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게임 기획 및 디자인

Study of Player Attitudes Regarding MMORPG Avatar Customization in the Transformation Stage

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MMORPG 아바타 커스터마이징의 변형 과정에서 플레이어 태도 연구

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ABSTRACT

MMORPG users can create their own identity that they will use to act through in the virtual world utilizing the avatar creation system. The MMORPG customization process, divided into the creation and transformation stages, provides a sandbox for the identity play by users. In this study, analysis of the users' customization attitudes using the Q methodology especially in the transformation stage was conducted. The users' attitudes were found to be categorized into 4 types: 1) fulfilling attitude, 2) customization immersed attitude, 3) customization challenging attitude, and 4) community oriented attitude. Of particular interest are the immersed customization type, where the attitude is driven by the internal motivation of "self-satisfaction" unlike the fulfillment and community oriented attitudes which are driven by instrumental motivation of the avatar, and the continuous desire towards transformation revealed by the challenging customization attitude. This study provides valuable insight in the design perspective for developers in instilling critical immersion elements to the users while preparing to update the level.

Keywords : MMORPG, avatar, customization, identity play, game design, Q methodology

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1. Introduction

In a virtual world, one's identity for all activities is represented by the user's virtual character called an avatar. There is a desire to reveal one's identity through the simple ID naming or an icon avatar in Computer Mediated Communication (CMC) programs. This desire is caused by a social characteristic to want to reveal one's identity among the numerous anonymous users that one meets in the virtual world. In this regard, massively multiplayer online role-playing game (MMORPG) can be described as a domain where the usefulness of the avatar is maximized. Ducheneaut et al.[1] writes that "...an avatar fulfills more than communication needs: it is also a visual representation of the user, a 'tangible' embodiment of their identity" (p. 1151). Ducheneaut also defined the function of an avatar as being an "embodiment of identity". This definition is in the same vein as a user's desire to express their identity via ID naming or their dialogue style in a text-based multi-user dungeon (MUD) 20 years ago (Turkle; 1995)[2]. Turkle stressed the importance of user identity expression via an avatar from a psychological or social science context and interpreted the phenomena within the virtual world from the perspective that a virtual realm is an extended reality in which people can experience various new roles.

The most recent games including MMORPGs consist of a system in which the users themselves can create highly customized avatars which embrace uniquely desired looks and characteristics as chosen by the gamer. MMORPG is simultaneously a game and a media where social elements are dominant. Therefore, characteristics not revealed in other games are found and among them are the players' attitudes that are exposed through the creative aesthetic expression in the avatar customization process. With the launch of the First 3D MMORPG (Meridian 59, 1996) and the Ultima Online (1997), which gained great popularity as an MMORPG with graphic technology, visual design became an important factor in avatar selection due to the significant changes presented in the game environment. In an environment where the user's identity was represented through the visualized image of the avatar, users began to discuss the idea of creating their own unique designs, although they were provided with readymade options for selecting and designing their image[3].

The general expectation is that everyone wants to be a superhero or a goddess[4]. However, it is through unique avatars which embrace specialized characteristics that users begin and create a fictitious narration in this virtual world. This begs the question: Why are users obsessed with the design of avatars? Why do users take gender-swapping as a normal trend? Why are they repeatedly trying to change appearances by making use of the paid game systems like the plastic surgery ticket?

This paper advocates that avatar customizing is not a basic gaming option, but for many it has evolved to be a major motivating factor of immersed play[5]. Enhanced avatar constructions are emerging as a crucial and essential element within avatar creation systems[6]. This paper demonstrates that attachment to player-designed avatars has a strong correlation with the degree of flexible transformation available. The internal motives of players, as well as their customization immersed attitude appear to satisfy the basic need or desire within the individuals.

2. Literature Study

2.1 Avatar Modification via Transformation

Unlike other games, accomplishing in-game missions is not the only goal of MMORPG users. These users enjoy their virtual lives as others do a real life, posting snapshots of their avatars with game-world backgrounds on blogs without referencing the game mission. In addition, they maintain social relationships with guild members with whom they share a long history after accomplishing all of the game levels (i.e., the level cap).

The aforementioned studies describing the user avatar design process focused on identity projections during the creative process. However, previous studies have not discussed the process of avatar design and transformation, which should be distinguished from avatar creation; therefore, analyzing identity projection and avatar transformation over time is necessary. Avatar customization can be divided into the "initial modification stage," in which the user begins the game according to its systematic layout, and the "transformation stage," in which the user pays for avatar customizations after having accomplished the game's goal. From the game producer's perspective, customization during the transformation stage is a way to provide an additional element of entertainment to the users between level updates. The motives and conditions of the secondary customization during the transformation stage reveal changes in user perceptions, and an independent element of immersion in the customization process is established. A user who shares their experiences with an avatar through virtual time and space is using alter ego to represent their identity; this essential medium links the virtual world and the user. As the user becomes attached to an avatar he or she has used for a long time, the act of changing the avatar's appearance at the transformation stage identifies the user's increased enjoyment of and immersion in the customization itself.

One MMORPG user described the attachment she felt with her avatars as follows:

"I decided to stop playing games because I was obsessed with them; however, I could not force myself to delete my avatars. They are like my children, and they are like my second selves because I dedicated 2 years of my life to them. Despite having many items that could have been sold at high prices, I stopped playing the game so the avatars could keep their items." (34-year-old female MMORPG Lineage, AION user)

The above passage implies that customization functionality is a play motive independent of accomplishing the game's goal. Kafai et al.[7] showed that teenagers exhibit a playful quality when they customize avatars in online games that exceed Turkle's concept of the second self in which a user finds another identity[8,2]. The creative avatar design process is not only interpreted as the search for one's second self but also as an experimentation of the second self. The increased desire for self-expression is separate from the motivation for playing a game based on basic instincts; rather it is as an expansion of playful expressiveness of the avatar design. Paid tickets for plastic surgery and gender switches

provide users with goals that are different from those of the customizations during the initial stage of the game. Just as people constantly tend to their appearance and feel the need for change in reality, users have internal motives for the constant care and transformation of their avatar's appearance through plastic surgeries and gender switches. These user attitudes can also be viewed as the desire to express one's ideas and immerse one's self in customization, the process of design.

3. Research Method

3.1 Methodology

Oppenheim[9] argued that "attitudes" are composed of two or more components: perception and emotion. Beliefs (the cognitive component) fortify attitudes and generally incite strong feelings (the emotional component). Cross[10] stated that attitudes are hard to define and that no tool can measure them perfectly because they are based on the users' subjective perceptions and thoughts. Cross[10] identified that the problem with the most commonly used measuring methods (e.g., Likert Scales and Semantic Differentials) is that the participant's unconsciousness can influence the results; however, he also asserted that the Q methodology could be a complementary, rigid measurement of attitudes and subjective opinions. Developed by the psychologist William Stevenson to measure subjectivity based on the conventional factor analytic theory, Q methodology is an objective assessment that uses concourse theory to create a composite of all participant views via a factor analysis. After the preliminary participant interviews, a categorization of Q statements is conducted in which the participants categorize Q statements or Q items. After the Q factor analysis assesses how the groups are classified according to the shared participant perspectives, the results are interpreted. Unlike an ordinary factor analysis, which is based on the correlation between variables, traits, or statements, a by-person factor analysis is based on the correlations between participants represented by Q sorts in the Q methodology[11].

Kim[12] explains that the Q methodology is an approach that "understands from the inside" and not a method that "describes from the outside". In this case, Q statements are based on user assumptions, not research assumptions; thus, all statements therein are composed of respondent opinions. Therefore, Q methodology statements have the advantage of being able to elicit participant views without an intervention and use them as research data. The self-images and gender perceptions projected by an avatar, which are expansions of the images that are physiologically distinguished from reality, provide a way to understand a user's ideas and values. Accordingly, this study employed Q methodology to objectively measure subjectivity in an in-depth investigation of user values. The use of the Q methodology is appropriate considering its ability to analyze unconscious behaviors that the user neither recognizes nor describes. In the last stage of Q methodology research, the typology extracted from the results is interpreted. This interpretation is conducted by comparing and

contrasting the locations of each statement using the Q categorization re-composition-determined type. To this end, the researcher relies on his or her interpretations, theories, basic research, cultural experience, and other factors[13].

3.2 Research Process

For the Q statements in this study, a total of 204 statements were obtained from interviews and group meetings with one MMOPRG AION director, eight game development experts, and eight MMORPG users over two months. The nine game developers were recruited during the initial study, including the director of AION, the subject of this study. The nine game developers, consisting of two planners, one game user interface designer, one background designer, one sales representative, one client programmer, one 3D modeler, one sound designer, and one 2D designer, participated in three group meetings over a three-week period and two additional group meetings that were intended to analyze the results of the experiment.

In addition to the game developers, eight users who reached the highest level of AION (level 60) were recruited and interviewed individually over two weeks to obtain opinion different from those of the hands-on staff. The ages of the game developers ranged from the late 20s to the early 40s, and many of their statements could have been based on common sense, despite their expertise. In contrast, unexpected statements based on lengthy experience were obtained from the eight users in their early and mid-20s.

A total of 204 statements concerning users' attitudes toward customization during the modification stage were extracted, including Extract 1: "When I see a prettier or better-looking character than me, I want to decorate myself more than them"; Extract 2: "I feel a sense of superiority when people react favorably to or envy my character's looks"; and Extract 3: "I sometimes feel an urge to swap gender when a character of the other gender is treated better." Statements that were repeated or were not appropriate for the study's intentions were eliminated in three rounds to improve validity, objectivity, and rigidity. Ultimately, 64 statements on attitudes during the modification stage were selected for an evaluation of major behavioural patterns. A total of 29 users in their 20s and 30s (minimum age: 22 years, maximum age: 39 years, median age: 28.7 years) who reached the level cap (level 60) of the MMORPG AION were selected as the P-Set (people). The gender composition was 20 males and 9 females. Considering that the 21-35 age group exhibited the highest play rate (54%) according to a 2011 MMO Games Market Report demographic survey in the U.S., the P-Set comprised the main target group for MMORPGs.

AION, which has a relatively high level of freedom of customization, was selected as the subject MMORPG. The subject group includes users of this game who showed intentionality in customization. An analysis of multi-dimensional users' attitudes is possible with a game that provides users with the freedom to modify their appearance, customization refinements, and community.

Cards printed with 64 statements were produced in a 13 cm x 7.5 cm format for the

Q sort in addition to a categorization board for the cards. Subjects were instructed to categorize the Q sort cards on the categorization board according to the forced distribution method. Each of the 29 subjects in the P sample required 30~40 minutes for categorization and often had to move previously categorized cards to evenly distribute all cards throughout the range from 'not true at all' to 'very true'. Utilizing the 'Thinking Aloud' usability assessment technique, the subjects verbally expressed what they thought while categorizing during the experiment. If the subject made a gesture of sympathy or wonder while looking at a certain card, an additional inquiry in the interview format was conducted to determine the source of these reactions.

The subjects' categorization results were recorded on the Q scoreboard and statistically processed by factor analysis using QUANL. For the statistical analysis, four factors were extracted using VARIMAX rotation. The selected factors had Eigenvalues of f1=6.8707, f2=.8543, f3=1.6335, and f4=1.2711, respectively. Eigenvalues over +1.000 can yield meaningful interpretation as a valid result for Q analysis.

The interpretation of the Q analysis data was based on the previously conducted preliminary study, interviews, and basic inquiries to improve objectivity and validity.

4. Results

The P sample experiment subjects that participated in the experiment of this study was found to be n=12 in Category 1, n=8 in Category 2, n=7 in Category 3, and n=2 in Category 4 for the 4 extracted categories. Examining the factor weight for each category, Category 1, which is the typical category with a factor weight over +1.0000, with P14 (w=1.5756), P29 (w=1.4883), P13 (w=1.0718), P15 (w=1.0264) has greater values than the other categories. In the extracted categories, the gender that showed factor weight values over +1.0000 in all categories was male except for P15 which was female. Among the categories, Category 4 does not have any P sample experiment subject with a factor weight over +1.0000 and had the smallest number of P sample number (n=2) among the categories.

Category 1 was classified as the fulfilling customization type that undergoes the second stage of customization, avatar plastic surgery and gender swapping, with the objective for achievements in the game. Category 2 is the immersed customization type that finds the customization process entertaining and aims to repeatedly use it almost in an addicted manner. Category 3 is the customization challenging type, hoping to attempt at items of a new level or imitate a celebrity, another avatar style, or ideal type of the user. Category 4 is community oriented type that has customization motives based on the community. In the case of this type, motives to follow the guild characteristics or consider other users' performance and reveal a sense of belonging when undergoing the customization process.

Type 1: Fulfilling customization

This type uses the plastic surgery/gender swapping to change the avatar body type and gender due to targeting probability (#33, z=2.31), PvP (Player vs Player) gaming strategy (#13, z=2.24), capturing of an advantageous vantage

point in battle (#63, z=1.93), exposure of the character during battle (#44, z=1.66), and agility (#34, z=1.47). The above 5 statements with the highest standard scores all show objectives aimed at achievements. The statements of this type reveal that because an avatar of a smaller body type reduces exposure to shootings by enemies and increases controllability and agility, users change their avatars to smaller characters based on such playing opinions.

Moreover, this type undergoes secondary plastic surgery when strategic customization is necessary depending on the user's position in the guild (#17, z=1.08/#40, z=1.04) and for the performance with fellow guild members (#50, z=1.13). These motives can be interpreted as motivation for collective achievement of the guild rather than for the community itself. In particular, the statements that revealed appearance-based motives in this type included when the character was of a size that was inappropriate for its class (#56, z=1.11) or the user wanted to put on a gear item before others did (#45, z=1.04), showing somewhat achievement-based mentalities.

The most distinctive characteristic of this type was that the number of male users (n=10) were far greater than the number of female users (n=2). It was inferred from the data of this type that most male users underwent secondary plastic surgery of the avatar motivated by achievement-based purposes.

Negative statements found in this type were purposes solely for customization itself or emotional customization tendencies including playing the game with the purpose of customization itself (#30, z=-2.31), not having a specific purpose but wanting to change the avatar appearance or clothing frequently (#14, z=1.57), using the customization ability for recreation (#51, z=-.93), and expressing the user's current feelings through the avatar (#58, z=-1.14). Type 1 has a tendency of rejecting secondary emotions such as copying other users, changing with other users, and receiving attention, which are common entertainment factors accompanying customization among MMORPG users, as well as other recreational gameplays such as being a couple, deceiving others, seducing others, and providing entertainment, which are commonly observable between other users in a community atmosphere.

[Table 1] Descending array of z-scores and item descriptions for type 1(over ±1.00)

Item	Description	Z-Score
Above		
33	In the case of a small body type, the targeting probability from others decreases so I want to get a body type as small as possible.	2.31
13	I have thought about changing the appearance for strategic purposes in the game play such as PvP(Player vs. Player).	2.24
63	To occupy a vantage point in battle.	1.94
44	I had difficulty playing with a small body size character because I was easily exposed to enemies when I was of low level.	1.66
34	I change the body type because a small body makes it feel more agile when traveling.	1.47
Below		
42	I want to copy a famous person as realistically as possible compared to others.	-1.40
61	To act like a female to blend in better in a guild or gain advantages.	-1.56
14	Even if I frequently change the appearance or clothing of my character, I want to change it again shortly.	-1.57
53	I used a gender switch ticket to hide my gender in reality.	-1.91
30	Customization itself is the objective of playing this game.	-2.31

Type 2: Immersed Customization

This type can be described as the type that has its purposes on the avatar customization itself. When a rare item is put on, the avatar appearance most fitting is selected as if to show off a sense of fashion through new hairstyle and clothing (#35, z=1.60), the design of a gear is changed if the gear is not attractive and even if it is a rare item (#46, z=1.55), and the avatar hairstyle or overall image is customized to better suit the clothing, weaponry, and accessories worn (#23, z=1.53). All the above actions are performed through repetitive secondary plastic surgery. A distinctive characteristic of this type was that customization was carried out due to an immersion to customization such as using the ability to perform customization for recreational purposes rather than aesthetic purposes (#51, z=1.40) or decorating the outward appearance or attire because the act of the decorating is entertaining (#15, z=1.33). It can be observed that creative customization impossible in reality is freely attempted such as dressing up the avatar to the gender or body type and changing the gender and body type to the clothing. Unusually, plastic surgery is also attempted when the user feels there is a certain gap between the character's name, gender, and external appearance.(#59, z=.59) Users of this type holds a somewhat emotional tendency in customization such as for recreational purposes and feeling a sense of superiority or entertainment in the reaction of others.

This type stated that they wanted to frequently change the avatar appearance or clothing (#14, z=.95) and revealed an addictive tendency to customization. This type does not recognize reaching the maximum level as the end of the game but enjoys customization through new content separately from the achievement of the game.(#27, z=1.13/#9, z=.89) In particular, this type stated that they enjoyed changing the avatar appearance through the high degree of freedom in the customization system(#44, z=1.41), revealing the importance of the degree of customization freedom in user immersion. AION, which was the subject of this experiment, can be described as providing a system that satisfies such desires.

Negative statements of this type were when customization was used as a means related to the community rather than the customization itself. Such statements included using the customization ability to hide the user's gender in reality (#53, z=-1.74), using customization to act like a female and be a part of a party or gain advantages (#61, z=-2.20), and playing a character of the opposite gender in expectation of entertainment or reactions from other characters (#5, z=1.53/#6, z=-2.03). Also, this type was negative towards changing the avatar appearance in recognition of attention and for other people.

[Table 2] Descending array of z-scores and item descriptions for type 2 (over ±1.00)

Item Description	Z-Score
Above	
35 When wearing a rare item, if the appearance of the item is not expressed well, I change the body type that expresses it better.	1.60
46 I want to change the exterior design of a gear that I feel does not look attractive.	1.55
23 I want to match the character hair style or image according to clothing, weaponry, or accessory.	1.53
2 I feel a sense of superiority when others respond positively or are envious of the appearance of my character.	1.42
11 I enjoy changing the appearance because of the high degree of freedom in the game customization system.	1.41
Below	
5 I want to experience what it feels like to play a character of the opposite sex.	-1.53
53 I used a gender switch ticket to hide my gender in reality.	-1.74
6 I am curious as to what kind of treatment I will receive when playing a character of the opposite sex.	-2.03
61 To act like a female to blend in better in a guild or gain advantages.	-2.20
57 When I am ripping off others in a trade or there is a bad happening, I use plastic surgery and act like I am not myself.	-2.32

Type 3: Challenging Customization

This type had their objectives in the experience of the customization itself. This type seeks new experience through customization or attempting at new elements such as wanting to experience newly added items after a large scale update of the game (#25, z=2.34), changing the avatar to look similar to a highly attractive character (#31, z=1.43), changing the avatar based on the user's ideal type (#4, z=1.59), wanting to dress up with certain clothing worn by celebrities (#28, z=1.37), copying the appearance of a famous person as realistically as possible (#42, z=.68), and wearing gear before anyone else did by going through instance dungeons newly added to the game (#45, z=.96). This type desires to feel new visual stimulation when bored (#54, z=1.98) and copy popular appearances, styles, and trends (#16, z=.37). Wanting to have a stimulating and sexually appealing image (#55, z=1.22), which was negatively responded to by other types, was also daringly pursued by this type.

The attention of others was a large motivation for this type, changing the appearance of the avatar to suit the maximum level gear and items to show off to others (#37, z=1.08) and feeling a sense of superiority when the reaction of others to the avatar appearance is positive and are envious.(#2, z=.88)

This type is similar to Type 2 in that the dominant objective was in the entertainment of customization itself but there were large standard score differences in some statements such as using the customization ability for recreation (Difference 3.018), wanting to change the avatar appearance frequently not long after customization (Difference 1.668), and playing the game solely for the customization (Difference 1.616). Rather than enjoying the ability to customize and change, the difference in the motivation of this type lies in challenging themselves to new customizations such as following a celebrity, famous person, ideal type, or an unconventional style.

[Table 3] Descending array of z-scores and item descriptions for type 3 (over ±1.00)

Item Description	Z-Score
Above	
25 I want to experience the changed customization (newly added items) after a large scale update.	2.34
54 For a different kind of visual stimulation when I get bored of the appearance or motion of my current characters.	1.98
4 I enjoy changing the avatar appearance to that of my ideal type in reality.	1.59
31 When I see an especially attractive character, I change because I want to have a similar appearance.	1.43
28 During an event period, I wanted to decorate with a certain celebrity's clothing so I used it.	1.37
Below	
5 I want to experience what it feels like to play a character of the opposite sex.	-1.61
51 I use the plastic surgery ticket just for recreation.	-1.62
53 I used a gender switch ticket to hide my gender in reality.	-1.63
6 I am curious as to what kind of treatment I will receive when playing a character of the opposite sex.	-1.77
30 Customization itself is the objective of playing this game.	-2.38

Type 4: Community Oriented Customization

For this type, the main motivation for secondary plastic surgery was changing the avatar appearance to increase the level of closeness with others in the game (#38, z=2.50). Users of this type frequently set a common appearance with members like matching guild clothing (#17, z=1.87) or specifying appearances according to the performance with other guild members (#50, z=1.57). This type change the avatar appearance to match that of friendly members to form a "fighting unit" (#40, z=1.55) and to share customization sources.(#29, z=.94) Users of this type holds a relationship oriented thinking where they would change the avatar gender to that of the user's in reality when they become a couple within the game (#36, z=.62) and want to entertain others by changing the avatar into a funny appearance (#41, z=.29).

This type does not fear attempting new appearances such as wearing gear before others (#45, z=1.28) and expressing individuality through unusual hairstyles or facial features (#37, z=1.26) while also performing secondary customization to enjoy various events in the community aside from the achievements of the game such as wearing a certain celebrity clothing during an event period and customizing according to an event day like Christmas or Halloween.

[Table 4] Descending array of z-scores and item descriptions for type 4 (over ±1.00)

Item	Description	Z-Score
Above		
38	I change the character appearance to increase the closeness with people I game with.	2.50
17	I want to change the character appearance to match guild clothing and show association with a race.	1.87
35	When wearing a rare item, if the appearance of the item is not expressed well, I change the body type that expresses it better.	1.86
50	When I have to match the appearance for a performance with friends or guild members in the game.	1.57
40	I want to change the character appearance with my friends to look like a “fighting unit”.	1.55
Below		
3	When another character receives friendlier treatment because of gender, I get an urge to change my gender as well.	-1.28
53	I used a gender switch ticket to hide my gender in reality.	-1.54
6	I am curious as to what kind of treatment I will receive when playing a character of the opposite sex.	-1.57
30	Customization itself is the objective of playing this game.	-1.58
57	When I am ripping off others in a trade or there is a bad happening, I use plastic surgery and act like I am not myself.	-2.19

5. Conclusion

MMORPG provides an environment for users to express their identity in various angles through identity play in the customization process of the transformation stage. The MMORPG avatar creation system provides the foundation for users to create their own “self” which will represent themselves in the virtual world.

The degree of freedom in the creation range of the customization system was analyzed to have impact on the 2 types which experienced greater immersion in the customization as the range of change available for the avatar was greater. While change to a person in reality is limited to clothing or hairstyle, the customization freedom offered in the virtual world ranges from the facial figure to the body type, gender, and even race, increasing the enjoyment of the customization. In this regard, the subject platform MMORPG AION of the experiment in this study allowed users to freely alter the avatar body proportions in an extreme manner such as making the avatar height abnormally tall or short and making the body extremely large. Developers had the universal perception that such an expansion of user freedom would hamper the completeness of the game. However, the game received positive reception by users and the game played a significant role in having avatar customization as the major content of the game.

“In the early AION development stage, the creative freedom of customization was maintained at a similar level to that of other games but after the first beta testing round, the user customization range was significantly modified to strengthen the user creation play function and surprisingly we received a good response from the users.” [AION developer, 39].

The degree of freedom in the avatar creation system plays a pivotal role in bringing out the desire of users for customization. Kafai et al.[7] explained that depending on the user’s skillfulness in creation, there were differences in the degree of identity reflected. When considering most users are amateur at design, it can be found that a number of variables are in play that affect the level of user immersion including simply the comfortableness with

the game user interface. In particular, various studies on gender role theory have dealt with the direct relationship between the operation difficulty of the game and the level of immersion into the game for female users in contrast to male users. Like this, the degree of freedom in a game system is a significant point that requires further research.

Bessiere et al.[14] explained that when users are creating the avatar, they sought an appearance closer to that of their ideal type rather than their own image. However, the user attitudes revealed in the transformation stage of this experiment showed a strong motivation to project one's identity through change or attempting at new aspects rather than the aesthetic appearance. Such results support the possibility of user identity expansion depending on the virtual world environment presented by Tuckle [2]. As explained earlier, the user attitudes in the transformation stage use customization as a means to achieve extrinsic goals and attempt at changes for internal satisfaction of "self". Moreover, the experiment of this study found that users in the transformation stage perceived the avatar as equivalent to him or herself and had a strong affinity towards the avatar. Even after reaching the maximum number of levels, it was observed that users consistently manage their avatar, enjoying the secondary play within the game.

The creation system called avatar customization provides an "identity playground" [7] that allows users of various classes to express themselves and is a key element of game development. The study of user identity that is resulted from the self-creation or in other words the cultural understanding in the virtual space or the multiple identity phenomenon that is observed in the virtual world is a significant topic for scholars in various fields including psychology and social sciences.

By pursuing future in-depth studies on the specific variables that come into play regarding the multiple identity phenomenon in the MMORPG customization system revealed through this study, the cultural phenomena and user psychology in the virtual world are to be understood and with this as basis provide solid feedback to MMORPG producers regarding the direction of game production.

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