

The Use of Game Elements in Hollywood Science Fiction Films, Taking Ready Player One and Free Guy as Examples

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Abstract: Film and game integration is a new phenomenon in today's multimedia era, and Hollywood science fiction films become a good carrier for the use of game elements with advanced production technology and virtual visual presentation. Based on current research, this paper uses the method of image analysis to explore the use of game rule elements and goal elements in two representative science fiction films, namely, *Ready Player One* and *Free Guy*. It looks into the formulaic effect of the rule elements on films' world construction and their innovativeness in terms of humanistic worldviews. Furthermore, it considers the set of layered characteristics of the goal elements in the films' narrative structures, especially the infinite narrative. Finally, by analyzing the individual cases of the two films and reflecting critically on the presentation of the films, it is concluded that in order to realize the integration of film, game and audience, the wide dissemination of the game spirit, and the subversion and reconstruction of the video world, it is necessary to make trade-offs and innovations. Directly using game elements gives positive inspiration for the creation of future film-game fusion works.

Keywords: Film gamification, Game rule element, Game goal element, *Ready Player One*, *Free Guy*

1. Introduction

In 2018, Hollywood produced the science fiction film *Ready Player One*, which earned 3.8 billion RMB at the global box office. This reflects the large consumer market and broad development space of the aesthetic form of film gamification. Hollywood continues to explore the potential of combining games with science fiction films and in 2021 it launched *Free Guy* with the same game theme.

At present, there are more and more studies on the fusion of film and video games in the academic field, but most of them focus on the new aesthetic characteristics arising from the fusion of the interactive nature of the game medium and the narrative nature of the film medium, while few studies are conducted from the perspective of game elements. Therefore, this paper focuses on the use of two main game elements, namely rule and goal, in the Hollywood science fiction films *Ready Player One* and *Free Guy* and their possible effects on the films.

The elements of rule and goal are the points frequently mentioned and generally agreed upon by domestic and foreign scholars. Firstly, the rule element is the necessary point and core that most of the game definitions share. Levi-Strauss writes in *The Savage Mind*, "(a)ll games are defined by a set of rules which in practice allow the playing of any number of matches" [1]. Stahl defines a game as

“an interactive simulation, involving more than one player, of a strategic game situation” and divides game activity into rigid-rule gaming and free-form gaming [2]. Secondly, there are two types of statements about the goal element of the game. One category is Parlett’s definition: only one of the contenders, be they individuals or teams, can achieve the goal, since achieving it ends the game. To win is to achieve that objective [3]. Another category refers to temporal boundaries. Caillouis argues that the nature of play includes separation, which means “circumscribed within limits of space and time, defined and fixed in advance” [4]. Carse’s definition combines both of them, and he divides games into finite games and infinite games. “There are at least two kinds of games. One could be called finite, the other infinite. A finite game is played for the purpose of winning, an infinite game for the purpose of continuing the play” [5]. Therefore, many scholars at home and abroad mostly focus on one aspect of specific game elements for definition qualification, and the amount of literature from the perspective of game elements’ effects is relatively small, which provides certain new ideas for this paper.

This paper mainly adopts literature research method and film analysis. By finding and reading the works and literature related to the definition of game, Hollywood science fiction film, and film-game fusion, relevant theories and research results are organized. Taking *Ready Player One* and *Free Guy* as the objects, the game rule and game goal elements involved in them are studied.

In conclusion, both films use these two game elements as well as innovations that have multifaceted effects on the world-building and narrative modes of the films. From *Ready Player One* to *Free Guy*, the understanding and use of game elements are a process of continuous improvement and experimentation. The filmmakers’ increased attention to game elements and innovation and their concern for the humanity of the film-game fusion category are clear.

2. The Game Rule Elements in *Ready Player One* and *Free Guy*

Game rule elements can be divided into two categories, while there is also an invisible rule element. The game rule elements assist in building the movie world and have an influence on the movie’s worldview.

2.1. Game Rules: Rigid Rule vs. Free Form

Game activities can be divided into two categories: rigid-rule gaming and free-form gaming. Rigid-rule gaming refers to the gaming in which all the rules of the games are exactly defined at the start of the games and every possible combination of players’ decisions is thus exactly defined. Free-form gaming refers to a situation where the participants invent the rules as the games go on [6].

In the definition of rules, there is also a vague concept – invisible rules. Invisible rules are unspecified rules, which generally refer to value-oriented social norms and moral concepts. Invisible rules are essentially humanistic rules, which are naturally generated in players’ interactions and followed by movie characters from their hearts, and therefore also belong to the category of free rules invented by players.

2.2. Game Rule Presentation: World-building Formula

The world in a movie is the story space created by the movie, which contains the viewpoint on the whole world that the movie wants to convey. The view of the whole world in the movie is pre-determined by rigid rules, which are equivalent to the movie background, specifying the space in which the characters move and the characters or players must act within the framework of the rules. The story space of the movie, on the other hand, is the context in which the characters create their free-form rules. Hollywood science fiction movies are non-realistic and fantasy in nature, and their science fiction worlds are difficult to create, so they have to construct the world through the assistance

of rules. Rules and logic are the central elements in the world undergoing construction, and they keep the science fiction world in the films internally unified through the following formulaic approach.

2.2.1. Using Mechanistic Rules as a Framework – the Example of the Movie *Ready Player One*

The mechanistic rules are actually the rigid rules of the game, which present the game space on the screen through the medium of film. The rules of the game may be the goals of the game players in the game and in the movie they are the framework for the characters' actions. These types of rigid rules are essentially the vehicle for the world of the movie. *Ready Player One* provides a way to earn gold in a game called *Oasis*, and any player can also get props scattered around the game on merit from Halliday, the founder of the *Oasis*. In this game, everyone is on the same starting line, and the more gold people have, the higher rank they are. In the *Oasis*, people can go anywhere, do anything they want, and accomplish things that cannot be done in the real world. In the library's video, Halliday says, "I don't wanna make any more rules, I'm a dreamer, I build worlds" [7]. All of these reflect that the *Oasis* world built by Halliday is equal and free, and this is also the characteristic of the film's world concept.

2.2.2. Aiming to Break the Rules – The Example of the Movie *Free Guy*

After a deeper understanding of the rules, Hollywood science fiction films often break the rules to make the characters real and relatable, making the films' story space three-dimensional and vivid and sublimating the films' worldview. The rigid rules in *Free Guy* severe players and non-player characters (NPCs). In the world of Liberty City, those wearing sunglasses are players, and NPCs initially do not dare to break through their own framework, do their part, and wear player sunglasses, until Guy, a NPC in the game *Free City* of the film, puts on the sunglasses as other players do. Then he breaks the rules of the game for NPC set and gets rid of the original unchanging life. He is free to make life choices and even helps the heroine to take back the *Free City*. Finally, in the fight with Dude, the villain of the game, he also unexpectedly puts on sunglasses to Dude. In this way, he breaks the rules and destroys his enemies. As he says, "I'm done playing your game. It's time I played mine". This kind of rule-breaking behavior is the embodiment of the film's individual courage to rebel and fight the concept of courage.

2.3. Game Rule Innovation: From a Programmatic Worldview to a Humanistic Worldview

The worldview of the games is predetermined and is depicted by the game producers at the game production stage according to the market demand or personal intention. The significance of the worldview in the games is to ensure that the game mechanics, rules, and objectives can be clearly known by the players. This kind of game worldview output is one-way, mechanical, and procedural. At the rule level, those simple competitive games often force players to be framed in the game worldview through the setting of rigid rules. For the film, although rigid rules also exist in order to build space and time, it is innovative and variable compared to the game. At the same time, there are also free-form rules in the film, which encompass moral codes and social rules and are closely related to human nature. From the game medium to the film medium, from the mechanization of the operation mode to the dynamism of the content change, the rules of the game have undergone a series of changes. Among them, the rigid rules are innovated and the free-form rules are added, thus transforming from a procedural worldview to a humanistic worldview.

Although Hollywood science fiction films attract audiences with a sense of technology, what ultimately impresses audiences is often emotion, humanity, and a humanistic worldview in the films. This concept emerges because behind each character are players with human consciousness, and the rules of humanity in a real human world are naturally brought into the game. This worldview can be

a social code of mutual help between friends. For example, in *Ready Player One*, Aech, the hero and Wade's friend and teammate, uses his body as a bridge to allow his teammates to enter a planet, sacrificing himself to protect others, and finally, the hero is willing to share the *Oasis* with his teammates. As Wade says, "A man with a friend is not failed". Similarly, in *Free Guy* Buddy who is the hero's best NPC friend in the game world also says to Guy, "What's more real than a person trying to help someone they love" [8].

From the world system of Hollywood science fiction films constructed by rigid rules, it can be seen that both films adopt the form of meta-universe, i.e. a new type of virtual and real Internet applications and social forms resulting from the integration of multiple new technologies [9]. Moreover, the meta-universe enables the penetration of virtual devices into reality [10].

Although one of these two films is an exploration of VR (Visual Reality) technology from the outside in and the other is a breakthrough from the inside out, both combine the virtual world with the real world to form a huge worldview system. The rule that runs throughout both films is that each player can produce self-content, and users can treat themselves as the centers, forming a rule that is centered on self-experience, self-feeling, and self-choice. The "world" is turned "outside in" (the physical is being represented in the virtual), and the metaverse is going "inside out" (virtually-controlled sensors are permeating the physical world) [11]. Thanks to the metaverse, people will try to compensate in the virtual world for what they are missing in real space. For example, Keys, the programmer who has a crush on the heroine in the real world of the movie *Free Guy*, designs the character of Guy to hide the love he does not dare to say to the heroine Millie in reality; Halliday hides his memories, regrets, and love for Kira in the game *Oasis*, hoping that there would be players to do things for him that could not be achieved in the real world, including dancing with Kira on the dance floor. The alternation of two spaces in the form of a meta-universe is essentially an innovation of rigid rules, and players can realize one person's two identities with the help of dual space-time, guiding their behavior with personal emotional needs and integrating humanistic factors into the plots of science fiction films.

In order to highlight the values of justice and humanization, the rules often have a process of improvement, and in the process of achieving the addition of free-form rules, this change of rules means the innovation of the worldview system. Most of the worldviews in Hollywood science fiction movies are led by the villain's disregard for human nature and profit-oriented concept to the protagonist's leading concern for human harmony and justice. Among them, the villain's worldview is restrained by rigid rules. For example, in the game world and the real world, IOI, the company set up by the villain in the movie, is cruel, because it locks up some people and forces them to work for it and even wants to kill Wade in the real world while the justice side is to simplify the rigid rules and rely on free-form rules to focus on human nature. When Wade takes over the *Oasis* game, he closes the server two days a week to allow players to accompany their families in the real world. The protagonist and the villain struggle with two worldviews within the framework of the rules to determine who can ultimately call upon the entire masses, i.e. all non-protagonist characters. This is about evoking a sense of belonging to the characters around the world at a psychological level. For example, Wade calls on the players of the whole *Oasis* to make them realize that some people have lost their freedom and some have lost their lives because of the existence of IOI, and he tells all the players that he has found missions, friends, and love in the game which are more important than himself. Wade uses his humanistic concept to arouse the humanity of all the players, and under the transmission of the humanistic concept, everyone joins hands to save the *Oasis* in the name of Halliday, and eventually the humanistic. In the end, the humanistic worldview inevitably overcomes the procedural worldview, which also confirms the oft-repeated theme of Hollywood science fiction films: "good often triumphs over evil".

While the deeper meaning of free-form rules for the construction of a humanistic worldview is fully aware, the rigid rules should not be completely abandoned, otherwise, the plot will easily fall into a deadlock and hollow. For example, at the end of *Ready Player One*, everyone should be destroyed in the game of *Oasis*, but the curator gives the hero a coin with a life so that he has a chance to win the game, using the rigid rules of this coin to push the humanism of the film to the climax. The only way to break the mechanism is to work on the rigid rules, so the audience will feel that it is unexpected and reasonable. Therefore, rigid rules are also the products of humanistic ideas bred by free-form rules. Only when rigid rules and free-form rules complement each other, a humanistic worldview can be successfully constructed.

3. The Game Goal Elements in *Ready Player One* and *Free Guy*

The game goal elements can be divided into two categories, and the differences and changes in goals have an impact on the film's narrative which makes the film structure complex and diverse.

3.1. Game Goals: Finite Goal and Infinite Goal

The games can be divided into two types: finite games and infinite games. A finite game is played for the purpose of winning while an infinite game is to continue the play [5]. Therefore, the goal of the games can also be divided into two kinds – finite and infinite, i.e. whether there is a clear endpoint.

A finite goal is a more common quantifiable task in the game. The first is the finiteness of time and space and the game is played under the predefined time and space. The second type of finite goal is the finiteness of winners, where the games end when one or more winners are produced. The third is the finiteness of the way of winning. Reaching the requirements set by the program is regarded as completing the game task, such as reaching a preset level and obtaining a quantitative amount of wealth. Infinite goals can both bring infinite processes and infinite endings. An infinite process is an event that can be repeated over and over again in a loop in order to complete the goal. An infinite ending is a task that cannot be quantified, without a clear or tangible result, more like an open ending.

From the time dimension, a finite goal is a short-term goal while an infinite goal is a long-term goal and the player's goal is to keep the games going for a long time. Based on the characteristics of the two kinds of goals, Hollywood science fiction movies often use the finite goal as the beginning and transition, and the infinite goal as the ending, using the openness of the infinite mission to give the film value, enhance the characters' image and achieve the unexpected effect.

3.2. Game Goal Presentation: Narrative Structure Nesting

Hollywood science fiction films sometimes adopt a non-linear narrative form that disrupts the normal sequence of time and space in order to express the science fictional aspects of the films' spatio-temporal structure, which is driven by the characters' goals to nest the stories in layers, forming a nested narrative structure. A nested structure can be interpreted as a story within a story [12]. As long as there are other textual layers within the text, it can be regarded as a nested structure in any form. The natural transition between internal and external texts and different layers needs to be guided by character motivation and character tasks to make the narrative present a logic.

The typical feature of the text stacking structure is the self-reflexivity of the structure. The movie *Ready Player One* uses VR technology as an intermediary to divide the space into the real world and the game world, in which the real world is the "outer" structure of the movie and the game world is the "inner" structure of the movie. The film starts with a narrative that connects the inner space with the outer space, with the alternation of space oriented to the different stages of the characters' tasks, but the ultimate task for the protagonists is to protect the *Oasis*, and for the villains is to seize the ownership of the *Oasis* for profit. The film's storyline travels between the two time periods, layering

on the audience to set aside the background of the story and establish character relationships. When the film reaches its climax, the gamers unite to protect the *Oasis* as the ultimate task. The achievement of the task requires the cooperation of two time periods, and the inner-outer space presents a fast-paced narrative. Although the images are presented sequentially, the actual narrative is simultaneous, with the parallel montage technique for the transition of the text, and the horizontal line part of the figure refers to the simultaneous plot. For example, when Samantha, one of Wade's friends and teammates, in the real text closes the magic ball, Parzival in the game text rallies friendly troops at the same time. The film uses a dual narrative to present the cooperative element, and the two character lines point to the same motive. In the use of parallel montage, the film also allows intertextual interference between different texts through natural editing. When the players confront the IOI in the game fall, the devices of these fighters will go out one after another in the real Nolan company. This echo between texts not only enriches the visual experience but also avoids giving the audience a sense of disconnection from the narrative.

The structure of the set of layers also mediates the transformation of the subject's identity. For example, in the real world, Wade is an independent and self-absorbed boy living at the bottom of the social ladder, whose family is poor and not treated by others, but in the world *Oasis*, he is the first game master who gets the key. Despite the two identities of the two worlds, the protagonists have the same consciousness and the same mission. Both are fighting to defend the *Oasis*, and the ultimate goal guides the plot so that the narrative can be logical while the pace of internal and external text alternates and accelerates.

3.3. Game Goal Innovation: from "Convergent" Finite Narrative to "Divergent" Infinite Narrative

The game is a spatial medium stronger than time and its space is shared by the creator and the player. The creator plans the game elements through complex rules to guide the player's action, which determines the characteristics of the game's "pre-determined narrative". In the face of the task of a fixed single choice, multiple choice models are constructed step by step to simplify the player's game direction. The future branches decrease step by step and the narrative scope narrows, showing "convergence". Facing the game content, players can make their own interpretation and expectation of the game process according to their own experience and feelings, but the goal and task towards which the players are heading are fixed. Therefore, the openness of the game only stays in the designer's perspective, which is actually a "closed narrative" for the players and tends to divorce the players from the game. In contrast, the film focuses more on time and narrative. The player's task choice has mobility and the players can generate plots when playing the game mechanics, or even choose to abort or open a new task, which belongs to the "generative narrative". The uncertainty increases and the future direction shows "divergence". For example, in *Ready Player One*, Duke is forced to wear the player glasses that do not belong to the NPC and this is not a mechanical task. It is more like a surprise egg, leading the narrative towards a more unknown direction.

Whether it is a film or a game, there is always an ultimate mission at the end, which makes the games easy with no outside factors, and the conditions for success are clear and unquestionable. In the film, limited tasks are often for non-lead characters and the starting tasks of the protagonists. For example, in *Ready Player One*, the villain's task is to get the key to controlling the *Oasis* of wealth and becoming the only one to win, while the hero's starting task is to complete Halliday's challenge and win the way to reach the *Oasis* of the game set. These are the traditional nature of the task, but the infinite task is the key that the film wants to express. The completion of the infinite goal is an extension of the connotation of the film after the end of a phase. The future of the story is still unknown and the player's task is to solve this phase of the problem so that the world presents a positive and optimistic direction. For example, when Wade won the *Oasis* in order to make the game *Oasis*

more humane to carry on, he made a provision to shut down the server to guide people to return to reality and live in the present. The film only tells the story of Wade's success in getting the three keys to end the limited tasks set by Halliday and bring the *Oasis* to a more positive future and it ends with Wade in charge of the *Oasis*. However, from the film's entire worldview, this is only the beginning of the *Oasis* and the infinite tasks are just beginning. The goal elements of Hollywood science fiction films are not limited to the "convergence" of the film's content when they have an impact on the narrative, but rather the "divergence" of the worldview contained in the films, leaving room for the audience to think and giving Hollywood science fiction films room to shoot sequels.

4. Conclusions

At present, games are gradually moving towards the world of virtual reality integration, and "film and game integration" is no longer a simple IP theme or visual style but an attempt to integrate the external form with the internal technology at a deep level and innovatively use game elements.

Both *Ready Player One* and *Free Guy* reflect the deep-level use of game rule elements and goal elements. The rule elements allow the world of the film to change from procedural to human culture, and the goal elements allow a finite narrative to become an infinite narrative. A vertical analysis of the two films shows that their understanding and use of game elements are a process of continuous improvement and experimentation. *Ready Player One*, as a landmark beginning of film-game integration, takes the lead in introducing game space and interactivity into video communication and visually presents game elements. Although *Free Guy* adopts dual space, the central task changes from the real task to the game player, and the film style changes from science fiction adventure to science fiction comedy, reflecting the importance of game elements and innovation.

"Using games but more than games" is the biggest highlight of the two films. They use the puzzle nature of the game but do not get trapped in the game space. They still focus on the audiovisual language, narrative value, and humanistic value of the film medium, landing in real space.

These two Hollywood science fiction films have given positive inspiration to the creation of film-game fusion in terms of structuring game elements, grasping the value foothold, and catering to the public demand. However, it should be dialectically recognized that gamification aesthetics is different from movie aesthetics, and movie narrative needs a complete plot foundation to avoid the logical fault caused by direct reference to the stereotypical narrative of games. Moreover, the use of game elements should be reasonable and adequate. Many films are trying to draw on the visual effects of games to build immersive experience scenes in films but ignore that what is important in films is not interactivity and the role of the films' audio-visual language lies in their lyrical, dramatic and coherent performance. In short, gamification is only a means for films to break through the traditional barriers, and the audience's viewing experience is more important than images.

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