GENDER REPRESENTATION IN THE LEAGUE OF LEGENDS

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Approval of the Graduate School of Social Sciences

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ABSTRACT

GENDER REPRESENTATION IN THE LEAGUE OF LEGENDS

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Video games became popular after 1990's among the young generation. Introduction of online video games in the early 2000's shadowed the popularity of offline video games because of the players' ability to interact with each other in the game world. American game publisher Riot Games' the League of Legends (2009), a free massively multiplayer online game, is a good example which we can investigate the subject with 67 million

monthly active players officially being the most played PC game in the World. (Riot Games, 2014; Tassi, 2014).

Video games have grown and become popular in a male dominant environment with male game designers, producers, and players. It is inevitable that the game market tends to favor male players. Several games create and maintain "real-life" gender stereotypes through game avatars. While the game world is a free and virtual environment, it is crucial to understand why players and producers prefer to maintain "real-life" gender roles through avatars even in their virtual lives.

The League of Legends, appeals to a large base of teenagers and young adults and tries to keep the gender representations balanced with the characters in the game. Generally, in Massively Multiplayer Online Games, players are able to choose the game character's sex, race and class in the game. In the League of Legends, game characters have already been assigned a sex, and a set of skills (Gameinfo.na.leagueoflegends.com, 2014a). The League of Legends has greatly reduced male avatar domination and increased the viability of female avatars. This thesis compares and analyzes male and female gender representation in the League of Legends. The positively changing gender role representation trend in the League of Legends may alter the society's view of gender roles over time.

Keywords: The League of Legends, Massively Multiplayer Online Games, gender, stereotype, avatar.

ÖZET

LEAGUE OF LEGENDS'DA TOPLUMSAL CİNSİYET TEMSİLİ

Damla İşbilen

TASARIM ÇALIŞMALARI YÜKSEK LİSANS PROGRAMI

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Video oyunları, 1990'lardan sonra gençler arasında popüler hale geldi. 2000'lerin başlarında çevrimiçi (online) video oyunları, oyuncuların birbirleriyle etkileşim içerisinde olmasına olanak sağlaması nedeniyle, çevrimdışı (offline) video oyunları gölgede bıraktı. Amerikan oyun yayıncısı Riot Games'e ait olan League of Legends (2009), aylık 67 milyon aktif oyuncusuyla, resmi olarak dünyada en çok oynanan PC oyunudur (Riot

Games, 2014; Tassi, 2014). Binlerce kişinin aynı anda internet üzerinden oynayabildiği oyun ücretsiz olarak piyasaya sürülmüştür.

Video oyunları, erkek oyun tasarımcıları, yapımcılar, ve oyuncuların egemen olduğu bir çevrede gelişip popülerleşti. Bu sebeple, oyun piyasasının erkek oyuncuları (tüketicileri) kayırmaya yönelik eğilimi kaçınılmaz bir durumdur. Birçok oyun avatarlar aracılığıyla, gerçek hayattaki toplumsal cinsiyet rollerini oluşturmaya ve sürdürmeye katkı sağlamaktadır. Oyun dünyası özgür ve sanal bir dünya iken, oyuncuların ve yapımcıların gerçek hayattaki toplumsal cinsiyet rollerini niçin sanal hayatlarında dahi sürdürmeyi tercih ettiklerini anlamak önemlidir.

Gençler ve yetişkinlerin büyük bir tabanına hitap eden League of Legends, oyun içerisindeki karakterleriyle toplumsal cinsiyet temsillerini dengede tutmaya çalışmaktadır. Binlerce kişinin aynı anda çevrimiçi olarak birlikte oynadığı oyunlarda oyuncular, genellikle oyun karakterinin cinsiyetini, ırkını ve sınıfını seçme şansına sahiptir. Fakat, League of Legends'da oyun karakterlerine cinsiyet ve yetenekleri zaten atanmış durumdadır. Oyun içerisinde erkek avatar egemenliğini büyük ölçüde azaltan League of Legends, kadın avatarların oyundaki sayısını arttırdı (Gameinfo.na.leagueoflegends.com, 2014). Bu tez, League of Legends'daki erkek ve kadın toplumsal cinsiyet temsillerini karşılaştırmakta ve analiz etmektedir. League of Legends'ın, toplumsal cinsiyet rollerinin temsilindeki değişime yönelik olumlu eğilimi, toplumun toplumsal cinsiyet rollerine bakışını zamanla değiştirebilir.

Anahtar Kelimeler: League of Legends, massively multiplayer online oyunlar, toplumsal cinsiyet, stereotip, avatar.

To my beloved daughter, the most precious gift of my life,

Defne…

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love, encouragement and great support I managed to finish this thesis. I will be grateful

forever for your love.

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1. INTRODUCTION

1.1. AIM OF THE STUDY

The purpose of the thesis is to provide a better understanding of the gender portrayals in the League of Legends game. When the studies and findings on the effects of violence in video games on players are considered, it is possible that the unbalanced gender representations in video games have an influence on the perception of gender roles and representations. The unconventional representation of genders in the League of Legends and the game's popularity is the source of inspiration of this study that focuses on the reformed and rehabilitated gender representation in this video game. Comparing of past studies and their results on gender representation in video games with the study conducted on the League of Legends, this thesis will give us hints at the future of the game.

Thus, this thesis provides reviews of previous studies conducted upon gender-representations in video games. Findings from a small-scale, exploratory content analysis on the avatars of the League of Legends will be discussed and the results of this analysis help to shed light on the possible social and psychological impacts on players for further studies.

Playable game characters, that are generally called "avatars" in the game jargon, are called "champions" in the League of Legends. In order to maintain an objective

standpoint and concur with the relevant terminology, they are referred to as avatars in the rest of this research. In the analysis of gender representation in this study, avatars' primary roles, sex, character attributes and their visual representations are used as the principal categories. These categories enable us to view general patterns in the game to evaluate the results in relation to the earlier studies.

1.2. SCOPE OF THE STUDY

A stereotype refers to one group's generalized perception about the personal attributes of members of another group which are widely accepted by the society (Brannon, 1996, pp. 160). Gender stereotypes that have been created by the society have kept being reinforced by the media, movies and the advertisement industry. These preconceived male and female roles and their representations have strong influence and effects in the virtual domains. Many studies on video games, video game avatars, video game covers and players have focused on gender stereotypes as a subject (Behm-Morawitz & Mastro, 2009; Cassell & Jenkins, 1998; Miller & Summers, 2007; Mou & Peng, 2008; Turkle, 1984). Gender stereotypes are widely conserved and reinforced among video games. These stereotypes come forward through game visuals, design, rules and storylines.

Previous studies have brought violence in video games to the table and its possible effects on the players. It has been discussed that frequent exposure to violence in video games may normalize the perception of violence in players (Dietz, 1998; Dill et al., 2005; Heintz-Knowles et al., 2001; Turkle, 1984).

Today, gender stereotypes, representations and gender roles in virtual domains tend to increase as subjects of research in many fields. Studies made on video games in general focus on the violent content's effects on the players and their possible contribution to violent behavior (Turkle, 1984). These studies have concluded that aggressive behavior is triggered and normalized on the players. If violent content is shown to affect players' behavior perception, similarly, unbalanced gender roles may also have an impact on players' perception of gender roles and help reinforce gender stereotyping in general.

As a very popular game with a large player base, the League of Legends may give us clues to how gender stereotyping lingers in video games. In most video games, primary roles and actions of game characters show a strong relation with socially perceived stereotypes such as fragile, weak, sexy female models and strong, aggressive, muscular male models. The League of Legends, however, contains a roster of female avatars with roles that are outside of these stereotypes. Females stereotypically portrayed as thin, with slim waist, flat belly and oversized breasts. For example; Annie and Poppy are still thin but do not follow the representation of the female stereotypes attributed and accepted by the society. Similarly, Sejuani and Kayle's muscular body type, aggressive, bravely behaviors portray non-stereotypical female representations.

Figure 1. Annie (The League of Legends, 2014a).

Figure 2. Kayle (The of Legends, 2014b)

Figure 3. Poppy (The of Legends, 2014c)

Figure 4. Sejuani (The of Legends, 2014d)

Figure 5. The League of Legends' Logo (Gamingwikia, 2014)

The League of Legends' avatars are chosen as the sample of thesis's small scale content analysis for the following reasons. The out of the ordinary roles that are far from the common stereotypes represented by the female avatars is a clue of a trend normalization of gender stereotypes in video games and the game reached large numbers of the population in a short amount of time and its popularity is rising day by day (Riot Games, 2014; Tassi, 2014). Riot Games reported the statistics and numbers about the active player base of the League of Legends game. According to these numbers the League of Legends has 67 million monthly active players. 27 million people play the game daily, with up to 7.5 million concurrent players. In 2012, the game had 32 monthly, 12 million daily active players, 5 million concurrent (Augustine, 2012).

> For context, longtime king of the PC gaming world, World of Warcraft, peaked at 12 million monthly players in 2010 (though those were $15 monthly subscribers). Across all platforms, every Call of Duty game combined had 40 million monthly players in 2011. If you want to consider it a game, Candy Crush has 46 million monthly players, though by some questionable metrics, that number is 100 or 200 million plus (Tassi, 2014, p.25).

A video game is a form of simulator in which the players experience various contexts through playable avatars. These simulators have been used to track and emulate the real world as well as creating and experiencing worlds of fantasy. The stereotypes and patterns found in real world therefore reflect to the virtual worlds simulated by video games. It is striking that in the League of Legends, some of the avatars do not carry stereotypic features and roles in such a popular game with one of the largest player bases in the world to date. It is essential to review video games and their history in general before going into details on gender stereotypes in the League of Legends.

Previous studies show that most of the stereotypes and patterns are preserved without an attempt to improve them where applicable. The conservation of existing stereotypes in the virtual world and their normalization limits the room required to change perception. However, the popularity of non-stereotypic avatars in the League of Legends, that is played by 27 million active players every day is a promising terrain for a shift. With more than 67 million monthly active players from all over the world. The League of Legends has potential and considerable power to influence the perception of gender stereotypes in society, in a positive way.

In this thesis we first consider the emergence of video games, their history and how they became an integral part of daily life. We then look at studies on the perception of genders by the society, how and where the gender stereotypes emerge from. In this framework the following research questions were raised:

RQ1: Are there any differences between male and female avatars in terms of their primary role distribution according to their genders in the League of Legends?

RQ2: Do the distribution of primary roles of different genders change over time?

RQ3: Do avatar health, difficulty, spell and attack damage change by gender?

RQ4: Do avatar health, difficulty, spell and attack damage change over time?

RQ6: Are avatars stereotypically portrayed in terms of their visual representation?

RQ7: Are avatars visually represented in stereotypes in the League of Legends?

In order to respond the research questions raised above, the existing 118 avatars of the League of Legends were analyzed, 78 of these avatars are male, and the remaining 40 are female. Two units of analysis were used in this study to evaluate gender representation in the League of Legends: avatars' attributes and visual representations. Avatars' attributes such as primary roles, health, ability damage and difficulty ratings were analyzed in order to locate their place and standing in the game. Each attribute is rated from 1 to 10. In the League of Legends, health is how well the avatar can take damage overall, attack attribute level shows how well the avatar can use attack damage; spell attribute is how well the avatar can use ability power and difficulty attribute's level shows how challenging that is avatar is to play, learn and master. The avatars were initially categorized into sexes as stated in the official the League of Legends website. Release dates, primary roles and avatar sex were tabulated. Avatar features and powers such as attack, spells, difficulty and health were analyzed and compared against sex and gender.

For the visual representation analysis a table (table 11) containing avatar artwork was used in order to answer "Are avatars visually represented in stereotypes in the League of Legends?" (The complete coding scheme can be found in the Appendix). A table was made using Nudity, Gender Stereotypes and Sex as categorical variables in order to evaluate the visual gender representation of the avatars. For these avatars nudity scale according to the attire is coded based on Downs & Smith definition of attire.

> The attire refers to "any garment that is worn in order to
> enhance, exaggerate, call attention to, or accentuate the curves

or angles of any part of the body (from the neck to above the

knee) and which by design, or the amount of exposed skin a

character shows, would arouse interest of physical intimacy

from others" (Downs & Smith, 2005, p. 7).

Nudity scale was categorized into four as; Nude, Partially Nude, Covered, and Irrelevant.

Gender Stereotypes were categorized into three as; Stereotypical, Non-Stereotypical and

Irrelevant. Sex was categorized in to two as; male and female. Female avatars are coded

stereotypical, if there is partially nudity featured with unrealistic body image and shown

wearing sexually revealing clothing and inappropriate attire such as Downs&Smith

(2005, pp.2) coded in their studies, or their attributes made females fragile, weak and

stuck in supporting roles (Such as Lux, Morgana, Janna etc.). Female avatars are coded

non-stereotypical, if their nudity scale is covered; the attire is coded opposite or

incompatible to Downs & Smith definition of attire or do not show leading roles in the

game with their power, attributes and positions. However, when a female avatar's nudity

scale is covered but still in supporting roles, and attributes made her weak and fragile

they also coded stereotypical (Lux). In similar way, if a female avatar is partially nude

but still has a powerful, leading role and position with high level attributes, coded non-

stereotypical (for example Riven and Jinx et cetera). Male avatars are coded stereotypical,

if they show stereotypical characteristics such as muscular body types and broad

shoulders, or they are on leading roles in the game and their attribute levels are high and

made them powerful, strong (Aatrox, Draven, Graves et cetera). Male avatars are coded

non-stereotypical, if they do not have muscular body types or show supporting roles in

the game with their power, attributes and positions (Karthus, Ezreal, Kennen et cetera). If

female and male avatars' attires are not able to be coded, or they are non-

anthropomorphic they coded irrelevant for the evaluation of the gender stereotype and nudity scale (Anivia, Blitzcrank, Fizz, Xerath, Veigar et cetera).

Nudity Scale	Gender Stereotypes	Sex
Covered: 1	Stereotypical: 1	Male: 1
Partially Nudity: 2	Non-Stereotypical: 2	Female: 2
Nudity: 3	Irrelevant:3	
Irrelevant:4		

Table 1. Categorical variables for visual gender representation analysis.

2. GENDER REPRESENTATION IN VIDEO GAMES

2.1 AN INTRODUCTION TO VIDEO GAMES

The game industry started being part of the entertainment culture with the introduction of the first commercially produced game, The Mansion of Happiness. Released in 1843, The Mansion of Happiness is the forefather of Monopoly game, which is still an influential board game today. Board games simulate real-life activities and events. Classic board games such as Risk and Dungeons and Dragons have inspired many video game developers. (Egenfeldt-Nielsen, Smith & Pajares Tosca, 2008) In 1962 Steve Russel and some of his students at MIT, created the "Spacewar!" game. Four years later, Ralph Baer explored a way to use television as a display device for computer games. American electronics company Magnavox signed contract with Ralph Baer for the first gaming console "Odyssey" in 1970. In the same year, Baer and Magnavox company collaborated

with Nolan Bushnell, who was developing the game "Computer Space" which is actually based on the Steve Russell's ' Spacewar!. "Computer Space" is crucial for being the first game users were paying for play.

Figure 6. Dan Edwards (left) and Peter Samson playing Spacewar! (Blake, 2014)

Until Ralph Baer and Nolan Bushnell brought video games into homes and arcades with Odyssey, video games were abstract concepts. (Rabin (ed), 2005) Between 1978 and 1981 video games affected society and a game culture started to begin, hence this era is called the "Golden Age" (Kent, 2001a, pp. 123-151). Arcade game manufacturer, Nutting Associates bought "Computer Space" from Nolan Bushnell; nevertheless due to the complexity of the game, the interest of gamers was not maintained - they simply gave up playing. As a result, first arcade game became a financial failure (Kent, 2001, pp.34). When Nutting Associates and Bushnell failed, Baer and Magnavox sold 100.000 units of Odyssey for $100 per unit. After the failure Bushnell left Nutting Associates and

founded Atari. Computer scientist and engineer Allan Alcorn designed video arcade game "Pong" under the direction of Bushnell. Unlike Computer Space, Pong was simple and it wasn't compelling for the users. Although it wasn't for home use, Magnavox sued Atari for Pong because of its similarities with Video Tennis on Odyssey. Consequently Atari had to pay a licensing fee for Pong to Magnavox. (Egenfeldt-Nielsen, Smith & Pajares Tosca, 2008, pp.53).

Figure 7. Odyssey gaming console on the PDP-1 display. (Hatzithomas, 2014)

Figure 8. Video Tennis on Odyssey (Magnavox Odyssey, 2014)

Figure 9. Pong (Dunham, 2014)

In 1972, William Crowther coded the first text-based game "Adventure" also known as Colossal Cave. This game became the template for all text-based adventure games. It became popular, even the designer of the Mystery House game, Roberta Williams admitted that she became addicted to the Colossal Cave when she first played it:

> "I just couldn't stop. It was compulsive. I started playing
>
> it and kept playing. I had a baby at the time, Chris was
>
> eight months old; I totally ignored him. I didn't want to
>
> be bothered. I didn't want to stop and make dinner."
>
> (Levy, 1984, pp.296).

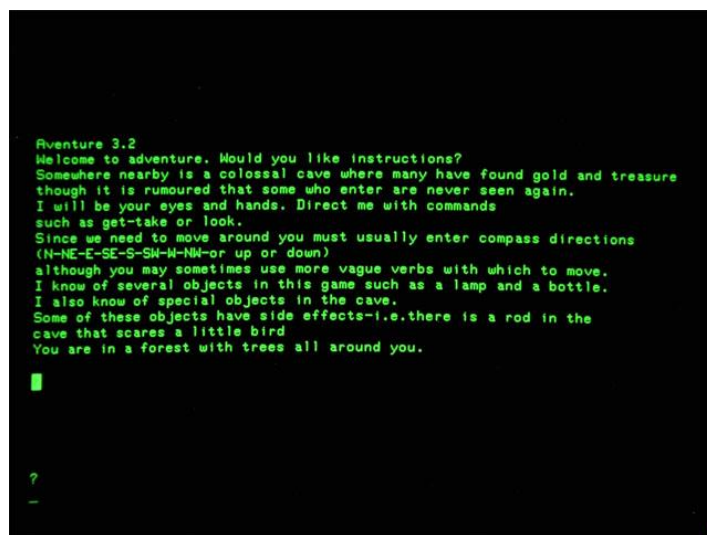**Figure 10.** Adventure (also known as Colossal Cave) (Crowther & Woods Adventure, 2014)

In 1976, cartridges were born: Fairchild Camera and Instrument Corporation released first ROM Cartridge Console. Users can insert large cartridges into the console and change games. In the same year, Steve Jobs, Steve Wozniak, Steve Bristow and Nolan Bushnell worked for Atari and created "Breakout" game. When Taito Corporation introduced

"Space Invaders" into arcades, this Japanese corporation pioneered two "first-time-ever" occurrences in the game industry. It was the first use of animated characters in video games and it was the first game that provided high scores. Space Invader's designer Tomohiro Nishikado stated that he took inspiration from the arcade game Breakout (Wong, 2014). At the turn of the 1980s, following the Taito Corporation, more Japanese companies were releasing games on the international market.
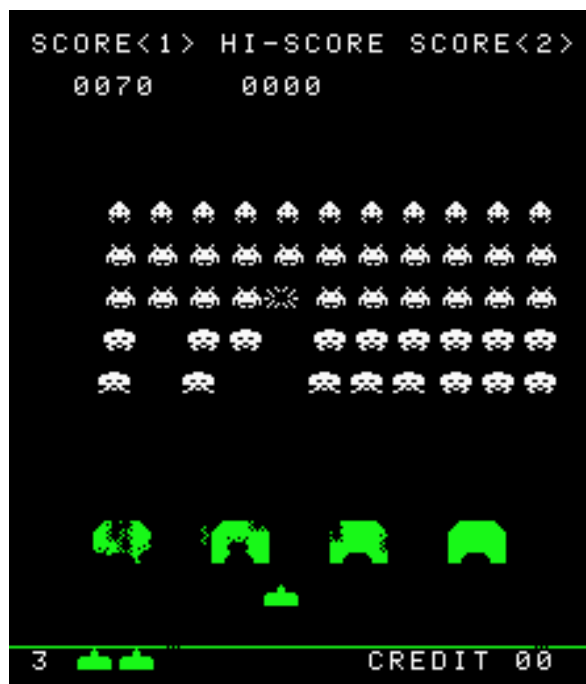

Figure 11. Space Invaders (Space Invaders, 2014)

In 1980, Japanese corporation Namco released Pac-Man game, which became one of the cults in the video game world. A year later Namco released Ms. Pacman that targets female users. Golden Age of the video games came to an end with video game crash. Video game crash was a massive recession of the video game industry that occurred in

1983 in North America. The video game crash might have opened a new path for new game generation. Because it started the modern age video games and slowly eliminated the arcade games. In 1984 Atari created the first 3D game "I, Robot". (Egenfeldt-Nielsen, Smith & Pajares Tosca, 2008)
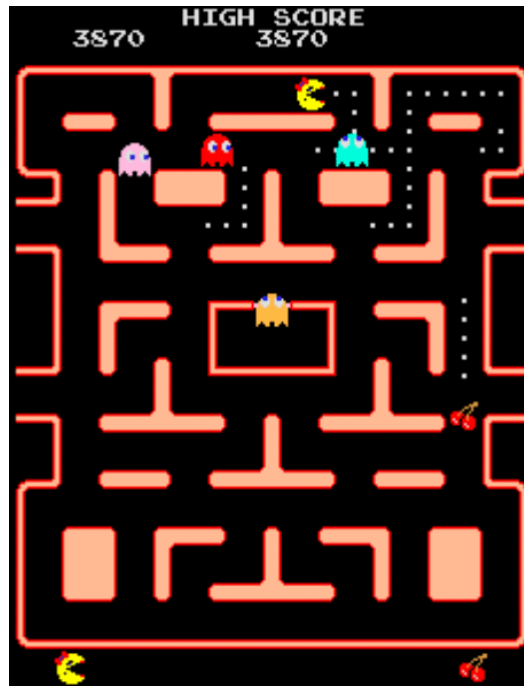
Figure 12. Ms. Pacman (Stahl, 2014)

In 1985, Russian mathematician Alex Pajitnov designed Tetris. In the same year, Sega released "Sega Master System" and Atari released the 7800 game console. 2 years later, Nintendo published the popular game, The Legend of Zelda. In 1989, Game Boy was released worldwide by Nintendo. Super Mario Bros. 3 was released a year after Game Boy. In 1991, the arcade game Street Fighter II was released by Capcom. Virgin Interactive Entertainment published The 7th Guest on PC CD-ROM in 1993. In 1994, Sony released PlayStation in Japan and a year after it released in United States.

Figure 13. Pokémon Red/Blue (O'Rourke, 2014)

Pokémon game which was a line of Game Boy role-playing games, become popular in Japan and its popularity also spread among the players in United States in 1998. In 2000, Sony released PlayStation 2. In 2001, Nintendo released GameCube and Microsoft released Xbox (Kent, 2001b). Today's game consoles can be connected to the internet and enable players to play massively multiplayer online (MMO) games. An MMO is an online game genre, which allows thousands of players to interact with each other and play the game (Nosrati and Karimi, 2013). There are several different types of MMOs. Multiplayer online battle arena (MOBA) is a sub-genre of real time strategy games. Majority of MOBA games are released for the PC platform. In MOBA games two teams battle for victory and resources. Every player controls one character in their team during the battles. Cooperative team play is crucial in MOBA games; each player has to contribute to the team's overall strategy in order to defeat the opponent team. The aim of the MOBA games is to destroy the opponent team's main structure. (Nosrati and Karimi, 2013) Riot Games' the League of Legends, S2 Games' Heroes of Newerth, Blizzard

Entertainment's Heroes of the Storm and Valve Corporation's Dota 2 are examples of popular MOBA games on PC platform. No other MOBA game has been able to challenge the popularity of the League of Legends yet, but in the future analysis of these other games may be considered as their play base grows larger.

2.2 GENDER STEREOTYPES IN VIDEO GAMES

Today, board games have been transformed into Massively Multiplayer Online Role Playing Games and they continue to simulate real-life and its stereotypical content. People live in a world that contains a large number of stimuli. In order to deal with the diversity and complexity of the stimuli, they tend to categorize them. People always want to make predictions to understand and perceive the world (Hinton, 2000). "As key components of social structure, statuses and roles allow us to organize our lives in consistent, predictable ways. In combination with established norms, they prescribe our behavior and ease interaction with people who occupy different social statuses, whether we know these people or not. "(Lindsey, 2010, pp.5)

They prefer to group the information, rather examining separately to facilitate understanding. Consequently, society creates its own groups, categories and most importantly its culture. Gender is one of the end results of the categorization (Hinton, 2000). Categorization of the society in terms of gender is naturalized, almost a reflex response. It starts with the birth whether the baby is a boy or girl. Society actually divides the world into two groups: males and females by assuming that all females are similar, all males are similar. They also tend to expect the two groups to be totally different from each other. Society's culture, myths, religions, expectations and beliefs about a certain group represent their stereotypes by creating the gender polarization (Crespi, 2003).

A gender stereotype consists of beliefs about the psychological traits and characteristics of, as well as the activities appropriate to, men or women. Gender roles are defined by behaviors, but gender stereotypes are beliefs and attitudes about masculinity and femininity. The concepts of gender role and gender stereotype tend to be related. When people associate a pattern of behavior with either women or men, they may overlook individual variations and exceptions and come to believe that the behavior is inevitably associated with one gender but not the other. Therefore, gender roles furnish the material for gender stereotypes (Brannon, 1996, pp. 160).

Children admire their parents as role models. For instance, a boy follows his father, tries to be like his father, and admires him to manage to be a man. Likewise, a girl imitates her mother's female behaviors in order to be a woman (Eckert & McConnell-Ginet, 2003). Gender is something we perform (Butler, 1999) since our childhood; it is not something we are born with it or something we have (West & Zimmerman, 1987). Although there is no biological reason for the gendered behaviors and roles, gender builds on biological sex. Eagly (1987) claims that one's gender roles and expectations are influenced by gender stereotypes of the society which are culturally transmitted. Society tries to match up their roles according to their biological sex, and expects others to follow their "appropriate" gender roles (Eckert & McConnell-Ginet, 2003). These expectations of the gender roles create stereotypes. Such as men are tough and powerful, but women are weak and helpless. Gender stereotypes have been maintained through the media.

Figure 14. Dolce&Gabbana Lipstick Advertisement (D&G advertisement, 2014)

Figure 15. Dolce & Gabbana Light Blue Fragrance Advertisement (Glamcheck, 2014)

"Central to the stereotypes of masculinity and femininity

in the Western media is the idea that they are opposites,

and that boys and girls are 'naturally' and fundamentally

different. Not surprisingly, children's media - like their toys - are among the first contexts that each of us encounters for demonstrating how masculinity and femininity 'ought' to be performed. Boy's action figure 'GI Joe' in the US A or 'Action Man ' in the U K depicts a muscled, tough and aggressive character armed with the latest guns, missiles and explosives."(Rutherford, 2012, p.12)

Figure 16. Meccano: Motorbike, (Adsoftheworld, 2014)

Figure 17. Vogue Paris, December '10 / January '11 (Fashionising, 2014)

"…Although stereotypes can include positive traits, they most often consist of negative ones that are then used to justify discrimination against members of a given group. The statuses of male and female are often stereotyped according to the traits they are assumed to possess by virtue of their biological makeup. "(Lindsey, 2010, pp.5)
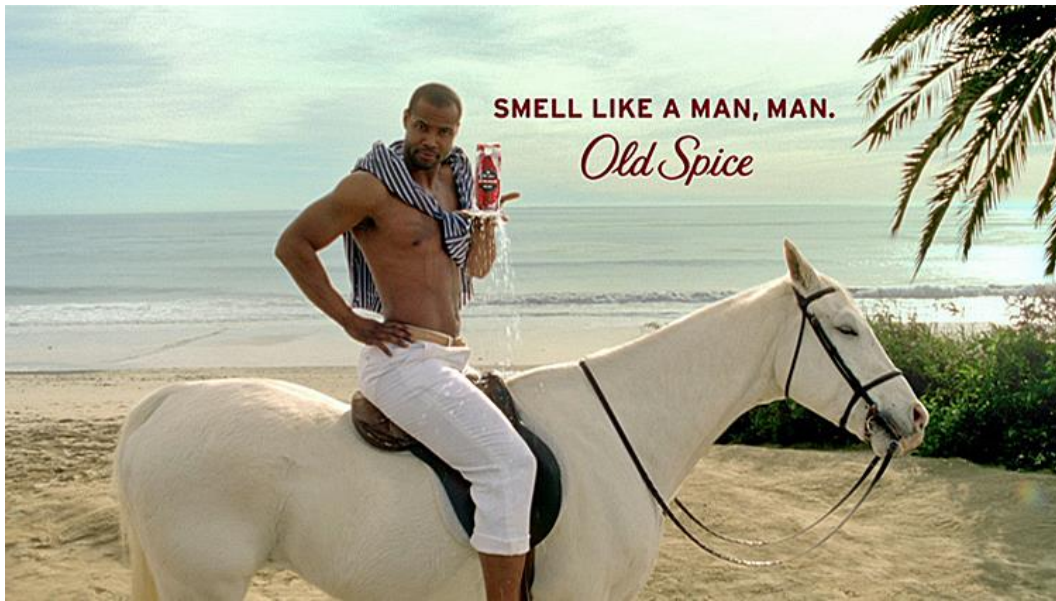
Figure 18. Old Spice Commercial (Mombert, 2014)

Some of these gender stereotypes are generally maintained through the videogames. Lindsey (2010) claimed that "The assignment of negative stereotypes can result in sexism, the belief that the status of female is inferior to the status of male." (Lindsey, 2010, pp.5). Schröder (2008) claimed that "In the past few years, there has been an increase in research examining gender issues in games." (Schröder, 2008, pp.241). "In the video game world, most games were based on male heroes, with females cast as victims or prizes, such as fairy tale princesses who needed to be rescued." (Knight, 2010, pp.203-204) On the other hand Schröder stated "The male avatar predominantly reproduces a traditional concept of masculinity and is in some aspects comparable to the tough 1980s action heroes." (Schröder, 2008, pp.253).

The first female protagonist in video game history was Ms. Pac-Man (Knight, 2010, pp.58). In 1991, Capcom game company released Street Fighter II. Chun Li was one of the first popular female game characters in the game.

Figure 19. Chun-Li connects a special move to Ken's head (Hill, 2014)

Chun Li is considered the first female playable character in a fighting video game. She debuted in Street Fighter II: The World Warrior in 1991, along with seven other playable characters, all of them men. Her entrance into the massively lucrative video game industry stirred excitement among avid game players. Indeed, Chun Li became one of the favorite characters in this ground-breaking series. (Knight, 2010, pp.58)

According to Beasly and Standy (2002) female characters in video games are more likely to be in low-cut clothing than male characters. Results from the analysis of 60 video

games have shown that females were more likely to be represented in a hypersexual way: being partially nude, featured with unrealistic body image and shown wearing sexually revealing clothing and inappropriate attire (Downs&Smith, 2005). Hence, male characters are more likely to achieve missions and show leadership. They are generally strong, intelligent, violent, brave heroes. Games' narratives are generally linked to these male stereotypes. According to Cassell and Jenkins women rarely appear in the games, when they do, they appear as damsels requiring rescue or rewards for successful completion of the mission (Cassell and Jenkins, 1998, pp.5).

 For example, the aim of the main character is usually to get revenge, rescue the helpless or fight the evil and gain power. According to Maccallum-Stewart players of all genders often chose female avatars for ludic, rather than gendered reasons. As a result, this has normalized the adoption of female avatars by male players, who feel more comfortable with assuming the female avatars as gameplay devices.

Jansz & Martis' study (2007), which is the content analysis on the introductory films of twelve contemporary video games, showed a dominance of male characters in the games. 60% of game characters (Thirteen of 22) were men. They observed a difference between leading and supporting roles. Supporting characters were seven men and three women, but among the characters in leading roles gender distribution was equal with six women and six men.

> A content analysis of images of video game characters
>
> from top-selling American gaming magazines showed
>
> male characters (83%) are more likely than female
>
> characters (62%) to be portrayed as aggressive. Female
>
> characters are more likely than male characters to be

portrayed as sexualized (60% versus 1%), scantily clad (39% versus 8%) and as showing a mix of sex and aggression (39 versus 1%). A survey of teens confirmed that stereotypes of male characters as aggressive and female characters as sexually objectified physical specimens are held even by non-gamers. Studies are discussed in terms of the role media plays in socializing sexism. (Dill and Thill, 2007, pp.851)

Although Jansz & Martis claim that the leading roles in the games held a dominant position with respect to other characters. Their study didn't note a difference between male and female leaders. But supporting roles showed a contrast, because female characters in supporter roles held either dominant or equal positions. In short words, they didn't observe any female characters in submissive position. Nevertheless, they observed three (43%) male supporters in submissive position, three male supporters in dominant position and one held equal position. (Jansz & Martis, 2007)

On the other hand, Dietz's study examined violence and gender stereotyping in the content analysis of 33 popular Nintendo and Sega Genesis videogames. In more than 40% of the games that Dietz sampled there were no female characters (Dietz, 1998). In the study of 70 video games Heintz-Knowles et al. (2001) also examined violence and gender stereotyping. According to the results of their study 73 percent were male and 12 percent were female of the 874 characters. Female characters were generally in secondary roles. Dill et al. (2005) analyzed twenty top-selling PC video games of 1999 and coded the each game character's role. Majority of (70 percent) of the primary characters were male, female characters became minority (10 percent) in comparison to male characters.

Furthermore results revealed that 55 percent of secondary characters were male and 31 percent were female. Female characters in video games are generally sexualized in popular video games (Beasley and Standley 2002; Dietz 1998; Ivory 2006; Miller & Summers, 2007) and they often function as victims or prizes when they appear in the games (Provenzo, 1991).

> "…In total, there were 26 human characters on the covers
> of the 19 games; 22 (84.6%) were males, while only four
> (15.4%) were females. The only four female characters
> appearing on the game covers were all unrealistically
> thin, and half of them wearing partially revealing attire
> such as bathing suits." (Mou and Peng, 2008, pp.928)

The results of the Miller and Summers (49 articles were coded from current U.S. gaming magazines, resulting in 115 coded characters) study have shown that video game characters in game magazines have remarkable differences in the representation of gender. For instance, while males were more likely to be main characters, women were generally secondary characters. More weapons are used by males and they have more abilities according to the female characters. Male characters often wore army attire, on the other hand females wore reveling clothing and a majority of them were in revealing dresses. (Miller & Summers, 2007)

> Women often appear in narratives of gender and
> development policy as both heroines and victims: heroic
> in their capacities for struggle, in the steadfastness with

which they carry the burdens of gender disadvantage and

in their exercise of autonomy; victims as those with

curtailed choices, a triple work burden and on the

receiving end of male oppression and violence.

(Cornwall, Harrison and Whitehead, 2008, p.2)

Behm-Morawitz and Mastro (2009) investigated the short term effects of exposure to sexualized female video game characters on gender stereotyping and female self-concept among U.S. college students. (328 undergraduate students at U.S. Southwestern University participated, and they completed an online questionnaire after randomly assigning to play a sexualized, a non-sexualized heroine or no video game.) According to their results, they claimed that playing with sexualized female heroines unfavorably influenced people's beliefs about women in real life. They also emphasized that the findings are of consequence to scholars, parents, gamers, and the gaming industry not only in the U.S. but also abroad. (Although their study based only in the U.S) By reason of the fact that the gender images they examined are mass produced and distributed worldwide. "Beliefs about inferiority due to biology are reinforced and then used to justify discrimination directed toward females." (Lindsey, 2010, pp.5) Ward and Friedman (2006) examined the effects of stereotypical media representations of gender on adolescents who exposed them for a period of 12 minutes. Adolescents who viewed representations of women as sex objects were more adhering to gender stereotypes. This suggests that exposure to underrepresented female portrayals may promote stereotyping of women (by both men and women) (Ward & Friedman, 2006). "Females are not the only ones affected by unrealistic body images in the media, however. Media portrayals of

muscle-bound men may also set standards for male gamers." (Downs and Smith, 2010, pp.5)

Most of the studies on games have been conducted upon violent content and its possible impact on players, such as aggressive behavior. If studies show that violent content affects players; unbalanced gender roles may also have an impact on players' perception of gender roles. The purpose of the thesis is to contribute to the understanding of the portrayal of gender in the League of Legends massively multiplayer online role-playing game. In the analysis the character's role, position and its visual representation are used as the principal categories. These categories enabled to record general patterns in the League of Legends and to evaluate the results in relation to the earlier studies. This thesis aims to provide a review of previous studies on gender representation and stereotypical content in video games and compare the results of the study, which is conducted upon the League of Legends online game.

3. ANALYSIS OF THE LEAGUE OF LEGENDS

The League of Legends is a competitive online game that combines speed and energy of an RTS (*Real-time strategy)* with RPG (Role playing game) elements. It is a battle of two teams in variable battlefields and different game modes using powerful avatars with unique play styles. The League of legends became addictive for players with expanding list of avatars, frequent updates and thrilling tournaments. The game also offers endless replayability for the players. Since the League of Legends is one of the most competitive games in the world, there are numerous tournaments worldwide; the most popular one is Championship Series where salaried professional players compete for millions.

Players are called "summoners", and game characters are called "champions" in the League of Legends. When summoners' level increases, players become able to unlock new bonuses to improve their avatar on the Fields of Justice. These bonuses are grouped in three categories as summoner spells, runes and masteries. Summoner's Rift is the biggest battlefield in the game which is mirrored diagonally and offers three lanes to the enemy base. There are three turrets and an inhibitor that defend each lane, while pair of turrets guards the nexus. The central river is the home of two boss monsters that provide team-wide benefits. In addition, there are expansive jungles containing powerful buffs in both sides of the map.

The player's and enemy's base are connected with three roads. These roads are called as lanes and they are used as the means of engaging the enemy team. The player has to push down the lane into enemy base and destroy the nexus at the base in order to win a game.

Figure 20. Lanes (Williamson, 2014)

There are AI–controlled (artificial intelligence) soldiers called Minions that show up at the nexus and move through each lane to the enemy base to encounter attacking enemies along the way. Player's avatar earns valuable gold by killing each minion in the game. Minions attack the avatar if they find him alone in a lane, otherwise they fight each other. If player attack a nearby allied avatar, minions will also switch targets to focus on.

Figure 21. Minions (Poon, 2014)

In the game there are powerful defensive structures called Turrets that defend each lane at even intervals. Turrets strike enemy within range with deadly bolts of energy. They attack other targets like minions, unless player engages another avatar within range.

Figure 22. Inner mid turret, Inhibitor mid turret and Nexus turret (Turrets, 2014)

Inhibitors are important structures in the game; there are inhibitors at each lane where the lane meets the base on both side of the map. A powerful super minion comes into play when the player destroys an inhibitor, each time a new minion wave spawns in that lane. Extreme durability is the key property of super minions, which make them ideal for leading the charge on the enemy nexus. The player should make sure he/she takes the

advantage during this time since the Inhibitors respawn after five minutes. Two super minions spawn in each lane every time a new minion wave is created when the player destroy all three of an enemy's inhibitors.

The nexus is located at the heart of each base. The nexus is a structure which creates minion waves in each lane periodically and which is guarded by two turrets. The game is over and the team is declared as victorious when players of a team destroy the enemy nexus. The player's avatar earns gold by taking down enemy units and structures in the League of Legends. Another way to get additional income for an avatar is scoring the killing blow on a minion or avatar, assisting in an avatar kill, and acquiring certain runes or items. The powerful items can be purchased from the shop near the summoner platform with the gold.

The Jungle is a wide area filled with neutral monsters where located between the lanes. These monsters can be defeated for additional gold and special temporary buffs. When a player attacks these monsters they won't attack the enemy base. These areas can be used as primary source of income by taking on the role of "jungler". Junglers typically roam between the lanes, coming to the aid of team mates in lane when needed.

Roles, or game functions of the avatars are Assasin, Mage, Tank, Support, Fighter and Marksman. Agile avatars who are specialized in killing or disabling high value targets are called as assassin. Assasins are opportunistic hunters who attack in the most suitable moments within a fight before jumping into the fray and focused on infiltration, deception, and mobility. Mostly ranged avatars who prioritize powerful abilities over basic attacks are called mages. A mages' specialty is the combination of long-range, area-effect or high-utility spells to get the job done. Versatile skillsets and flexible play style are the key properties for the talented mages, which have a huge impact on any team.

Durable front-line avatars, which help lock down enemies and start fights are called Tanks. Tanks are usually found leading the charge, choosing the right times and situations to initiate aggression. They also stun or push around foes and limit their damage potential to protect their weaker teammates. Supports make plays by enabling their teammates through buffs and heals. They also disrupt enemy lines through crowd control. From laning to late game team fights, they create opportunities for their allies to capitalize on. Melee combatants which have both defensive and offensive capabilities are called fighters. Fighters do not have much utility as a tank or much damage as an assassin however their damage will add up over time and make them a major threat. Each fighter has a unique blend of mobility, damage, disruption and durability. (Gameinfo.na.leagueoflegends.com, 2014b)

3.1 CHARACTER ATTRIBUTES

In order to understand the significance of gender representation we need to consider how the roles and attributes are distributed first. According to Table 2 the number of new male avatars added each year has been decreasing over the years. The number of new female avatar additions per year has also decreased. The decrease in absolute numbers of avatars added per year is due the saturation of avatar roles and mechanics over time. The ratio of new female avatar additions to male avatars in the game has increased until 2011. There is a significant drop in 2012 but the ratio increases again in 2013 (Figure 23). According to the Figure 24 and Figure 25, x-axis shows years, y-axis shows total number of male or female avatars (78 of 118 avatars are male, 40 of 118 avatars are female).
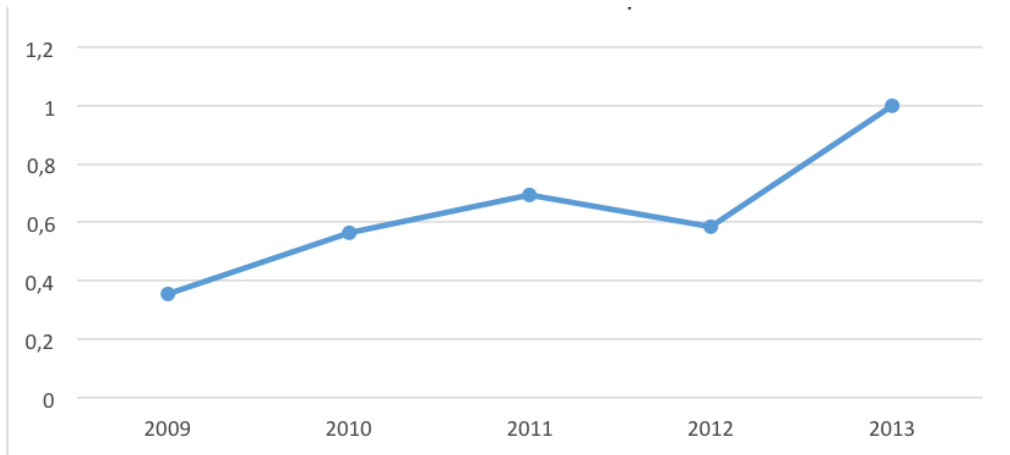
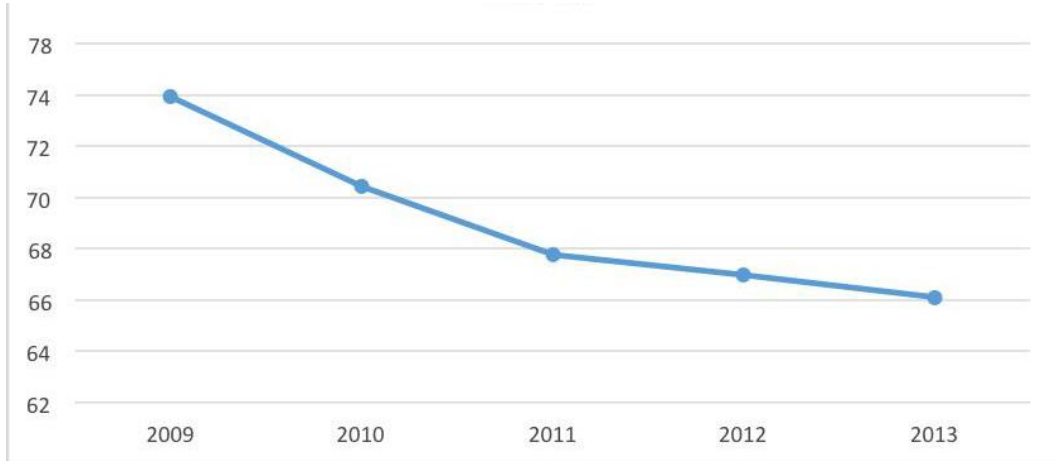**Figure 23.** Ratio of female to male new avatar additions per year

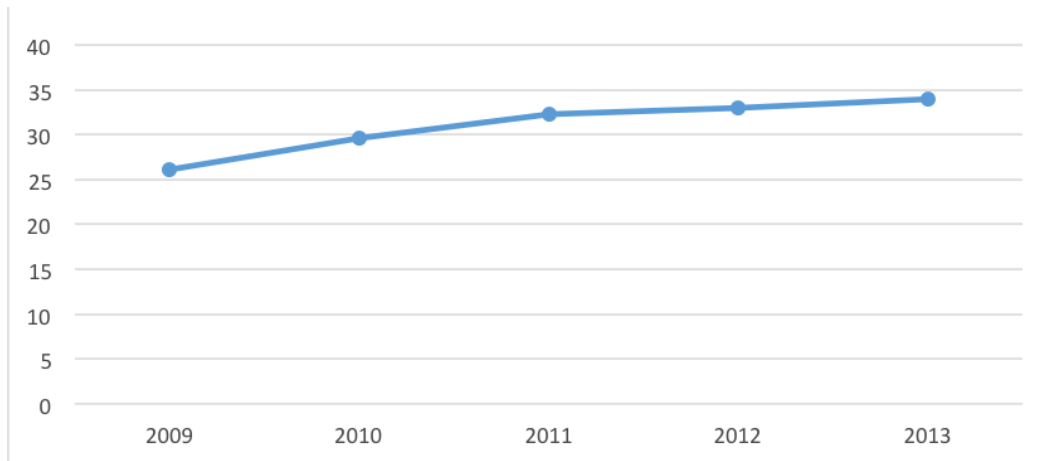**Figure 24.** Percent of male avatars over the years

Figure 25. Percent of female avatars over the years

DAMAGE

Combined damage is the sum of spell and attack damage of an avatar that represents the overall damage potential of an avatar. Tank and support avatars tend to benefit less from damage. Instead they rely on spells that can turn the tide of the battle by applying control effects. These control effects slow, stun and silence other avatars. Some spells heal avatars, increase their stats while others may cripple the healing received and reduce stats.

According to the figure below (Figure 26) x-axis shows the attribute level (because each attribute is rated from 1 to 10, combined damage is rated from 1 to 20) and y-axis shows the probability distribution. Average combined damage for male avatars is 11.03 and average combined damage for female avatars is 11.25. Average combined damage output of female avatars is slightly higher than male avatars. However, the variance of combined damage is higher in female avatars than males. This results in a tighter damage range for the male avatars increasing the overall probability of future male avatars' damage to be

more consistent. A wider damage range for female avatars indicate that there may be female avatars in the future that may have high damage capabilities.
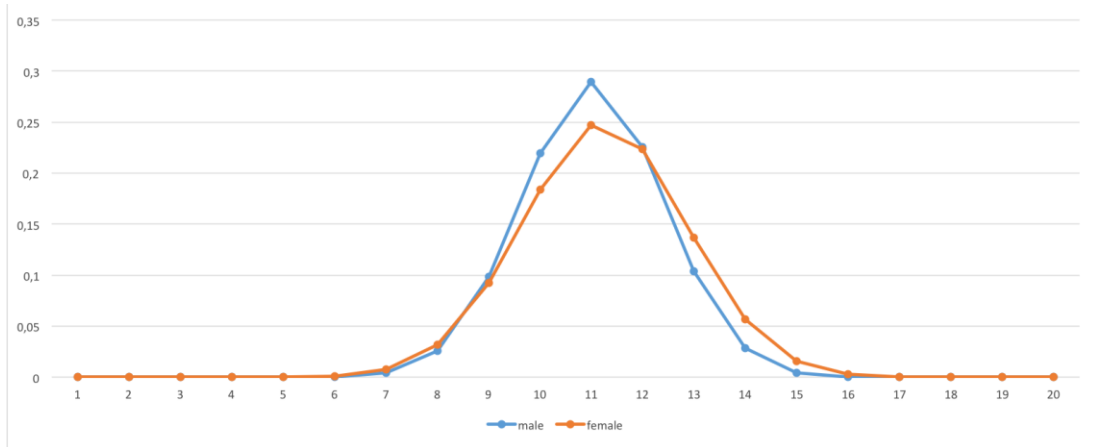
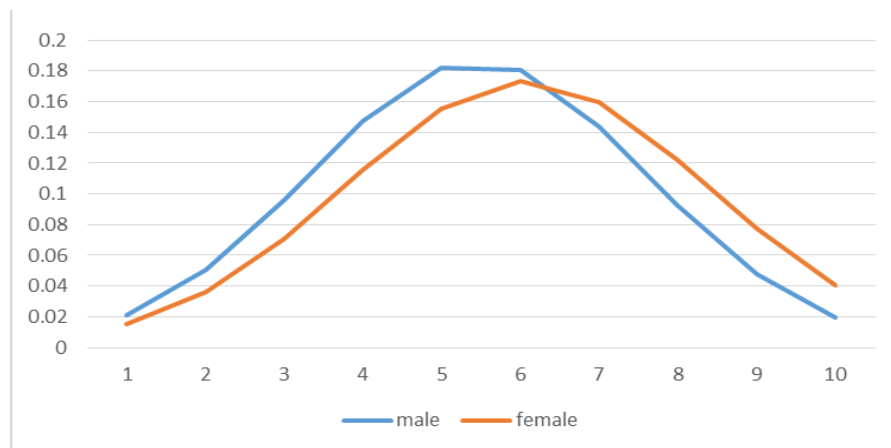**Figure 26.** Avatars' combined damage distribution

DIFFICULTY

Figure 27. Average difficulty for male and female avatars

Figure 27 shows that average difficulty for female avatars is significantly higher than average difficulty for male avatars (x-axis shows the attribute level, y-axis shows the probability distribution). Female avatar average is 6.1 where male avatar average is 5.46.

Female avatars seem to be about %10 harder than male avatars on average. Female avatars show slightly higher variance compared to male avatars. Considering the higher mean of female avatar difficulty, it is more likely that a future female avatar's difficulty will be higher than a new male avatar's difficulty.

HEALTH
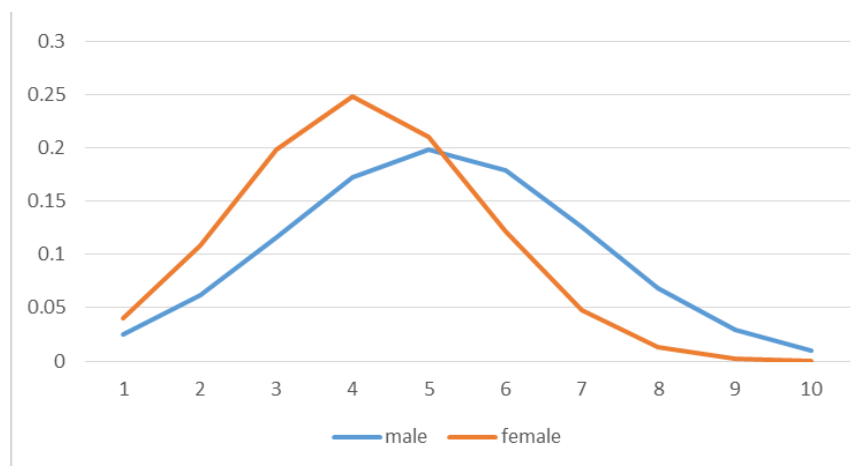
Figure 28. Average health for male and female avatars

Average health of male avatars according to the Figure 28 is significantly higher than female avatars (x-axis shows the attribute level, y-axis shows the probability distribution). Male average is 5.08 where female average is 4.08. This is around %20 difference in average health between males and females. Male avatars display higher variance and female avatar health seems to be contained in a narrow range. Future female avatars have significantly higher chance of getting lower health values compared to future male avatars.

SPELLS

Spells and their damage favor female avatars. According to the Figure 29 male avatars have 6.125 average spell damage, which is %12 higher than their male counterparts with an average of 5.36 (x-axis shows the attribute level, y-axis shows the probability distribution). Female avatars show a clear dominance in spell based play style which contributes to the difficulty of female avatars (Such as Lissandra, Karma and Cassiopeia). Most spells in the League of Legends require manual positional aiming by the player. Both male and female spell damage show similar variance but the female average is significantly high.
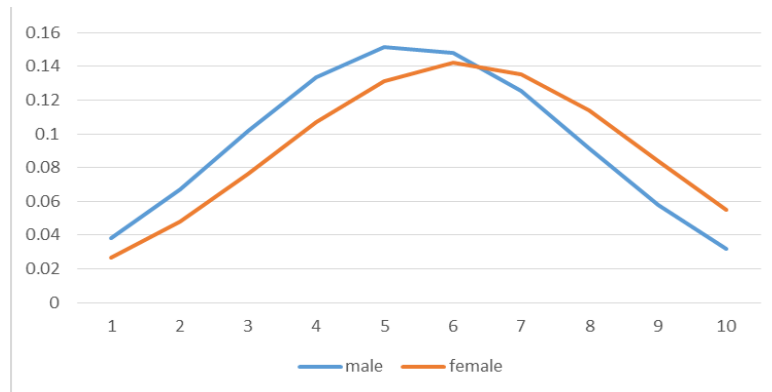
Figure 29. Average spells for male and female avatars

ATTACK
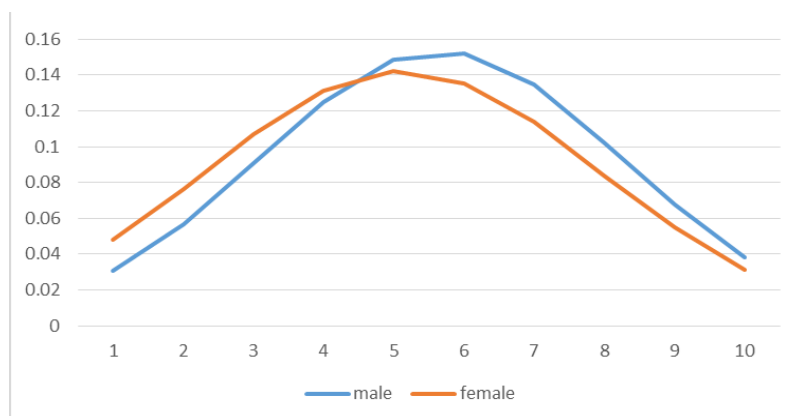
Figure 30. Average attack for male and female avatars

Male avatars on average have %9 more attack power than female avatars. Male average is 5.67 and female average is 5.13 (According to the Figure 30, x-axis shows the attribute level, y-axis shows the probability distribution). When the higher average spell damage of female avatars is considered, lower attack damage given to female avatars seems to be balancing the gameplay (According to the Figure 31, x-axis shows the total number of the avatars, y-axis shows the percentage distribution).
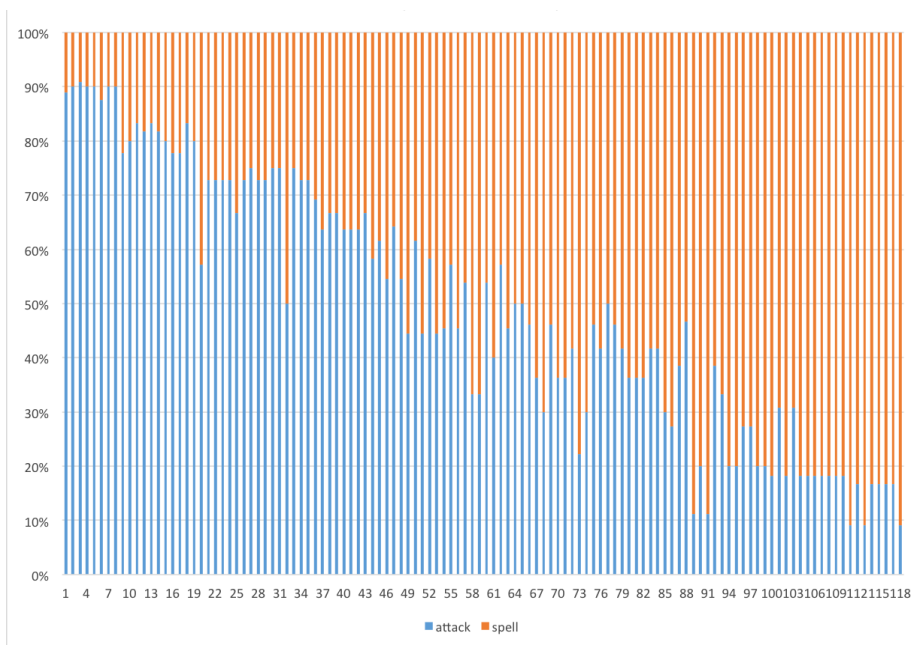

Figure 31. Comparison of avatars' attack and spell attributes

ATTACK vs. SPELL

If an avatar relies on both attack and spells, his/her average attack and spell damage seems to be lower than average. Some avatars clearly rely on pure spell damage (Annie, Anivia, Karthus et cetera) while others rely on attack damage (Darius, Kha'Zix etc.). Spell damage avatars seem to be harder to play and they are mostly female avatars

however we could not find a relation between spell damage and difficulty as seen in Figure 32 (x-axis shows the total number of avatars, y-axis shows the attribute level).
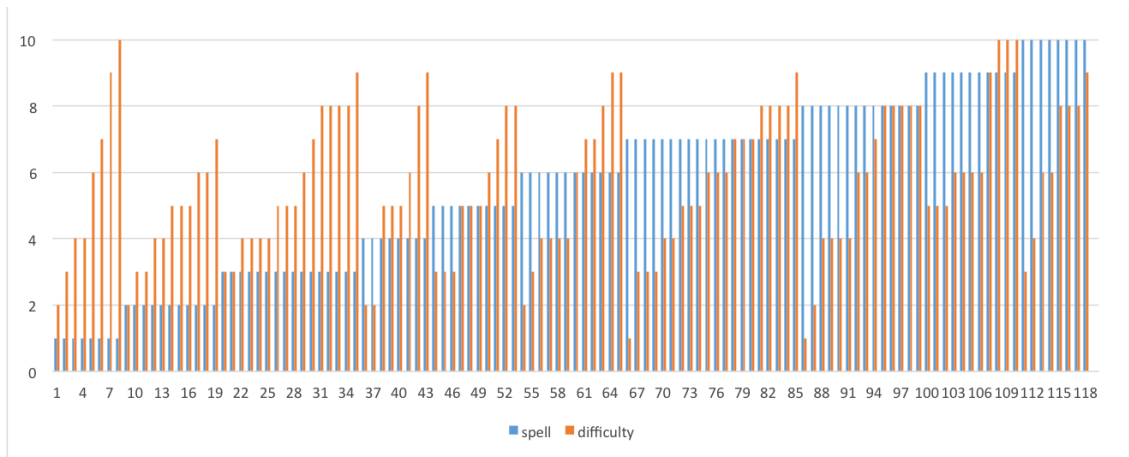

Figure 32. Avatars' spell and difficulty comparisons.

3.2. VISUAL REPRESENTATION OF THE AVATARS

As seen in the figure below female avatars tend to display non-stereotypical characteristics when they have a revealing outfit (x-axis shows the female avatars, y-axis shows the probability distribution). The female avatars with revealing outfits tend to display stereotypical characteristics (Figure 33).
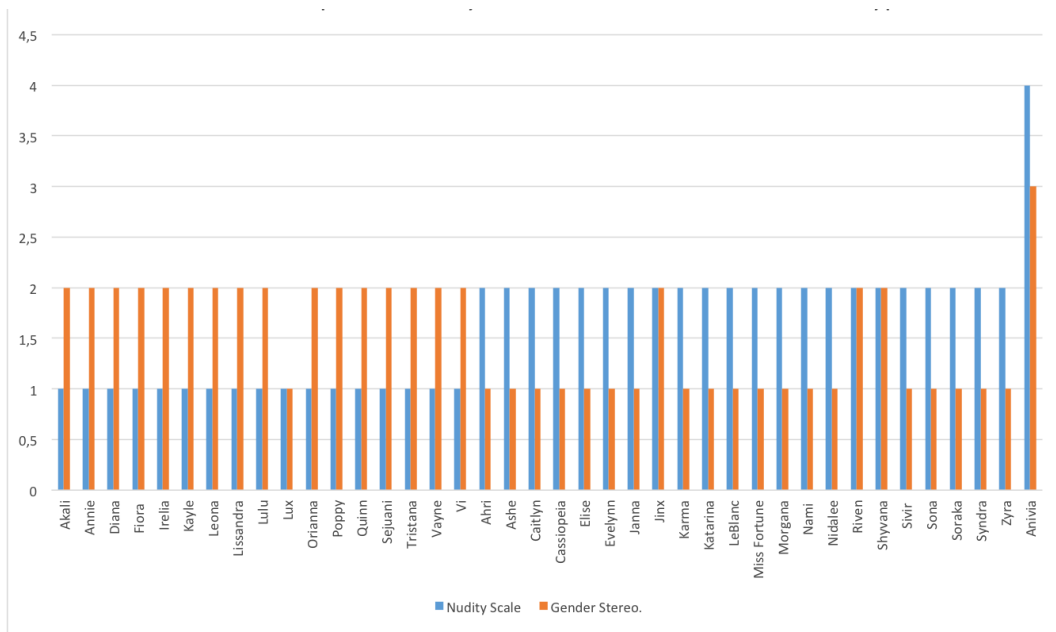
Figure 33. Female Avatars' nudity scale and visual gender stereotype
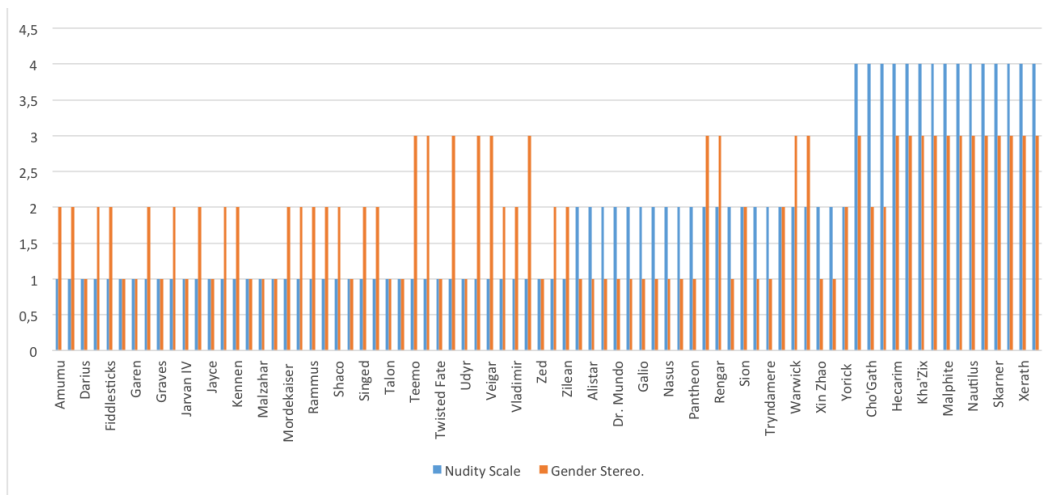
Figure 34. Male Avatars' nudity scale and visual gender stereotype

As seen in Figure 34, most male avatars are split between stereotypical and irrelevant stereotypical characteristics (x-axis shows the male avatars, y-axis shows the probability distribution). Revealing outfits for male avatars are rare, and where they apply, the male

avatars show stereotypical characteristics such as muscular body types and broad shoulders (Olaf, Pantheon, Lee Sin et cetera.).

DISTRIBUTION OF AVATAR ATTRIBUTES AMONG GENDER STEREOYPES

HEALTH

Male avatars show a consistent health distribution among gender stereotypes for stereotypical and irrelevant gender avatars. Non-stereotypical male avatars show a slightly higher health average (According to the Figure 35, x-axis shows the attribute distribution, y-axis shows the probability distribution of the male avatars).
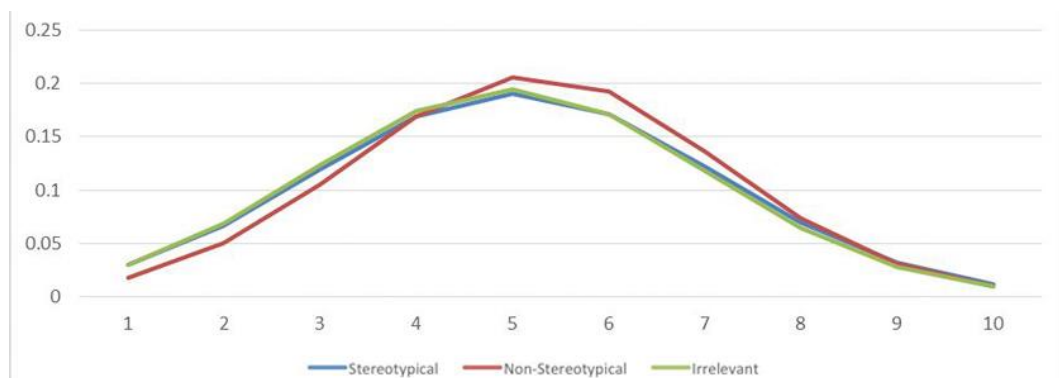
Figure 35. Male Avatars' health attributes and visual gender stereotypes
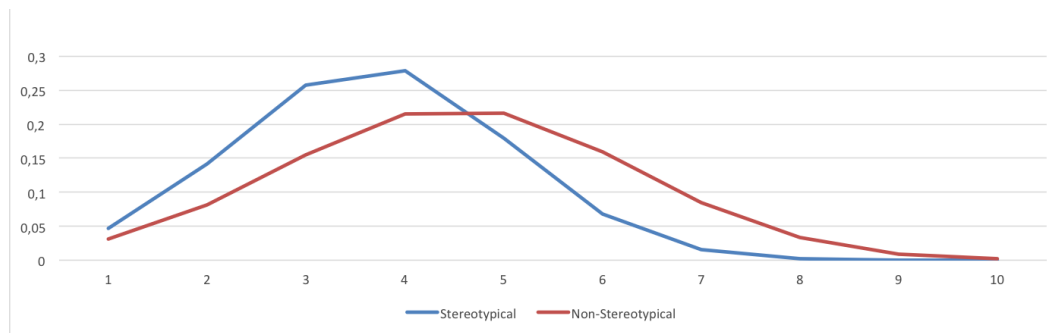
Figure 36. Female Avatars' health attributes and visual gender stereotypes

Female avatars show an interesting difference in health attribute when gender stereotype is considered (According to the Figure 36, x-axis shows the attribute distribution, y-axis shows the probability distribution of the female avatars).Stereotypical female avatars have a very significantly lower health average within a tight range. Non-stereotypical female avatars show a wider range and are closer to male avatar averages (Figure 37).

ATTACK

According to Figure 37 and Figure 38; all avatars show very stereotypical results with stereotypical males having strong attack versus females having weak attack (According to the Figure 37 and the Figure 38 x-axis shows the attribute distribution, y-axis shows the probability distribution). Stereotypical male avatars have a significantly higher attack average compared to non-stereotypical male avatars. Gender irrelevant avatars are evenly distributed.
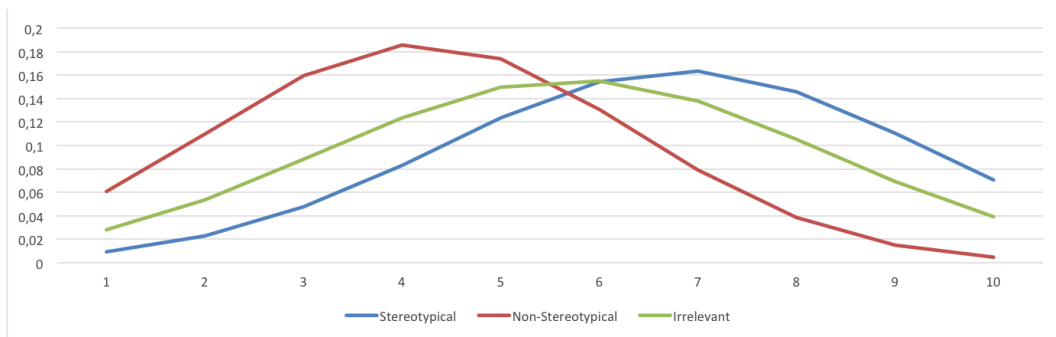

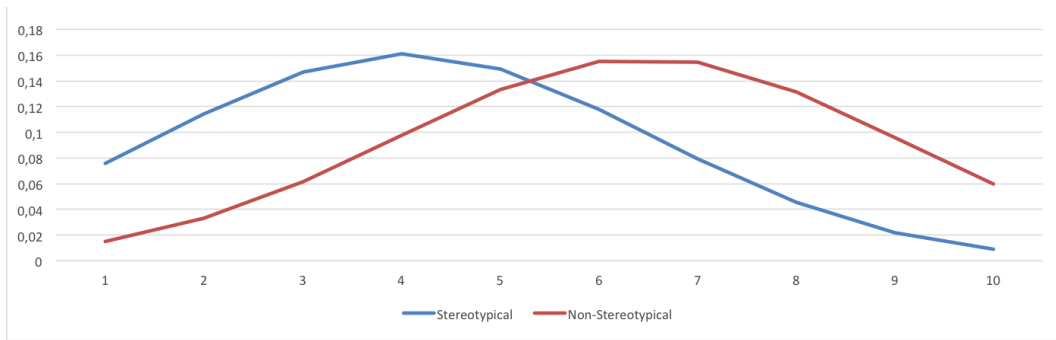**Figure 37.** Male Avatars' attack attributes and visual gender stereotypes

Figure 38. Female Avatars' attack attributes and visual gender stereotypes

Female avatar attack distributions are highly biased according to their gender stereotypes. Stereotypical females are significantly weaker in attack attribute when compared to the non-stereotypical female avatars.
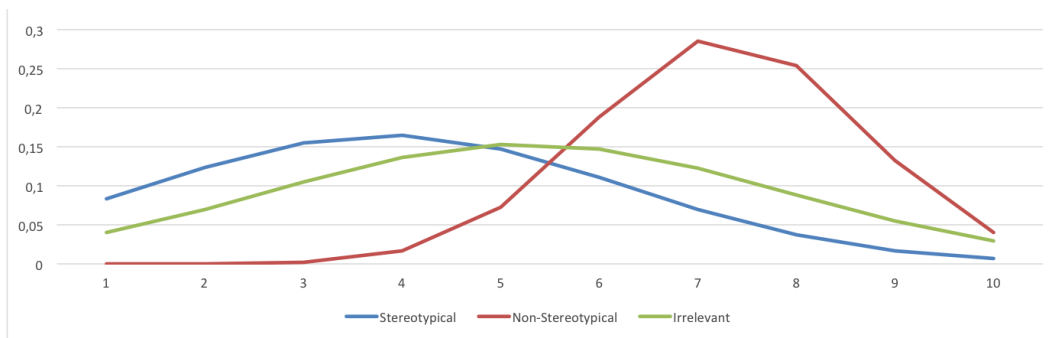
SPELLS

Figure 39. Male Avatars' attack spell and visual gender stereotypes

Irrelevant gender category for males shows an even spell attribute distribution very similar to attack attribute for males. Non-stereotypical males possess significantly high spell attribute where stereotypical males show a low average. These results support the findings where the inverse relation between attack and damage is shown (Figure 39).

As seen in Figure 40, female avatars' spell attribute does not show extreme differences when compared to male avatars. Stereotypical females have higher spell attribute average but both distributions are fairly wide. Female spell distribution is similar to male attack distribution. Male and female avatars show opposite characteristics when attack and spell are analyzed with respect to gender stereotypes (According to the Figures 39 and 40, x-axis shows the attribute distribution, y-axis shows the probability distribution).
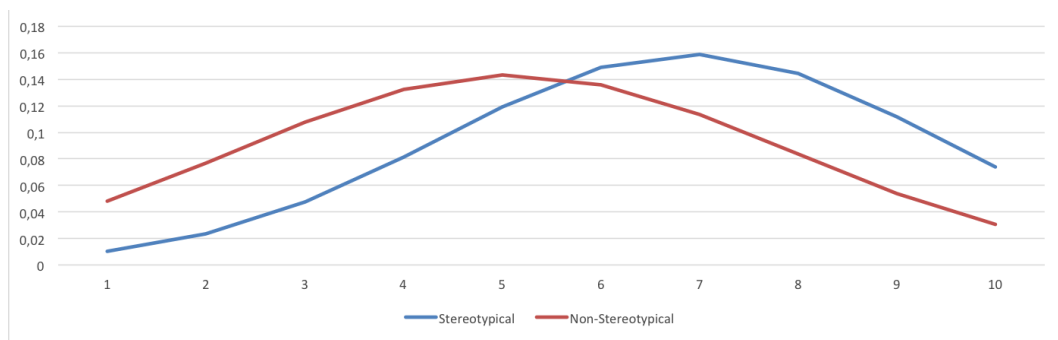

Figure 40. Female Avatars' spell attributes and visual gender stereotypes

DIFFICULTY

In the League of Legends avatars' difficulty attribute is how challenging that is avatar is to play, master. Avatar difficulty for males is evenly distributed regardless of gender stereotype (Figure 41). Female difficulty attribute show similar average values (Figure 42) however stereotypical female avatars are distributed on a larger range with higher chance to be more difficult when compared to non-stereotypical females (According to the Figures 39 and 40, x-axis shows the attribute distribution, y-axis shows the probability distribution).
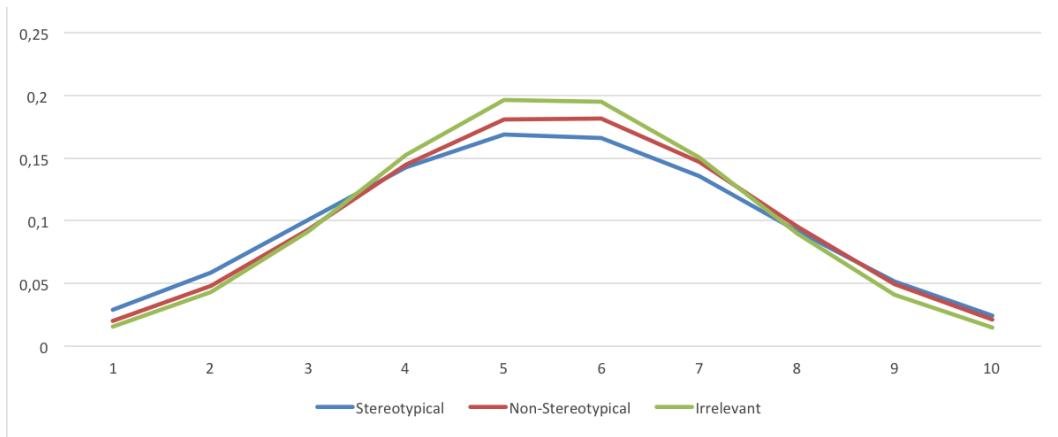
46

Figure 41. Male Avatars' difficulty attributes and visual gender stereotypes
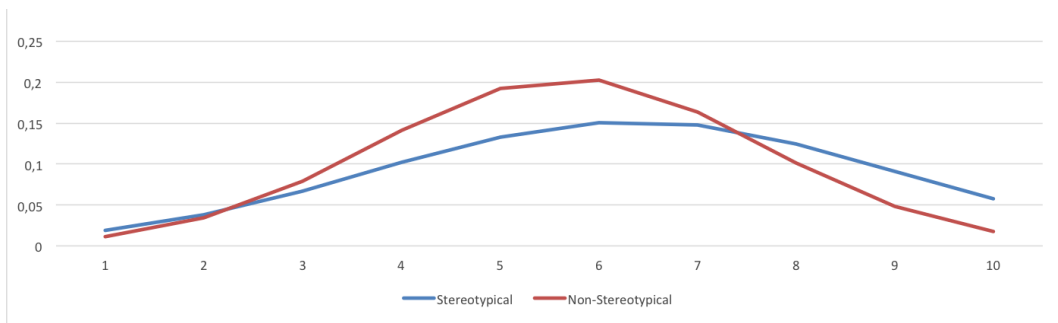

Figure 42. Female Avatars' difficulty attributes and visual gender stereotypes

4. CONCLUSION

Previous studies conducted upon gender-representation in video games show that primary roles and actions of video game characters maintain a strong relation with the socially perceived stereotypes. The unconventional representation of gender stereotypes in the League of Legends and the game's popularity is the source of inspiration of this study that focuses on the reformed and rehabilitated gender representation in this game. According to the statistics on the game's active players, the game has reached a large population over relatively short amount of period. (Riot Games, 2014; Tassi, 2014). With its large player base, the League of Legends give clues to how gender stereotyping lingers in video games in general. Although the majority of the results of past studies indicate an unbalanced representation of genders; it is expected that the trend has been changing in a positive direction in the League of Legends.

Avatars of the League of Legends are chosen as a measure for this thesis' small-scale content analysis. In this analysis, avatars' primary roles, attributes, sex and visual representations were used as categories and variables. This analysis helped outline the general patterns in the game and gave a chance to evaluate the results. When stereotypical females and males are compared, representations of the avatars still conform to socially perceived stereotypes.

In the League of Legends, stereotypical male avatars have weaker spells compared to non-stereotypical male avatars. On the contrary, stereotypical female avatars' spell attribute is stronger than non-stereotypical female avatars. Among all male avatars, difficulty attribution's distribution is almost the same. On the other hand, stereotypical female avatars' difficulty levels are much higher. This indicates that it is more difficult to

master and learn to play a stereotypical female avatar. Spell damage avatars' perceived difficulty is expected to be higher compared to attack damage avatars; however, results do not show a strong numerical relationship between an avatar's spell and difficulty attributes (Figure 31). This may be due to the spells of some avatars being simple to learn and execute but hard to master, which requires experience and extensive time playing the avatar.

Stereotypical female avatars have significantly lower attack attribute when compared to stereotypical male avatars. On average, male avatars' attack attribute is higher than female avatars. Attack attribute is associated to physical strength and it conforms to the social norms, with avatars having low attack attribute being seen as weak and fragile.

The chance of having lower health attribute is significantly high for female avatars with male avatars having a significantly higher health attribute in general. This finding also supports the idea that stereotypical features are preserved in the game.

However, according to the statistical results, future female avatar's difficulty presumably will be higher than male avatars'. It is also likely that there will be female avatars in the future that may have higher damage capabilities, considering their wider damage range. The weakness and fragility shown by stereotypical female avatars may be balanced with the damage output and spell attributes, which favor a higher level of skill and game tactics. This creates the perception of stereotypical female avatars being higher skill cap and suitable for competitive play giving female avatars potential to be respected and be highly sought after.

Interestingly, non-stereotypical female avatars are as strong and as powerful as stereotypical male avatars. The increasing number and ratio of new female avatar

additions to the game, whether stereotypical or not, shows that Riot Games tries to normalize the representation of female avatars. It is a positive trend that there exist non-stereotypical female avatars, and their numbers are quite satisfactory (one irrelevant, twenty stereotypical and nineteen non-stereotypical female avatars). It is also promising that there are female avatars, whose primary roles and visual representations do not show any relationship to socially perceived stereotypes.

In conclusion, the results show a positive trend in female representation and the continuation of the trend may foreshadow significantly better improvements. The female stereotype is being diluted with a large number of non-stereotypical female champions increasingly over time. Female champions are designed viable as much as male champions in terms of game play mechanics even when they display stereotypical characteristics. Even with the conservation of stereotypical traits on some female champions female champions frequently fill important roles in the online battles. Most importantly, the perceived stereotypical weakness attributed to females, such as lower health or attack damage, does not seem to affect female champion viability as other traits are balanced and strengthened in order to account for weak attributes. For further studies, the League of Legends game and future avatars can be followed and analyzed the same way it has been done in this study. Similar games that are competitors to the League of Legends such as "Heroes of Newerth", "Dota 2" and "Heroes of the Storm" can be examined since the MOBA game genre tends to contain a very large selection of playable characters to analyze. It is hoped and expected that, Riot Games will continue releasing new avatars and keep improving, the non-stereotypical female representation in their game hence move the balance towards a more equalized gender perception and influence other video games.

REFERENCES

Adsoftheworld, (2014). Meccano: Motorbike. [image] Available at:

https://adsoftheworld.com/media/print/meccano_motorbike [Accessed 17 May. 2014].

Augustine, J. (2012, October 12). League of legends has 32 million active players, is now

"as big as starcraft" in korea. Retrieved from

http://www.pcgamer.com/2012/10/12/league-of-legends-has-32-players-is-now-bigger-

than-starcraft-in-korea/

Beasley, B., Standley, T. (2002). Shirts vs. skins: Clothing as an indicator of gender role

stereotyping in video games. Mass Communication \& Society, 5(3), 279--293.

Behm-Morawitz, E. and Mastro, D. (2009). The effects of the sexualization of female

video game characters on gender stereotyping and female self-concept. *Sex Roles*, 61(11-

12), pp.808--823.

Blake, I. (2014). Dan Edwards and Peter Samson playing Spacewar!. [image] Available at: http://pongmuseum.com/history/FirstElectronicGameEverMade.php [Accessed 16 May. 2014].

Brannon, L. (1996). Gender: Psychological Perspectives. 1st ed. Boston: Allyn and Bacon, pp.160

Bruchansky, C. (2010, January 22) "The Semiotics of Video Games." Online document available at: http://bruchansky.name/exhibitions-and-events/the-semiotics-of-video-games/

Butler, J. (1999). Gender trouble (1st ed.). New York: Routledge.

Cassell, J. and Jenkins, H. (1998). *From Barbie to Mortal Kombat*. 1st ed. Cambridge, Mass.: MIT Press.

Christopher J. Ferguson and Stephanie M. Rueda, "The Hitman Study: Violent Video Game Exposure Effects on Aggressive Behavior, Hostile Feelings, and Depression", Texas A&M International University, Laredo, TX, USA

Cornwall, A., Harrison, E. and Whitehead, A. (2008). *Gender myths and feminist fables*. 1st ed. Malden, MA: Blackwell, p.2.

Crespi I. (2003) , "Socialization and gender roles within the family: A study on adolescents and their parents in Great Britain ",Texas A&M International University, Laredo, TX, USA

Crowther & Woods Adventure. (2014). [image] Available at:

http://www.hp9845.net/9845/software/games/#adventure [Accessed 16 May. 2014].

Deskins, C. (2009, July 14). "Semiotics in Video Games." Online document available at:

http://imamp.colum.edu/blogs/?p=10847

Dietz, T. (1998). An examination of violence and gender role portrayals in video games:

Implications for gender socialization and aggressive behavior. Sex Roles, 38(5-6), 425--

442.

Dill, K., D. Gentile, W. Richter and J. Dill (2005) 'Violence, Sex, Race and Age in

Popular Videogames', in E. Cole and J. Daniel (eds) Featuring Females: Feminist

Analysis of the Media, pp. 115–30. Washington, DC: American Psychological

Association.

Dill, K. and Thill, K. (2007). Video game characters and the socialization of gender roles:

Young people's perceptions mirror sexist media depictions. *Sex Roles*, 57(11-12), pp.851-

-864.

D&G advertisement. (2014). [image] Available at: http://celebrity-fragrance-

poster.blogspot.com.tr/2012/12/scarlett-johansson-is-face-of-dolce-and_5.html [Accessed

17 May. 2014].

Dorst, K. (2007, July) "The Semiotic Immersion of Video Games,Gaming Technology

and Interactive Strategies", The Public Journal of Semiotics, Vol. 1 No. 2, pp. 31-49

Dovey, J., & Kennedy, H. W. (2006). "Game cultures: Computer games as new media."

New York: Open University Press.

Downs, E., & Smith, S. (2005, May). Keeping abreast of hypersexuality: A video game character content analysis. Paper presented at the meeting of the International Communication Association 2005, New York City.

Dunham, S. (2014). *Pong*. [image] Available at: http://www.metromodemedia.com/features/GotGame0016.aspx [Accessed 16 May. 2014].

Eagly, A. (1987). Sex differences in social behavior (1st ed.). Hillsdale, N.J. [u.a.]: Erlbaum.

Eckert, P., & McConnell-Ginet, S. (2003). Language and gender (1st ed.). Cambridge: Cambridge University Press.

Egenfeldt-Nielsen, S., Smith, J. H., & Pajares Tosca, S. (2008). Understanding video games: The essential introduction. (p. 46). Routledge.

Ensslin , A. (2011, March) "Do avatars dream of electric steak? Video games and the gendered semiotics of food", Journal of Gaming and Virtual Worlds, Volume 3 Issue 1.

Fashionising, (2014). Thylane Lena-Rose Blondeau: Vogue Paris, December '10 / January '11. [image] Available at: http://www.fashionising.com/pictures/p--Thylane-Lena-Rose-Blondeau-Vogue-Paris-December-10-January-11-11353-182471.html [Accessed 17 May. 2014].

Gameinfo.na.leagueoflegends.com, (2014a). *Avatars | League of Legends*. [online] Available at: http://gameinfo.na.leagueoflegends.com/en/game-info/avatars/ [Accessed 23 April. 2014].

Gameinfo.na.leagueoflegends.com, (2014b). *New Player Guide | League of Legends*. [online] Available at: http://gameinfo.na.leagueoflegends.com/en/game-info/get-started/new-player-guide/ [Accessed 28 May. 2014].

Glamcheck, (2014). Dolce & Gabbana Light Blue Fragrance ad campaign. [image] Available at: http://www.glamcheck.com/fashion/2010/07/13/dolce-gabbana-light-blue-fragrance-campaign/ [Accessed 17 May. 2014].

Gamingwikia, (2014). League of Legends Logo. [image] Available at: http://gaming.wikia.com/wiki/File:League-of-legends-logo.jpg [Accessed 17 May. 2014].

Hatzithomas, I. (2014). Magnavox Odyssey Released in 1972. [image] Available at: http://www.gooddealgames.com/articles/Home%20Video%20Game%20History.html [Accessed 16 May. 2014].

Heintz-Knowles, K., J. Henderson, C. Glaubke, P. Miller, M.A. Parker and E. Espejo (2001) Fair Play? Violence, Gender and Race in Videogames. Oakland, CA: Children Now.

Hill, G. (2014). Chun-Li. [image] Available at: http://www.theregister.co.uk/2012/07/18/antique_code_show_streetfighter_2/ [Accessed 17 May. 2014].

Hinton, P. (2000). Stereotypes, cognition, and culture (1st ed.). Hove, East Sussex: Psychology Press. pp. 32

Ivory, J. (2006). Still a man's game: Gender representation in online reviews of video games. Mass Communication \& Society, 9(1), 103--114.

Jansz, J., & Martis, R. (2007). The Lara phenomenon: Powerful female characters in video games. Sex Roles, 56(3-4), 141--148.

Jenkins, H. " Eight myths about video games debunked. "Retrieved August 2007, Online document available at: http://www.pbs.org/kcts/videogamerevolution/impact/myths.html

Jensen, Sisse Siggaard , "With or as avatars? The semiosis of avatars in actor-networks of human and non-human actors "Journal of Gaming & Virtual Worlds, Volume 4, Number 2, 14 September 2012 , pp. 171-187(17)

Juul, J. "A Clash between Game and Narrative." M.A. Thesis 1998. Online document available at: http://www.jesperjuul.dk/thesis.

Kent, S. L. (2001a). The ultimate history of video games: From pong to pokémon. (pp. 123-151). New York: Three Rivers Press.

Kent, S. L. (2001b). The ultimate history of video games: From pong to pokémon. (pp. 11-16). New York: Three Rivers Press.

Knight, G. (2010). *Female action heroes*. 1st ed. Santa Barbara, Calif.: Greenwood

Kücklich, J. (2003 May) "Perspectives of Computer Game Philology", The International Journal of Computer Game Research, Vol.3 Issue 1.

League of Legends, (2014a). Annie. [image] Available at: http://gameinfo.na.leagueoflegends.com/en/game-info/avatars/annie/ [Accessed 17 May. 2014].

League of Legends, (2014b). Kayle. [image] Available at:

http://gameinfo.na.leagueoflegends.com/en/game-info/avatars/kayle/ [Accessed 17 May.

2014].

League of Legends, (2014c). Poppy. [image] Available at:

http://gameinfo.na.leagueoflegends.com/en/game-info/avatars/poppy/ [Accessed 17 May.

2014].

League of Legends, (2014d). Sejuani. [image] Available at:

http://gameinfo.na.leagueoflegends.com/en/game-info/avatars/sejuani/ [Accessed 17

May. 2014].

League of Legends Wiki,. (2014). Base avatar statistics. Retrieved 23 April 2014, from

http://leagueoflegends.wikia.com/wiki/Base_avatar_statistics

Levy, S. (1984). "Hackers: Heroes of the Computer Revolution." New York: Penguin

Books.

Lindsey, L. (2010). *Gender Roles: A Sociological Perspective*. 5th ed. Prentice Hall, pp.5

Magnavox Odyssey, (2014). Video Tennis on Odyssey. [image] Available at:

http://www.corvallisadvocate.com/2012/1115-video-game-art/ [Accessed 16 May. 2014].

Markel, N. N. & Hamp, E. P. (1960-1), "Connotative Meanings of Certain Phoneme

Sequences", Studies in Linguistics, 15, 47-61.

Miller, M., & Summers, A. (2007). Gender differences in video game characters' roles, appearances, and attire as portrayed in video game magazines. Sex Roles, 57(9-10), 733--742.

Mombert, G. (2014). Old Spice Commercial. [image] Available at: http://www.digitaltrends.com/computing/old-spice-commercial-roundup/#!OfWK6 [Accessed 17 May. 2014].

Mou, Y. and Peng, W. (2008). Gender and racial stereotypes in popular video games. *Handbook of research on effective electronic gaming in education*, pp.922--937

Myers, D. (1991): "Computer Game Semiotics". In: Play and Culture, No. 4

Nosrati, M. and Karimi, R. (2013). General Trends in Multiplayer Online Games. *World Applied Programming*, 3(1), pp.1-2.

O'Rourke, P. (2014). Pokemon Red/Blue. [image] Available at: http://www.intellivisionrevolution.com/entries/intellivision-miscellaneous/7-retro-video-games-still-worth-playing-today [Accessed 19 May. 2014].

Poon, M. (2014). Minions. [image] Available at: http://michaelpoon.hubpages.com/hub/DOTA-2-vs-League-of-Legends [Accessed 17 May. 2014].

Provenzo, E. (1991). Video kids (1st ed.). Cambridge, Mass.: Harvard University Press.

Rabin (ed), S. (2005). Introduction to Game Development. Hingham, Mass.: Charles River Media.

Reid, W., Otheguy, R. & Stern, N. (eds) (2002), "Signal, Meaning, and Message, Perspectives on Sign-based Linguistics", John Benjamins.

Riot Games,. (2014). Our Games. Retrieved 15 April 2014, from http://www.riotgames.com/our-games

Rutherford, J. (2014). Cynthia Carter and Linda Steiner (eds), Critical Readings: Media and Gender. Maidenhead and New York: Open University Press, 2004.\pounds 18.99. 366 pp. *European Journal of Communication*, 20, p.12.

Ross, K. (2012). *The handbook of gender, sex, and media* (1st ed., p. 25). Malden: Wiley-Blackwell.

Sandberg, M. (n.d.). Gender distribution normalization in the computer game development arena. In National Course in Philosophy of Computer Science Proceedings of the Conference (pp. 91-94). Retrieved from http://www.idt.mdh.se/personal/gdc/work/PedagogogicCareerLadder/Appendices/Appendix-C/C2-PI-CourseProceedings.pdf

Schröder, A. (2008). "We don't want it changed, do we?"-Gender and Sexuality in Role Playing Games. *Eludamos. Journal for Computer Game Culture*, 2(2), pp.241 - 256.

Space Invaders. (2014). [image] Available at: http://www.arcade-museum.com/game_detail.php?game_id=9894 [Accessed 16 May. 2014]

Stahl, T. (2014). *Ms. Pacman*. [image] Available at: http://www.thocp.net/software/games/golden_age.htm [Accessed 16 May. 2014].

Tassi, P. (2014). Riot's 'League of Legends' Reveals Astonishing 27 Million Daily Players, 67 Million Monthly. *Forbes*. Retrieved 7 May 2014, from http://www.forbes.com/sites/insertcoin/2014/01/27/riots-league-of-legends-reveals-astonishing-27-million-daily-players-67-million-monthly/

Turkle, S. (1984). *The second self*. 1st ed. New York: Simon and Schuster.

Ward, L., & Friedman, K. (2006). Using TV as a guide: Associations between television viewing and adolescents' sexual attitudes and behavior. Journal Of Research On Adolescence, 16(1), 133--156.

West, C., & Zimmerman, D. (1987). Doing gender. Gender & Society, 1(2), 125--151.

Williams, D. (2003). "The video game lightning rod. Information, Communication & Society", 6, 523-550.

Williams J. P. , Hendricks , S. Q. & Winkler , W. K. (Eds.), "Gaming as culture: Essays on reality, identity, and experience in fantasy games." Jefferson, NC: McFarland and Company.

Williamson, S. (2014). Lanes. [image] Available at: http://www.the-arcade.ie/2013/11/uninstall-pls-a-beginners-guide-to-league-of-legends-part-1-the-basics/ [Accessed 17 May. 2014].

Wong, D. (2014). The evolution of video games. People.ucsc.edu. Retrieved 20 February 2014, from http://people.ucsc.edu/~dojwong/project_two.html

6. APPENDIX

Table 2. Distribution of health, attack, spells and difficulty attributes based on the

avatars' primary roles, release dates and sex

Rank	Avatar	Primary Role	Release Date	Health	Attack	Spells	Diff.*	Sex
1	Aatrox	Fighter	2013	4	8	3	6	Male
2	Ahri	Mage	2011	4	3	8	8	Female
3	Akali	Assassin	2010	3	5	8	6	Female
4	Alistar	Tank	2009	9	6	5	8	Male
5	Amumu	Tank	2009	6	2	8	4	Male
6	Anivia	Mage	2009	4	1	10	8	Female
7	Annie	Mage	2009	3	2	10	4	Female
8	Ashe	Marksman	2009	3	7	2	4	Female
9	Blitzcrank	Tank	2009	8	4	5	6	Male
10	Brand	Mage	2011	2	2	9	6	Male
11	Caitlyn	Marksman	2011	2	8	2	4	Female
12	Cassiopeia	Mage	2010	3	2	9	10	Female
13	Cho'Gath	Tank	2009	7	3	7	7	Male
14	Corki	Marksman	2009	3	8	6	7	Male
15	Darius	Fighter	2012	5	9	1	4	Male
16	Diana	Fighter	2012	6	7	8	4	Female
17	Dr. Mundo	Fighter	2009	7	5	6	4	Male
18	Draven	Marksman	2012	3	9	1	10	Male
19	Elise	Mage	2012	5	6	7	8	Female
20	Evelynn	Assassin	2009	2	4	7	8	Female

21	Ezreal	Marksman	2010	2	7	6	8	Male
22	Fiddlesticks	Mage	2009	3	2	9	5	Male
23	Fiora	Fighter	2012	4	10	2	5	Female
24	Fizz	Assassin	2011	4	6	7	8	Male
25	Galio	Tank	2010	7	3	6	4	Male
26	Gangplank	Fighter	2009	6	7	4	5	Male
27	Garen	Fighter	2010	7	7	1	2	Male
28	Gragas	Mage	2010	6	5	7	6	Male
29	Graves	Marksman	2011	5	8	3	4	Male
30	Hecarim	Fighter	2012	6	8	4	5	Male
31	Heimerdinger	Mage	2009	6	2	8	4	Male
32	Irelia	Fighter	2010	4	7	5	5	Female
33	Janna	Support	2009	5	3	7	9	Female
34	Jarvan IV	Tank	2011	8	6	3	5	Male
35	Jax	Fighter	2009	5	7	7	6	Male
36	Jayce	Fighter	2012	4	8	3	8	Male
37	Jinx	Marksman	2013	2	9	4	9	Female
38	Karma	Mage	2011	7	1	8	8	Female
39	Karthus	Mage	2009	2	2	10	8	Male
40	Kassadin	Assassin	2009	5	3	8	8	Male
41	Katarina	Assassin	2009	3	4	9	5	Female
42	Kayle	Fighter	2009	6	6	7	5	Female
43	Kennen	Mage	2010	4	6	7	5	Male
44	Kha'Zix	Assassin	2012	4	9	3	7	Male
45	Kog'Maw	Marksman	2010	2	8	5	8	Male
46	LeBlanc	Assassin	2010	4	1	10	9	Female

47	Lee Sin	Fighter	2011	5	8	3	9	Male
48	Leona	Tank	2011	8	4	3	4	Female
49	Lissandra	Mage	2013	5	2	8	8	Female
50	Lucian	Marksman	2013	5	8	3	8	Male
51	Lulu	Support	2012	5	4	7	7	Female
52	Lux	Mage	2010	4	2	9	6	Female
53	Malphite	Tank	2009	9	5	7	3	Male
54	Malzahar	Mage	2010	2	2	9	6	Male
55	Maokai	Tank	2011	8	3	6	4	Male
56	Master Yi	Assassin	2009	4	10	2	2	Male
57	Miss Fortune	Marksman	2010	2	8	5	3	Female
58	Mordekaiser	Fighter	2010	6	4	7	3	Male
59	Morgana	Mage	2009	6	1	8	6	Female
60	Nami	Support	2012	3	4	7	8	Female
61	Nasus	Fighter	2009	5	7	6	2	Male
62	Nautilus	Tank	2012	6	4	6	6	Male
63	Nidalee	Assassin	2009	4	5	7	7	Female
64	Nocturne	Assassin	2011	5	9	2	6	Male
65	Nunu	Support	2009	6	4	7	1	Male
66	Olaf	Fighter	2010	5	9	3	4	Male
67	Orianna	Mage	2011	3	4	9	10	Female
68	Pantheon	Fighter	2010	4	9	3	5	Male
69	Poppy	Fighter	2010	6	6	5	7	Female
70	Quinn	Marksman	2013	4	9	2	7	Female
71	Rammus	Tank	2009	10	4	5	5	Male
72	Renekton	Fighter	2011	5	8	2	3	Male

73	Rengar	Assassin	2012	4	7	2	5	Male
74	Riven	Fighter	2011	5	8	1	4	Female
75	Rumble	Fighter	2011	6	3	8	8	Male
76	Ryze	Mage	2009	2	2	10	3	Male
77	Sejuani	Tank	2012	7	5	6	4	Female
78	Shaco	Assassin	2009	4	8	6	9	Male
79	Shen	Tank	2010	9	3	3	3	Male
80	Shyvana	Fighter	2011	6	8	3	4	Female
81	Singed	Tank	2009	8	4	7	5	Male
82	Sion	Fighter	2009	8	5	7	4	Male
83	Sivir	Marksman	2009	3	9	1	3	Female
84	Skarner	Fighter	2011	6	7	5	5	Male
85	Sona	Support	2010	2	5	8	1	Female
86	Soraka	Support	2009	5	2	7	3	Female
87	Swain	Mage	2010	6	2	9	5	Male
88	Syndra	Mage	2012	3	2	9	10	Female
89	Talon	Assassin	2011	3	9	1	6	Male
90	Taric	Support	2009	8	4	5	3	Male
91	Teemo	Marksman	2009	3	5	7	4	Male
92	Thresh	Support	2013	6	5	6	7	Male
93	Tristana	Marksman	2011	3	9	5	3	Female
94	Trundle	Fighter	2010	6	7	2	5	Male
95	Tryndamere	Fighter	2009	5	10	2	6	Male
96	Twisted Fate	Mage	2009	2	6	6	9	Male
97	Twitch	Marksman	2009	2	9	3	8	Male
98	Udyr	Fighter	2009	7	8	4	5	Male

99	Urgot	Marksman	2009	5	8	3	8	Male
100	Varus	Marksman	2009	3	7	4	6	Male
101	Vayne	Marksman	2011	1	10	1	7	Female
102	Veigar	Mage	2011	2	2	10	6	Male
103	Vel'Koz	Mage	2010	2	2	10	8	Male
104	Vi	Fighter	2009	5	8	3	5	Female
105	Viktor	Mage	2009	5	2	9	9	Male
106	Vladimir	Mage	2012	6	2	8	2	Male
107	Volibear	Fighter	2012	7	7	4	2	Male
108	Warwick	Fighter	2009	4	7	4	2	Male
109	Wukong	Fighter	2012	5	8	2	3	Male
110	Xerath	Mage	2012	3	1	10	6	Male
111	Xin Zhao	Fighter	2009	6	8	3	3	Male
112	Yasuo	Fighter	2010	4	8	4	8	Male
113	Yorick	Fighter	2009	6	6	6	3	Male
114	Zac	Tank	2012	7	3	7	6	Male
115	Zed	Assassin	2011	2	9	1	9	Male
116	Ziggs	Mage	2010	4	2	9	6	Male
117	Zilean	Support	2009	5	2	8	4	Male
118	Zyra	Mage	2010	3	4	8	7	Female

*Diff: Abbreviation for "Difficulty"

Table 3. Cross tabulation of the avatars' sex and release dates

			Release Date					Total
			2009	2010	2011	2012	2013	
Sex	Male	Count	34	16	13	12	3	78
		% within Sex	43,6%	20,5%	16,7%	15,4%	3,8%	100,0%
		% within Date	73,9%	64,0%	59,1%	63,2%	50,0%	66,1%
		% of Total	28,8%	13,6%	11,0%	10,2%	2,5%	66,1%
	Female	Count	12	9	9	7	3	40
		% within Sex	30,0%	22,5%	22,5%	17,5%	7,5%	100,0%
		% within Date	26,1%	36,0%	40,9%	36,8%	50,0%	33,9%
		% of Total	10,2%	7,6%	7,6%	5,9%	2,5%	33,9%
Total		Count	46	25	22	19	6	118
		% within Sex	39,0%	21,2%	18,6%	16,1%	5,1%	100,0%
		% within Date	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	39,0%	21,2%	18,6%	16,1%	5,1%	100,0%

Table 4. Cross tabulation of the avatars' primary roles and release dates

				Release Date				Total
Role * Date Cross tabulation								
			2009	**2010**	**2011**	**2012**	**2013**	
Role	**Assasin**	Count	6	2	4	2	0	14
		% within Role	42,9%	14,3%	28,6%	14,3%	0,0%	100,0%
		% within date	13,0%	8,0%	18,2%	10,5%	0,0%	11,9%
		% of Total	5,1%	1,7%	3,4%	1,7%	0,0%	11,9%
	Fighter	Count	12	8	6	7	1	34
		% within Role	35,3%	23,5%	17,6%	20,6%	2,9%	100,0%
		% within date	26,1%	32,0%	27,3%	36,8%	16,7%	28,8%
		% of Total	10,2%	6,8%	5,1%	5,9%	0,8%	28,8%
	Mage	Count	9	9	5	4	1	28
		% within Role	32,1%	32,1%	17,9%	14,3%	3,6%	100,0%
		% within date	19,6%	36,0%	22,7%	21,1%	16,7%	23,7%
		% of Total	7,6%	7,6%	4,2%	3,4%	0,8%	23,7%
	Marksman	Count	7	3	4	1	3	18
		% within Role	38,9%	16,7%	22,2%	5,6%	16,7%	100,0%
		% within date	15,2%	12,0%	18,2%	5,3%	50,0%	15,3%
		% of Total	5,9%	2,5%	3,4%	0,8%	2,5%	15,3%
	Support	Count	5	1	0	2	1	9
		% within Role	55,6%	11,1%	0,0%	22,2%	11,1%	100,0%
		% within date	10,9%	4,0%	0,0%	10,5%	16,7%	7,6%
		% of Total	4,2%	0,8%	0,0%	1,7%	0,8%	7,6%
	Tank	Count	7	2	3	3	0	15
		% within Role	46,7%	13,3%	20,0%	20,0%	0,0%	100,0%
		% within date	15,2%	8,0%	13,6%	15,8%	0,0%	12,7%
		% of Total	5,9%	1,7%	2,5%	2,5%	0,0%	12,7%
Total		Count	46	25	22	19	6	118
		% within Role	39,0%	21,2%	18,6%	16,1%	5,1%	100,0%
		% within date	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	39,0%	21,2%	18,6%	16,1%	5,1%	100,0%

Table 5. Cross tabulation of the male avatars' primary roles and release dates

Sex				Release Date					Total
				2009	**2010**	**2011**	**2012**	**2013**	**Total**
Male	**Role**	**Assasin**	Count	3	0	4	2	0	9
			% within Role	33,3%	0,0%	44,4%	22,2%	0,0%	100,0%
			% within date	8,8%	0,0%	30,8%	16,7%	0,0%	11,5%
			% of Total	3,8%	0,0%	5,1%	2,6%	0,0%	11,5%
		Fighter	Count	10	6	4	5	1	26
			% within Role	38,5%	23,1%	15,4%	19,2%	3,8%	100,0%
			% within date	29,4%	37,5%	30,8%	41,7%	33,3%	33,3%
			% of Total	12,8%	7,7%	5,1%	6,4%	1,3%	33,3%
		Mage	Count	6	6	2	2	0	16
			% within Role	37,5%	37,5%	12,5%	12,5%	0,0%	100,0%
			% within date	17,6%	37,5%	15,4%	16,7%	0,0%	20,5%
			% of Total	7,7%	7,7%	2,6%	2,6%	0,0%	20,5%
		Marksman	Count	5	2	1	1	1	10
			% within Role	50,0%	20,0%	10,0%	10,0%	10,0%	100,0%
			% within date	14,7%	12,5%	7,7%	8,3%	33,3%	12,8%
			% of Total	6,4%	2,6%	1,3%	1,3%	1,3%	12,8%
		Support	Count	3	0	0	0	1	4
			% within Role	75,0%	0,0%	0,0%	0,0%	25,0%	100,0%
			% within date	8,8%	0,0%	0,0%	0,0%	33,3%	5,1%
			% of Total	3,8%	0,0%	0,0%	0,0%	1,3%	5,1%
		Tank	Count	7	2	2	2	0	13
			% within Role	53,8%	15,4%	15,4%	15,4%	0,0%	100,0%
			% within date	20,6%	12,5%	15,4%	16,7%	0,0%	16,7%
			% of Total	9,0%	2,6%	2,6%	2,6%	0,0%	16,7%
	Total		Count	34	16	13	12	3	78
			% within Role	43,6%	20,5%	16,7%	15,4%	3,8%	100,0%
			% within date	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
			% of Total	43,6%	20,5%	16,7%	15,4%	3,8%	100,0%

Table 6. Cross tabulation of the female avatars' primary roles and release dates

Sex				Release Date					Total
				2009	**2010**	**2011**	**2012**	**2013**	
Female	**Role**	**Assasin**	Count	3	2	0	0	0	5
			% within Role	60,0%	40,0%	0,0%	0,0%	0,0%	100,0%
			% within date	25,0%	22,2%	0,0%	0,0%	0,0%	12,5%
			% of Total	7,5%	5,0%	0,0%	0,0%	0,0%	12,5%
		Fighter	Count	2	2	2	2	0	8
			% within Role	25,0%	25,0%	25,0%	25,0%	0,0%	100,0%
			% within date	16,7%	22,2%	22,2%	28,6%	0,0%	20,0%
			% of Total	5,0%	5,0%	5,0%	5,0%	0,0%	20,0%
		Mage	Count	3	3	3	2	1	12
			% within Role	25,0%	25,0%	25,0%	16,7%	8,3%	100,0%
			% within date	25,0%	33,3%	33,3%	28,6%	33,3%	30,0%
			% of Total	7,5%	7,5%	7,5%	5,0%	2,5%	30,0%
		Marksman	Count	2	1	3	0	2	8
			% within Role	25,0%	12,5%	37,5%	0,0%	25,0%	100,0%
			% within date	16,7%	11,1%	33,3%	0,0%	66,7%	20,0%
			% of Total	5,0%	2,5%	7,5%	0,0%	5,0%	20,0%
		Support	Count	2	1	0	2	0	5
			% within Role	40,0%	20,0%	0,0%	40,0%	0,0%	100,0%
			% within date	16,7%	11,1%	0,0%	28,6%	0,0%	12,5%
			% of Total	5,0%	2,5%	0,0%	5,0%	0,0%	12,5%
		Tank	Count	0	0	1	1	0	2
			% within Role	0,0%	0,0%	50,0%	50,0%	0,0%	100,0%
			% within date	0,0%	0,0%	11,1%	14,3%	0,0%	5,0%
			% of Total	0,0%	0,0%	2,5%	2,5%	0,0%	5,0%
	Total		Count	12	9	9	7	3	40
			% within Role	30,0%	22,5%	22,5%	17,5%	7,5%	100,0%
			% within date	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
			% of Total	30,0%	22,5%	22,5%	17,5%	7,5%	100,0%

Table 7. Cross tabulation of the avatars' sex and health

			Health										Total
			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Sex	**Male**	Count	0	11	7	12	15	16	7	6	3	1	78
		% within Sex	0,0%	14,1%	9,0%	15,4%	19,2%	20,5%	9,0%	7,7%	3,8%	1,3%	100,0%
		% within Health	0,0%	68,8%	38,9%	60,0%	68,2%	76,2%	77,8%	85,7%	100,0%	100,0%	66,1%
		% of Total	0,0%	9,3%	5,9%	10,2%	12,7%	13,6%	5,9%	5,1%	2,5%	0,8%	66,1%
	Female	Count	1	5	11	8	7	5	2	1	0	0	40
		% within Sex	2,5%	12,5%	27,5%	20,0%	17,5%	12,5%	5,0%	2,5%	0,0%	0,0%	100,0%
		% within Health	100,0%	31,2%	61,1%	40,0%	31,8%	23,8%	22,2%	14,3%	0,0%	0,0%	33,9%
		% of Total	0,8%	4,2%	9,3%	6,8%	5,9%	4,2%	1,7%	0,8%	0,0%	0,0%	33,9%
Total		Count	1	16	18	20	22	21	9	7	3	1	118
		% within Sex	0,8%	13,6%	15,3%	16,9%	18,6%	17,8%	7,6%	5,9%	2,5%	0,8%	100,0%
		% within Health	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	0,8%	13,6%	15,3%	16,9%	18,6%	17,8%	7,6%	5,9%	2,5%	0,8%	100,0%

Table 8. Cross tabulation of the avatars' sex and attack

			Attack										Total
			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Sex	**Male**	Count	1	14	7	7	6	6	11	15	9	2	78
		% within Sex	1,3%	17,9%	9,0%	9,0%	7,7%	7,7%	14,1%	19,2%	11,5%	2,6%	100,0%
		% within Attack	20,0%	70,0%	77,8%	50,0%	60,0%	66,7%	78,6%	75,0%	69,2%	50,0%	66,1%
		% of Total	0,8%	11,9%	5,9%	5,9%	5,1%	5,1%	9,3%	12,7%	7,6%	1,7%	66,1%
	Female	Count	4	6	2	7	4	3	3	5	4	2	40
		% within Sex	10,0%	15,0%	5,0%	17,5%	10,0%	7,5%	7,5%	12,5%	10,0%	5,0%	100,0%
		% within Attack	80,0%	30,0%	22,2%	50,0%	40,0%	33,3%	21,4%	25,0%	30,8%	50,0%	33,9%
		% of Total	3,4%	5,1%	1,7%	5,9%	3,4%	2,5%	2,5%	4,2%	3,4%	1,7%	33,9%
Total		Count	1	5	20	9	14	10	9	14	20	13	4
		% within Sex	0,8%	4,2%	16,9%	7,6%	11,9%	8,5%	7,6%	11,9%	16,9%	11,0%	3,4%
		% within Attack	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	0,8%	4,2%	16,9%	7,6%	11,9%	8,5%	7,6%	11,9%	16,9%	11,0%	3,4%

Table 9. Cross tabulation of the avatars' sex and spells
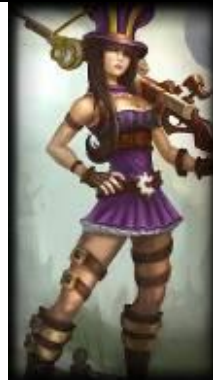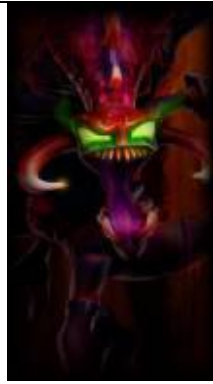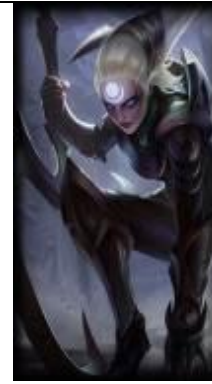
			Spells										Total
			1	2	3	4	5	6	7	8	9	10	
Sex	Male	Count	5	7	13	7	6	11	12	6	6	5	78
		% within Sex	6,4%	9,0%	16,7%	9,0%	7,7%	14,1%	15,4%	7,7%	7,7%	6,4%	100,0%
		% within Spells	62,5%	63,6%	81,2%	87,5%	60,0%	91,7%	60,0%	42,9%	54,5%	62,5%	66,1%
		% of Total	4,2%	5,9%	11,0%	5,9%	5,1%	9,3%	10,2%	5,1%	5,1%	4,2%	66,1%
	Female	Count	3	4	3	1	4	1	8	8	5	3	40
		% within Sex	7,5%	10,0%	7,5%	2,5%	10,0%	2,5%	20,0%	20,0%	12,5%	7,5%	100,0%
		% within Spells	37,5%	36,4%	18,8%	12,5%	40,0%	8,3%	40,0%	57,1%	45,5%	37,5%	33,9%
		% of Total	2,5%	3,4%	2,5%	0,8%	3,4%	0,8%	6,8%	6,8%	4,2%	2,5%	33,9%
Total		Count	1	8	11	16	8	10	12	20	14	11	8
		% within Sex	0,8%	6,8%	9,3%	13,6%	6,8%	8,5%	10,2%	16,9%	11,9%	9,3%	6,8%
		% within Spells	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	0,8%	6,8%	9,3%	13,6%	6,8%	8,5%	10,2%	16,9%	11,9%	9,3%	6,8%

Table 10. Cross tabulation of the avatars' sex and difficulty
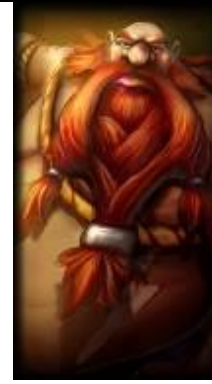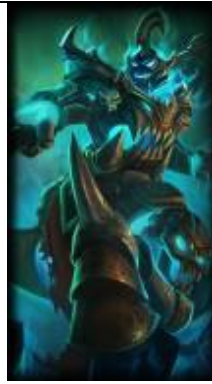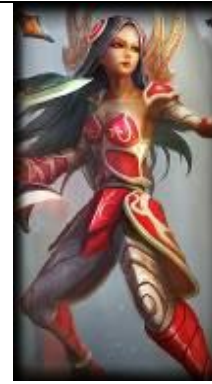
			Difficulty										Total
			1	2	3	4	5	6	7	8	9	10	
Sex	Male	Count	1	6	9	11	13	15	4	13	5	1	78
		% within Sex	1,3%	7,7%	11,5%	14,1%	16,7%	19,2%	5,1%	16,7%	6,4%	1,3%	100,0%
		% within Diff.	50,0%	100,0%	69,2%	57,9%	72,2%	83,3%	40,0%	65,0%	62,5%	25,0%	66,1%
		% of Total	0,8%	5,1%	7,6%	9,3%	11,0%	12,7%	3,4%	11,0%	4,2%	0,8%	66,1%
	Female	Count	1	0	4	8	5	3	6	7	3	3	40
		% within Sex	2,5%	0,0%	10,0%	20,0%	12,5%	7,5%	15,0%	17,5%	7,5%	7,5%	100,0%
		% within Diff.	50,0%	0,0%	30,8%	42,1%	27,8%	16,7%	60,0%	35,0%	37,5%	75,0%	33,9%
		% of Total	0,8%	0,0%	3,4%	6,8%	4,2%	2,5%	5,1%	5,9%	2,5%	2,5%	33,9%
Total		Count	1	2	6	13	19	18	18	10	20	8	4
		% within Sex	0,8%	1,7%	5,1%	11,0%	16,1%	15,3%	15,3%	8,5%	16,9%	6,8%	3,4%
		% within Diff.	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	0,8%	1,7%	5,1%	11,0%	16,1%	15,3%	15,3%	8,5%	16,9%	6,8%	3,4%

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Table 11. Visual gender representation of the avatars
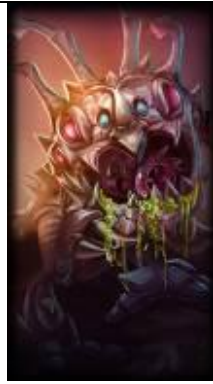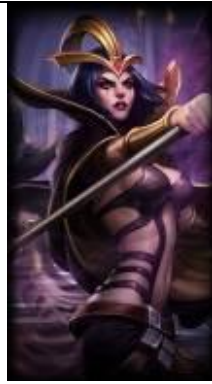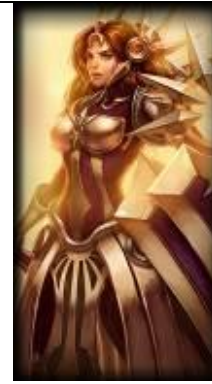
Aatrox Partially Nudity Stereotypical Male	**Ahri** Partially Nudity Stereotypical Female	**Akali** Covered Non-Stereotypical Female	**Alistar** Partially Nudity Stereotypical Male
Amumu Covered Non-Stereotypical Male	**Anivia** Irrelevant Irrelevant Female	**Annie** Covered Non-Stereotypical Female	**Ashe** Partially Nudity Stereotypical Female

Blitzcrank Irrelevant Irrelevant Male	**Brand** Partially Nudity Stereotypical Male	**Caitlyn** Partially Nudity Stereotypical Female	**Cassiopeia** Partially Nudity Stereotypical Female
Cho'Gath Irrelevant Non-Stereotypical Male	**Corki** Covered Non-Stereotypical Male	**Darius** Covered Stereotypical Male	**Diana** Covered Non-Stereotypical Female
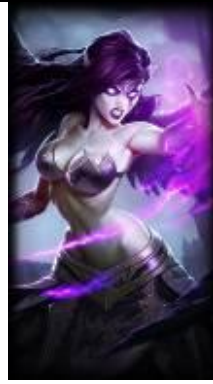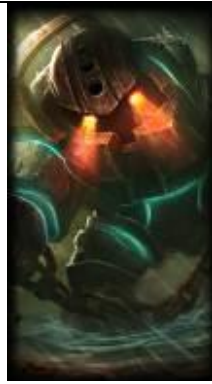
Dr. Mundo Partially Nudity Stereotypical Male	**Draven** Partially Nudity Stereotypical Male	**Elise** Partially Nudity Stereotypical Female	**Evelynn** Partially Nudity Stereotypical Female
Ezreal Covered Non-Stereotypical Male	**Fiddlesticks** Covered Non-Stereotypical Male	**Fiora** Covered Non-Stereotypical Female	**Fizz** Irrelevant Non-Stereotypical Male

Galio	**Gangplank**	**Garen**	**Gragas**
Partially Nudity	Covered	Covered	Covered
Stereotypical	Stereotypical	Stereotypical	Non-Stereotypical
Male	Male	Male	Male
Graves	**Hecarim**	**Heimerdinger**	**Irelia**
Covered	Irrelevant	Covered	Covered
Stereotypical	Irrelevant	Non-Stereotypical	Non-Stereotypical
Male	Male	Male	Female
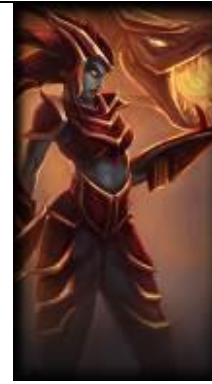
Janna	**Jarvan IV**	**Jax**	**Jayce**
Partially Nudity	Covered	Covered	Covered
Stereotypical	Stereotypical	Non-Stereotypical	Stereotypical
Female	Male	Male	Male
Jinx	**Karma**	**Karthus**	**Kassadin**
Partially Nudity	Partially Nudity	Covered	Irrelevant
Non-Stereotypical	Stereotypical	Non-Stereotypical	Irrelevant
Female	Female	Male	Male

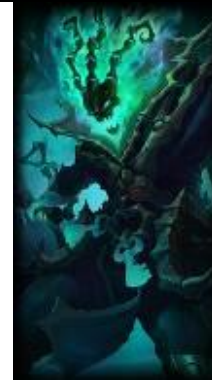|			
Katarina Partially Nudity Stereotypical Female	**Kayle** Covered Non-Stereotypical Female	**Kennen** Covered Non-Stereotypical Male	**Kha'Zix** Irrelevant Irrelevant Male
Kog'Maw Irrelevant Irrelevant Male	**LeBlanc** Partially Nudity Stereotypical Female	**Lee Sin** Partially Nudity Stereotypical Male	**Leona** Covered Non-Stereotypical Female

Lissandra Covered Non-Stereotypical Female	**Lucian** Covered Stereotypical Male	**Lulu** Covered Non-Stereotypical Female	**Lux** Covered Stereotypical Female
Malphite Irrelevant Irrelevant Male	**Malzahar** Covered Stereotypical Male	**Maokai** Irrelevant Irrelevant Male	**Master Yi** Covered Stereotypical Male
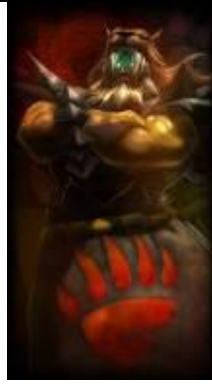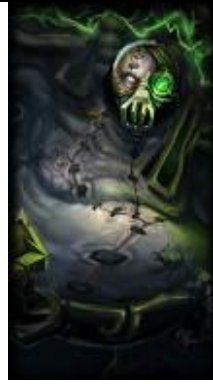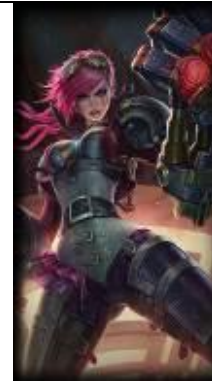
Miss Fortune	**Mordekaiser**	**Morgana**	**Nami**
Partially Nudity	Covered	Partially Nudity	Partially Nudity
Stereotypical	Stereotypical	Stereotypical	Non-Stereotypical
Female	Male	Female	Female
Nasus	**Nautilus**	**Nidalee**	**Nocturne**
Partially Nudity	Irrelevant	Partially Nudity	Irrelevant
Stereotypical	Irrelevant	Stereotypical	Irrelevant
Male	Male	Female	Male

Nunu Covered Non-Stereotypical Male	**Olaf** Partially Nudity Stereotypical Male	**Orianna** Covered Non-Stereotypical Female	**Pantheon** Partially Nudity Stereotypical Male
Poppy Covered Non-Stereotypical Female	**Quinn** Covered Non-Stereotypical Female	**Rammus** Covered Non-Stereotypical Male	**Renekton** Partially Nudity Irrelevant Male

Rengar	**Riven**	**Rumble**	**Ryze**
Partially Nudity	Partially Nudity	Covered	Partially Nudity
Irrelevant	Non-Stereotypical	Non-Stereotypical	Non-Stereotypical
Male	Female	Male	Male
Sejuani	**Shaco**	**Shen**	**Shyvana**
Covered	Covered	Covered	Partially Nudity
Non-Stereotypical	Non-Stereotypical	Stereotypical	Non-Stereotypical
Female	Male	Male	Female

Singed Covered Non-Stereotypical Male	**Sion** Partially Nudity Non-Stereotypical Male	**Sivir** Covered Stereotypical Female	**Skarner** Irrelevant Irrelevant Male
Sona Partially Nudity Stereotypical Female	**Soraka** Partially Nudity Stereotypical Female	**Swain** Covered Non-Stereotypical Male	**Syndra** Partially Nudity Stereotypical Female

Talon Covered Stereotypical Male	**Taric** Covered Stereotypical Male	**Teemo** Covered Irrelevant Male	**Thresh** Covered Irrelevant Male
Tristana Covered Non-Stereotypical Female	**Trundle** Partially Nudity Stereotypical Male	**Tryndamere** Partially Nudity Stereotypical Male	**Twisted Fate** Covered Stereotypical Male

Twitch	**Udyr**	**Urgot**	**Varus**
Covered	Covered	Covered	Partially Nudity
Irrelevant	Stereotypical	Irrelevant	Non-Stereotypical
Male	Male	Male	Male
Vayne	**Veigar**	**Vel'Koz**	**Vi**
Covered	Covered	Irrelevant	Covered
Non-Stereotypical	Irrelevant	Irrelevant	Non-Stereotypical
Female	Male	Male	Female

Viktor Covered Non-Stereotypical Male	**Vladimir** Covered Non-Stereotypical Male	**Volibear** Covered Irrelevant Male	**Warwick** Partially Nudity Irrelevant Male
Wukong Partially Nudity Irrelevant Male	**Xerath** Irrelevant Irrelevant Male	**Xin Zhao** Partially Nudity Stereotypical Male	**Yasuo** Partially Nudity Stereotypical Male
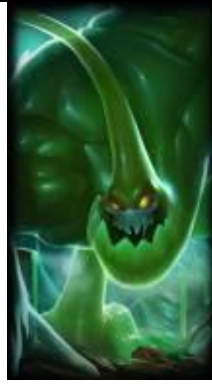
Yorick	**Zac**	**Zed**	**Ziggs**
Partially Nudity	Irrelevant	Covered	Covered
Non- Stereotypical	Non- Stereotypical	Stereotypical	Non- Stereotypical
Male	Male	Male	Male

Zilean	**Zyra**
Covered	Partially Nudity
Non- Stereotypical	Stereotypical
Male	Female

Table 12. Data table of the visual gender representation of the avatars

Rank	Avatar	Nudity Scale	Gender Stereo.	Sex
1	Aatrox	2	1	1
2	Ahri	2	1	2
3	Akali	1	2	2
4	Alistar	2	1	1
5	Amumu	1	2	1
6	Anivia	4	3	2
7	Annie	1	2	2
8	Ashe	2	1	2
9	Blitzcrank	4	3	1
10	Brand	2	1	1
11	Caitlyn	2	1	2
12	Cassiopeia	2	1	2
13	Cho'Gath	4	2	1
14	Corki	1	2	1
15	Darius	1	1	1
16	Diana	1	2	2
17	Dr. Mundo	2	1	1
18	Draven	2	1	1
19	Elise	2	1	2
20	Evelynn	2	1	2
21	Ezreal	1	2	1
22	Fiddlesticks	1	2	1
23	Fiora	1	2	2
24	Fizz	4	2	1
25	Galio	2	1	1
26	Gangplank	1	1	1
27	Garen	1	1	1
28	Gragas	1	2	1
29	Graves	1	1	1
30	Hecarim	4	3	1
31	Heimerdinger	1	2	1
32	Irelia	1	2	2
33	Janna	2	1	2
34	Jarvan IV	1	1	1
35	Jax	1	2	1
36	Jayce	1	1	1
37	Jinx	2	2	2
38	Karma	2	1	2
39	Karthus	1	2	1
40	Kassadin	4	3	1

41	Katarina	2	1	2
42	Kayle	1	2	2
43	Kennen	1	2	1
44	Kha'Zix	4	3	1
45	Kog'Maw	4	3	1
46	LeBlanc	2	1	2
47	Lee Sin	2	1	1
48	Leona	1	2	2
49	Lissandra	1	2	2
50	Lucian	1	1	1
51	Lulu	1	2	2
52	Lux	1	1	2
53	Malphite	4	3	1
54	Malzahar	1	1	1
55	Maokai	4	3	1
56	Master Yi	1	1	1
57	Miss Fortune	2	1	2
58	Mordekaiser	1	2	1
59	Morgana	2	1	2
60	Nami	2	1	2
61	Nasus	2	1	1
62	Nautilus	4	3	1
63	Nidalee	2	1	2
64	Nocturne	4	3	1
65	Nunu	1	2	1
66	Olaf	2	1	1
67	Orianna	1	2	2
68	Pantheon	2	1	1
69	Poppy	1	2	2
70	Quinn	1	2	2
71	Rammus	1	2	1
72	Renekton	2	3	1
73	Rengar	2	3	1
74	Riven	2	2	2
75	Rumble	1	2	1
76	Ryze	2	1	1
77	Sejuani	1	2	2
78	Shaco	1	2	1
79	Shen	1	1	1
80	Shyvana	2	2	2
81	Singed	1	2	1
82	Sion	2	2	1
83	Sivir	2	1	2
84	Skarner	4	3	1
85	Sona	2	1	2

86	Soraka	2	1	2
87	Swain	1	2	1
88	Syndra	2	1	2
89	Talon	1	1	1
90	Taric	1	1	1
91	Teemo	1	3	1
92	Thresh	1	3	1
93	Tristana	1	2	2
94	Trundle	2	1	1
95	Tryndamere	2	1	1
96	Twisted Fate	1	1	1
97	Twitch	1	3	1
98	Udyr	1	1	1
99	Urgot	1	3	1
100	Varus	2	2	1
101	Vayne	1	2	2
102	Veigar	1	3	1
103	Vel'Koz	4	3	1
104	Vi	1	2	2
105	Viktor	1	2	1
106	Vladimir	1	2	1
107	Volibear	1	3	1
108	Warwick	2	3	1
109	Wukong	2	3	1
110	Xerath	4	3	1
111	Xin Zhao	2	1	1
112	Yasuo	2	1	1
113	Yorick	2	2	1
114	Zac	4	3	1
115	Zed	1	1	1
116	Ziggs	1	2	1
117	Zilean	1	2	1
118	Zyra	2	1	2