost uniformly among our novice and expert participants. Perhaps the utility of healing souls was not readily apparent to novice players, while those more experienced with MMOGs were more willing to perform a particular function for the sake of group play (rather than solo advantage). As mentioned previously, healing souls were popular among Cleric-playing participants of either sex, yet there was not as much sex-swapping among male participants as Yee et al.'s [22] paper had lead us to expect.

The female novices who played a Warrior were split between tanking and DPS souls. While no female experts played a Warrior, there was still the possibility of selecting the Rogue tanking soul. However, none of our participants (male or female, all experience levels) selected a Rogue tanking soul. Perhaps this is a holdover from *WoW*, where Rogues are solely a DPS class. Additionally, the fact that Rogues can be used for tanking may not be readily apparent to new *Rift* players. Rogues begin the game with leather armor and two daggers, not a broadsword and shield or any other visual indicators that would signify that they are capable of mitigating damage and taking the beating usually associated with tanks. We did, however, observe two instances of players choosing a tanking soul for their first Cleric soul – both of these participants were male (one mid, one high expertise), and both of these participants selected healing for their second soul.

4. CONCLUSION

With a dataset consisting of a broad spectrum of player experience levels ranging from first time MMOG players to experts, we have attempted to show here that the stereotypical understanding that females are 'supposed' to be healers and males are 'supposed' to be warriors is not prevalent among novice MMOG players.

Instead, we argue that these gendered stereotypes are reinforced within MMOG gameworlds (as is the case of *WoW* class trainer NPCs) and by game developers (as illustrated by text and images on the Blizzard Entertainment and Trion Worlds websites), and it is reasonable to suppose that these stereotypes become internalized by players over time—they are 'taught' by the game, and learned by its players.

Like novice players, female players tend to be understudied, just as they tend to be underrepresented in the player populations of MMOGs such as *WoW* or *Rift*. By continuing to make comparisons across male and female play, perhaps academic research has been (unintentionally) helping to re-inscribe gendered stereotypes in MMOG gameplay. Jenson and de Castell [15] demonstrate the need for research that more carefully considers (and troubles) presumptions about gender and gameplay. A way to trouble those presumptions is to ask researchers to move away from the sex binary invoked in other studies [13][21][22]. The difficulty is that players are a moving target: their preferences, attitudes, playstyles, skills, etc. change over time, and capturing those changes has not yet been a subject of inquiry. This study shows, however, that studying different populations of players might well yield very different results, with novice players seemingly less bound by MMOG stereotypes, quite possibly because of a lack of understanding of the game or its lore, or having not yet been introduced to the player community's expectations and norms. Our participants, especially those with previous MMOG experience, seem to conform to prevailing gendered frameworks for gameplay. What remains unclear is to what degree researchers have been complacent in reproducing those very stereotypes because of the questions we ask and those we don't, or because we are working with narrow participant populations (no matter how large their participant numbers). By paying insufficient attention to traditionally understudied player populations, it might well be that we inadvertently invite claims which exceed their evidence.

5. Acknowledgements

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