Manga matrix's approach to creating Indonesian ghost game visual characters on Dreadeye VR

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ARTICLE INFO

Article history
Received 2022-04-03
Revised 2022-04-13
Accepted 2022-05-20

Keywords
Game;
Indonesian ghost;
Visual characters;
Manga Matrix;
Dreadeye VR

ABSTRACT

Visual imagery is the most important part of game design. Game designers should pay particular attention so that the visual character of the game can be effectively realized and able to convey the depth of its visual meanings. Taking use of the widespread fear of the Indonesian Ghost's appearance, the game is able to present challenges to its players. This study aims to develop the creation of character designs, especially by elevating visual images of Indonesian ghosts into visual characters' in-game media. The method for designing Indonesian ghost characters is to dismantle the visual image of Indonesian ghost characters in the Dreadeye VR game. The strategy is to consider the following three components: (1) the matrix of shapes, (2) the costume matrix, and (3) the matrix of traits. All three were analyzed with the approach of manga matrix theory. This research has led to the emergence of relatively distinct ghost figures that are frequently feared by Indonesians, such as pocong, kuntilanak, and tuyul. By examining the matrices of the shape, costume, and nature of each character of the three Indonesian ghosts, it is possible to conclude that to create visual characters of Indonesian ghosts, game designers must identify these three components, while the contribution of this research is to provide a visual image analysis model including shape imagery, costume imagery, and traits imagery of Indonesian ghosts used in the Dreadeye VR Game in Indonesia.

1. Introduction

The game is not a new phenomenon, but it is also not an old phenomenon; even today, people can easily get and access a variety of games. Playing games has become a habit and a necessity as an entertainment medium to escape the daily routine, even further as a medium for interacting and expressing. The game has been known and continues to be in demand by the public because it provides something that is entertaining and interactive. The term game first appeared in 1947, which was coined by Thomas T. Goldsmith Jr. and Estle Ray Mann using a CRT (cathode ray tube) screen, the first handheld gaming device and patented in 1948. The system consists of eight vacuum tubes and simulates a target system in the form of shots, the idea of which comes from World War II radar displays. Then in 1972 came the first game device for the home market and was connected to a television. Next comes a game with a mystery house theme, designed by a housewife named Roberta Williams using graphics on Apple II [1]. In 1990, computer games and online games were introduced. For the first time, online games used a LAN (local area network), and according to technological developments, they used a wider network such as the www (world wide web), better known as the internet. To play online games, you must install a game program and register [2]. The present era can be said to be the period of modern technology, where the development of game technology creates a virtual world. McLuhan defines a game as popular art, a collective social reaction to each culture's

main impulse or action [3]. Games and technology are anti-anxiety or ways to adjust to the pressures that occur in social groups. Game is a dynamic resource and part of multimedia and can often be linked to resources from other media with relationships such as inspiration, sequel, and adaptation and have a lot of semantic contexts. Relationships with other entities bring additional semantic context to game entities in individuals and form the basis of individual engagement as users with the game medium [4].

The game is currently seen as popular culture; many games published in the world feature characters with a universe story. Thus forming a visual entity in the game [5]. A game must be developed with careful and careful concepts, especially visual parameters, so that the goals of the creator can be achieved. Visual appearance is the first thing that will be received by the five senses, which will later have a very big role in persuading users to play the game. The user's understanding of the messages and concepts conveyed in a game can be through the visual design constructed by the game creator. Therefore, in designing and developing a game's visual concept, it is very important to know who will play the game in the future. Knowing the user is done by knowing how the user interprets the visual appearance or commonly called visual perception. The user's visual perception can be formed by developing a visual display concept created by the game designer. In this way, the user's perception is directed in the direction the game maker wants, and the user is expected to understand the message conveyed easily. The game is an interactive medium in which there is an interaction between the game, represented by a visual display with the user. In this interaction, the user's focus and interest in what the game shows is an important element in order to create a good impression and encourage users to keep playing it. The visual appeal of a game includes visual elements, character designs, objects, forms, colours, and animations. All components must adhere to the principles of design and art [6]. A game's visual design backed by the correct character design will enable players to readily recognize any existing visual features and allow them to comprehend the messages and concepts provided by the game's designers [7]. One of the games that present the visual concept of characters in the game is the Dreadeye VR game. The game is from the game studio Digital Happiness from Bandung game. This is a virtual game reality where to play it requires a VR device. On the game DreadEye VR, players will take on the role of a shaman and have to do the ritual like a shaman to enter another world. The visual characters presented are local ghosts such as Kuntilason, Tuyul, Pocong and others. The presence of games in virtual form with the concept of virtual reality can provide real experiences to users regarding the experience they want to see [8].

The visual output of the characters is present because of the premise of the story that is offered. By focusing on user fun, designing and developing games allows users to immerse themselves in a virtual worldview and act out the fun of the story. The system works in the game as follows: a player chooses a prepared story, takes on the role of a character in the story, and plays his role in the allotted time. In this way, it is possible to create a system that remains faithful to the original worldview while maintaining a high level of immersion and freedom in the virtual world [9]. In the process of designing and developing concepts in-game visuals, it is very important to recognize a user who will later be expected to play the game designed. One way to know the user can be done by studying and researching pre-existing games so that the process can be known user in interpreting a visual display; this can be studied with various approaches, one of which is by using the manga matrix approach [10]–[13]. Manga Matrix is an approach developed by Hiroyoshi Tsukamoto which is used to design a new character in a systematic way. Character creation will be parsed from its building elements which will then be used as a guide in the process of creating a character. This approach has three variables matrix: the form matrix, the costume matrix, and the trait matrix [14]–[18]. This is in line with the research entitled “Lacerman” Comic Character Design With Morphological Forced Connection Method (MFC). This research focuses on how to design comic characters using the morphological forced connection transformation method. The final result of this research is a form of comic character with a combination of human and animal forms where the process of making the character can be a foothold for illustrators who want to create similar characters [19]. Gao also performed research on video game characters. According to him, in a video game, the character is the game's soul, and stunning game design and realism can raise players' visual focus and even impact their game experience. Gao believed that character design is the most important aspect of game development. According to him, every character must be designed by the creator [20]. In game design, characters serve as emotional ties and are useful for igniting the players' imaginations due to the fact that people can be freely plucked from the narrative and relocated as needed, so characters' presence in the game's media is one of its most prominent selling points [20]. The results of previous studies

showed that the topic of character formation in ghost visual images in Indonesian games was not found, so this research has a fairly high level of novelty. The purpose of this study is to create a character design for Indonesian ghost visual images in the visual media of the Dreadeye VR game character using a manga matrix approach, paying attention to the three main components of the analysis, namely the form matrix, costume matrix, and the trait matrix. Methodologically, the contribution of this research is to provide a model for analyzing visual images of Indonesian ghosts used in the Dreadeye VR Game in Indonesia.

2. Method

This research will answer and explain the problems posed in this study, namely how to develop the creation of visual image designs of Indonesian ghosts into visual media of game characters. Then, to get the discussion and research results, the researcher used a theoretical approach, the Manga matrix, a theory developed by Hiroyoshi Tsukamoto, to design new characters with a mathematical method [21]. The character creation system is decomposed from building elements, which are then simplified into a diagram that will later be used as a guide in creating a character. Character design method in theory matrix system There are three variables that are used as the basis for the creation of a character, namely: Matrix (shape matrix), Costume Matrix (Costume Matrix), Personality Matrix (Attribute Matrix) [22]. Figure 1 is Matrix Manga Theory.

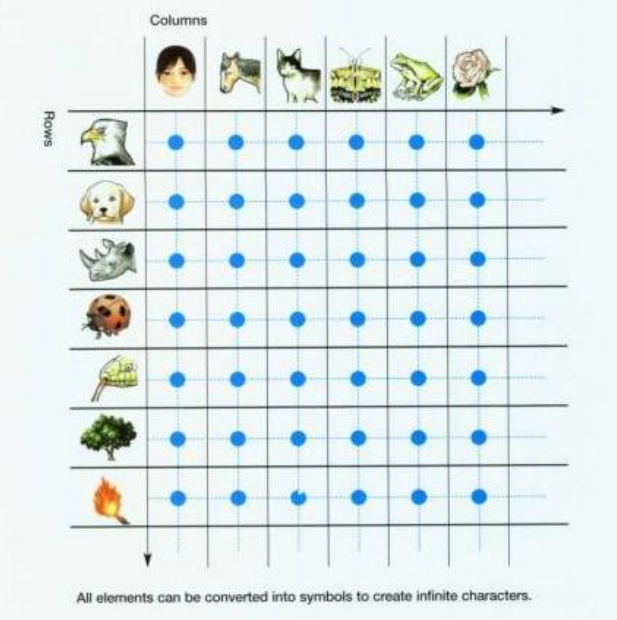

Fig. 1. Theory Manga Matrix

The following is a character design method in matrix system theory where there are three variables that are used as the basis for creating a character, namely; (1) Matrix Forms: The design of the structure and body shape refers to the elements that make up the character's body which is then combined to produce a new type of character. Then to develop body type, you can use various parameters: fixed form, non-fixed form, collective form, mechanical form, cracked form, increase/decrease, length span, growth, combination; (2) Costume Matrix (limitless costumes): Once the character's body is formed, it can be thought of as a newborn human and can wear any costume. Costumes are used as a complement in strengthening the identity of new characters by considering the parameter list in the matrix system. Choose one of the lists of parameters in designing a costume from head to toe that suits the new character. The classification of costume parameters includes body wear, covering/footwear, ornament, makeup, wrap/tie, carry-on items and the classification of costume materials: heaven, earth, water/fire, inorganic matter, image; (3) Personality Matrix (limitless personalities): Since the character was formed he has not had a fixed personality. A kind of blank paper and need to determine his personality freely. There are six parameters used to illustrate the character's personality: behaviour, status, profession, position, biological environment, special attributes, weakness and desire. Figure 2 is the Parameter Costume Matrix.

Fig. 2. Parameter Costume Matrix

3. Results and Discussion

The results and discussion in this paper related to the analytical method used are the Matrix System, a method that emphasizes the application of a combination of ideas to shape, form, and composition, where these elements are then processed in such a way so that they become the basic formulation of the idea of creation. Character. Three characters are represented in the character designs of the Dreadeye VR game: Pocong, Kuntilanak and Tuyul.

3.1. Pocong Character Analysis

In Figure 3, the researcher will discuss the shape matrix, costume matrix and trait matrix for the pocong character in the Dreadeye VR game. This character is one of the main characters in the game, where the pocong ghost is a ghost from Indonesia that has a shape like a bolster. This ghost is quite popular and has been made into many horror genre films. Some say that this pocong ghost comes from a person who has died, then when the shroud is buried, the corpse is not removed, so its spirit wanders and becomes a pocong. The pocong ghost always asks for help to let go of the pocong rope so that his spirit does not wander anymore. If the rope is not removed, the corpse will wander after the funeral procession at night. People being bullied are who took part in his funeral procession because they were the ones responsible for untying the ropes pocong.

Fig. 3. Pocong Character in Dreadeye VR

The matrix of the shape, costume and nature of the pocong character in the Dreadeye VR game can be seen in the results of Table 1, where the pocong resembles a human form but has a scary statue with a pale white face and black eye circles and bright white eyes. The physical form of the characters in this game refers to the style of horror games made from abroad, such as in America and Japan, so that the style of the characters displayed is closer to being realistic in the real world. The costume matrix presented in this game is in the form of a shabby white cloth with tones of some traces of soil

texture, thus showing the horror or mystical form of the characters presented in this game. The trait matrix shown in this character is that it is fast to move by camouflaging with the surrounding environment.

Table 1. Research Results Related to Character Visuals Pocong In-Game Dreadeye VR Can Be Formed With Manga Matrix Approach

Character Visuals	Shape Matrix	Costume Matrix	Trait Matrix
Pocong	Resembling a human form but has a sinister statue with a pale white face, black eye circles, and bright white eyes.	In the form of a shabby white cloth with tones of several soil textures, it shows the horror or mystical form of the characters presented in this game.	The trait matrix shown in this character is that it is fast to move by camouflaging with the surrounding environment.

3.2. Kuntilanak Character Analysis

In Figure 4, the researcher will discuss the shape matrix, costume matrix and trait matrix for the kuntilanak character in the Dreadeye VR game. This character is one of the supporting characters that are very iconic and has become a local culture presented by the creators of the game in the form of ghost mythology from Indonesia. This kuntilanak character is described as a beautiful woman with long hair and long white clothes. The figure of the kuntilanak is depicted in the form of a beautiful woman with a hollow back. Kuntilanak is described as happy to terrorize the villagers to seek revenge. Kuntilanak, when it appears on the full moon and is always accompanied by the smell of flowers in Cambodia. It is said that men who are not careful can be killed after the kuntilanak turns into a bloodsucker. Kuntilanak is said to be often incarnate as a beautiful woman who walks alone on a quiet street. Therefore, this story is likely aimed at avoiding the female class rather than being disturbed by youths who are afraid of the kuntilanak when walking alone on a lonely street.

Fig. 4. Kuntilanak Character in Dreadeye VR

The shape matrix of the kuntilanak character in the Dreadeye VR game resembles a human (female) form but has a beautiful statue with make-up and will become scary when it attacks. The physical form of the characters in this game refers to the style of horror games made from abroad, such as in America and Japan, so that the style of the characters displayed is closer to being realistic in the real world. A transparent white dress is used for the costume matrix presented in this game. Meanwhile, the trait matrix in this character is easy to move and grumpy when attacked. Table 2 is research results related to character visuals kuntilanak in-game Dreadeye VR.

Table 2. Research Results Related to Character Visuals Kuntilanak In-Game Dreadeye VR Can Be Formed With Manga Matrix Approach

Character Visuals	Shape Matrix	Costume Matrix	Trait Matrix
Kuntilanak	Resembling human form (woman) but has a stature that is beautiful with makeup and will be scary when it comes to attacking.	The costume matrix presented in this game wearing a colourful dress the white transparent.	The trait matrix in this character is easy to move and grumpy when attacked.

3.3. Tuyul Character Analysis

In the results of the discussion in Figure 5, The researcher will discuss the shape matrix, costume matrix and trait matrix for tuyul characters in the Dreadeye VR game. Tuyul is a ghost in the form of a dwarf or a small child with a bald head who is believed to be able to steal money for his master. The myth about this money-stealing demon has existed for many years. Initially, tuyul emerged due to social inequality between the community and landlords and the assistance of subtle beings was considered the easiest way to explain all the increasingly complicated affairs for people in rural areas who were still traditional.

Fig. 5. Tuyul Characters in Dreadeye VR

The shape matrix of the tuyul character in the game Dreadeye VR resembles a human form (a small child) but has a scary statue with white eyes. The character's physical form has a small height, and the characters in this game refer to the style of horror games made from abroad, such as in America and Japan, so that the style of the characters displayed is closer to reality in the real world. For the costume matrix that is presented in this game without using a costume, he is naked with pale body colour. The trait matrix of this character is shy and very agile to hide. Table 3 is the result of research related to the visuals of tuyul characters in the Dreadeye VR game.

Table 3. Research Results Related to Character Visuals Tuyul In-Game Dreadeye VR Can Be Formed With Manga Matrix Approach

Character Visuals	Shape Matrix	Costume Matrix	Trait Matrix
Tuyul	Resembling the human form (small child) but has stature, which me scary with white eyes.	The costume matrix presented in this game without wearing a costume naked with pale body colour.	The trait matrix of this character is shy and very agile to hide.

4. Conclusion

Based on the results of the discussion above, it can be concluded that the visuals of the characters presented in the Dreadeye VR game have mixed visual forms with the local culture displayed. Then also use the myths that exist in Indonesian culture for mystical characters that are displayed, such as pocong, kuntilanak and tuyul. It is related to the manga matrix approach, where in creating these characters, the creators of the game start from imagination and ideas that come to mind based on the experiences that the creators have gone through, either social or cultural experiences. So mythical characters are created that are present in the figures of pocong, kuntilanak and tuyul, which make this game very thick with the culture and social life of people in Indonesia by looking at the matrix of shapes, costumes, and the nature of each character presented. A game must be developed with a thorough and careful concept, especially on the visual parameters, so that the goals of the creator can be achieved. Then from the results of this study, it is hoped that it can be used as reference material for developing character design creation, especially in the game industry, so that designers can create characters that have an appeal to attract players by incorporating elements of local culture in the game and be taken into consideration in the visual development of future game characters.

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