

Rochester Institute of Technology

RIT Scholar Works

Theses

7-7-2020

Design and Production of 3D Animation Short film “RELICT”

Huzehui Xia
hx8217@rit.edu

Follow this and additional works at: <https://scholarworks.rit.edu/theses>

Recommended Citation

Xia, Huzehui, "Design and Production of 3D Animation Short film “RELICT”" (2020). Thesis. Rochester Institute of Technology. Accessed from

This Thesis is brought to you for free and open access by RIT Scholar Works. It has been accepted for inclusion in Theses by an authorized administrator of RIT Scholar Works. For more information, please contact ritscholarworks@rit.edu.

RIT

Design and Production of 3D Animation Short film “RELICT”

BY

HUZEHUI XIA

A Thesis Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Fine Arts in Visual Communication Design

School of Design

College of Art and Design

Rochester Institute of Technology

Rochester, NY

July 7, 2020

Committee Approval:

Mike Strobert

Date

Chief Advisor

Co-Director of Visual Communication Design program

School of Design, College of Art and Design

Daniel Deluna

Date

Associate Advisor

Associate professor

School of Design, College of Art and Design

Abstract

Relict is a surrealist animation short film expressing satire and self-examination of Beijing's major social issues by depicting the illusion of Beijing' future. Beijing, as the capital of China, has a lot of social problems that have existed for many years. Among them, the main problems we focused on are the housing price, the population explosion, and air pollution. In this piece, with a series of scenarios including indoor scenes and outdoor landmarks created for Beijing's future based on social problems, Relict will affect the audience's thoughts about our modern life.

Keywords:

Relict 3D Beijing Social problem Future

Introduction

Liu (2019) investigated the value of Science fiction in China. With the popularity of "The Wandering Earth" in 2019, it can be reasonably predicted that rapid artworks of science fiction themes will be promoted by people and the world they live in. Therefore, in Relict, we strive to create visual works reflecting these contemporary social problems that will eventually appear under the development of time, instead of just pursuing gorgeous visual effects without meanings. We summarize some social problems that visual design should mainly reflect in this short film after deep thinking based on realism into three following points.

Content

First, air pollution is always an eternal topic for human beings. Forouzanfar's research shows that polluted air and 6.4 million deaths worldwide are interrelated in 2015 (Forouzanfar, 2015). The air quality in Beijing isn't considered good by people since the whole city looks like it is covered by fog. This is an important social issue that has caused widespread discussion in recent years. As the capital of China and an international first-tier city, Beijing's air quality is even lower than most industrial cities because of frequent hazy weather and the high volume of fine particulate matter (PM2.5) in the air. Zhang (2016) concluded that air pollution in Beijing appear to have a complex set of causes, including high growth rate of the population and the accompanying problems of car exhaust, heating, and other energy issues. On the other hand, air pollution can cause some health problem. Tian (2017) investigated that the visits of asthma exacerbations are increased by higher PM2.5 concentration.

The second problem is the chaotic population management in Beijing. Beijing brings together the best education resources and human resources among the whole nation, so an increased amount of people are coming to Beijing for better education and job opportunities (Chen, 2016). This led to the immigrant population becoming cheap laborers who have a low income, low quality of life and no place to live in this big city. Even those immigrants who received high education before and have a decent job, couldn't buy their own house due to the policy of household registration. At the same time, their children don't have equal education opportunities compared to Beijing residents. According to Goodburn (2009), the causes of preventing migrant children from entering state schools are closely related to discrimination, administrative and financial barriers.

Lack of space for population activities is the third problem we want to convey to our audiences in the project, which is mainly reflected in this huge gap between house prices and the income of Beijing's ordinary working-class. Real estate prices have skyrocketed because urban families are frantically participating in the commercial housing market (Yang, 2019). Li (2020) found that the cost of first-hand house in Beijing has lifted annually from 2005 to 2017 by 43 percent. Calculated based on the average salary of new college graduates and the average house price in Beijing, a 100 square meter apartment in Beijing costs people who own a bachelor's degree 20 - 30 years of work only if they don't spend their incomes on anything else. This situation is even worse for other low-income people. However, housing is a rigid demand for people, and this imbalance between supplies will inevitably affect Beijing's future urban planning.

In summary, audiences will see that the design of many scenes reflects those social problems in Beijing. If those problems cannot be effectively solved, they will become more and more intense as time goes by.

Methods

To highlight the dark and depressing social atmosphere in Beijing, at the beginning of the film, a series of dark and cold color scenes were used to describe the mood. With the development of the film, we used more bright colors with warm tones in the scenes to emphasize the grand and magnificent Beijing as the capital of China. At the end of the film we used warm tones, expressing that although Beijing's future development is accompanied by many social issues, we still believe it will get better.

Similarly, in the choice of scenes, the first few sets of shots are mainly depressing indoor office scenes. These indoor office scenes are the most common places for white collar workers to work. In the middle of the film, more outdoor scenes appear, showing Beijing's magnificent urban temperament. Among them, there are not only modern landmark buildings but also scenes of ancient buildings built since the Ming Dynasty, which express the conflict and coexistence of old and new cultures in Beijing as an ancient historical capital. The last shot returns to a close shot, a set of still life scenes. It expresses that problems in quietness and stability will be solved and order will continue to improve.

The whole film begins with a night scene, the middle of the film begins with sunrise, and the end of the film is dawn.

The editing logic on this timeline expresses that after the long night, the dawn with hope will always arrive eventually. It is full of idealistic meanings and metaphors.

798 is Beijing's most distinctive art and design industry center, originally an abandoned industrial plant. At the end of the 20th century, a group of poor but talented artists in Beijing gathered in these abandoned factories for artistic creation, spontaneously organizing some exhibitions of contemporary art. Later, more and more art and design industries gathered here and gradually formed the 798 Art Center. In 798, the most representative is the exhibition hall of the UCCA (Center for Contemporary Art), which is the picture I presented in this scene. I placed a dense but empty iron lung in this special architectural design exhibition hall, which symbolizes that if Beijing's air pollution issue becomes worse, people who travel in the streets wearing protective masks now will eventually have to rely on ventilators to live.

In addition to these two scenes, the conceptual design of other indoor and outdoor scenes has also undergone such deliberation. Among them, the Chinese character element is also an interesting detail that I added in some of the scene design. For example, Chinese characters “计划生育” on the wall of the nightclub scene refers to the slogan of China's one-child policy. The two poems on the wall of the Palace Museum imply that all the things one wants to pursue deliberately can not be achieved in the end if they are rushed, suggesting that blindly pursuing the speed of development may lead to more problems. The four words above the 798 Hall describe the various landscapes in the world as extremely beautiful, but they are in sharp contrast to the iron lungs below, which is ironic.

Another scene is the Zhengyang Bridge. Zhengyang Bridge is a part of a defensive ancient building built in the Ming Dynasty. Now behind Zhengyang Bridge is a whole commercial street, which is one of the preferred leisure places for Beijing residents and foreign tourists. In the future, if Beijing needs more space to accommodate urban residents because of increasing housing crisis, it may only have surrounding areas of ancient buildings like Zhengyang Bridge developed into living or working space. Therefore, in my design, the whole below and behind the Zhengyang Bridge are filled with residential buildings that block out the sun. These residential buildings are extremely magnificent, but in contrast, the size of every single room is stretched to accommodate more people.

Beijing's most representative, and also the main gathering of immigrants, is the office buildings in the most popular financial business center. These people are the mainstay of the people floating around in Beijing. Many of them come from other places and do decent jobs, they work hard however get low pay. In China, there is a working model called 996, which means working from 9 a.m. to 9 p.m. every day for a total of 12 hours, working six days a week. Such a high-intensity work model is sometimes a rigid rule of the major companies in Beijing. Employees can only choose to obey; otherwise, they have to leave. Zhang (2020) unveiled that the salary for "996" workers can be similar to what non "996" workers earns. Therefore, on the one hand, the white-collar class in Beijing is under great pressure at work; on the other hand, their salaries cannot make the price of their houses in Beijing affordable. They have to be in the office buildings as we depicted in the early part of the film, accompanied by dense workplaces, or shuttle in the office hall, worrying about if the crowded elevators are coming or not. And for the design of a series of office scenes at the beginning of the short film, we mainly create a very depressive and cold atmosphere through

composition, the position relationship between objects, lighting, and color, which lays an emotional tone for the whole film.

Although there are subways in big cities all over the world, Beijing's subway is very unique. In Beijing, because of urban planning and population overload, many people can only travel by subway during rush hours (Wang, 2018).

Some of them are white-collar with no savings; some are not without private cars, but cannot tolerate the abnormal traffic congestion in Beijing that may cost them much time. Beijing's subway runs every 2 minutes during rush hours, but it still can't withstand the huge pressure of passenger flow. Many stations with large traffic in Beijing Metro have special staff that constantly use loudspeakers to urge passengers to get on and off the train efficiently during rush hours. Sometimes, their duties even include pushing passengers crowded in doorways into subway carriages by hand so that the subway door can be closed and the subway can operate normally. Because of the large scale of Beijing's city area, the average commuter who commutes through the subway needs to spend 1.5 to 2 hours of commuting events on the subway every day.

One scene in the film depicts the Zhichun Road subway station, a transfer station connecting Beijing subway Line 13 and subway Line 10. Zhichun Road Station is a necessary station connecting Haidian District, where Beijing's university group is located, and Chaoyang District, where Beijing's white-collar office buildings are concentrated. Countless people come and go at this transfer station every day.

Result

This thesis showcase about the short film Relict makes full use of the exhibition space of 1540 classrooms, using the big screen to show the film itself and the making process video of the film. The details of each scene are displayed back and forth separately on the 24 mac screens, letting viewers watch the individual scenes they are interested in at close range while watching the film or waiting for the film to be played. The auditorium is equipped with sofas and chairs, which can accommodate up to 25 people to watch movies at the same time. The mac screen also shows the text description for each scene and the author's personal information for the audience to further understand the work and communicate with the author.

The schedule of this thesis project is quite ideal. With the premise of guaranteeing the rational implementation of the design ideas, we maximized the time and cost of rendering support that we can use, completing a short film with good visual and ideological quality. The design of picture albums and posters in combination with short films in the later period is also highly completed, which played a very important role in explaining and publicizing the short film and thesis showcase.

Due to time constraints, the redesign of some scenes is in a hurry in terms of details. Noise in some night scenes is quite obvious. We try our best to make up for the above problems by using color grading and noise reduction in Adobe After Effects.

Conclusion

For this project, We use a short film to show some aspects of prediction apply in landmarks after introducing the problem Beijing faced in the future. Both evidences and references are expected for prove that complex social issues are the reason why Beijing is consuming. Obviously, people should be careful about the source use due to the difficulties of different national conditions. The finding of this project remind students may need to understand the use and functions about their own field to avoid some problem they may encounter in their designs. And supervisors can identify requirements based on students' demands. As we did this research, we aware some aspects about the difficulties of rendering problems we haven't find out, perhaps future studies can explore more challenges about rendering and give designers more instruction about different strategies. Overall, the whole film has achieved the author's expectations. The exquisite design of different scenes not only satirized some existing social problems in Beijing, but also constantly affect our audiences' thoughts and behaviors of protecting our living environment.

Reference

Liu, Yang. (2019). Prospects of the Chinese "Imagination" Movies with Sci-Fi as a Striker. Proceedings of the 5th International Conference on Arts, Design and Contemporary Education (ICADCE 2019), 2352-5398.

Forouzanfar, Mohammad., Ashkan Afshin, and Lily T Alexander et al. (2015). Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *The Lancet*, 388, 1659-1724.

Zhang, Hefeng., Shuxiao Wang, and Jiming Hao et al. (2016). Air pollution and control action in Beijing. *Journal of Cleaner Production*, 112, 1519-1527.

Tian, Yaohua., Xiao Xiang, and Juan Juan et al. (2017). Fine particulate air pollution and hospital visits for asthma in Beijing, China. *Environmental Pollution*, 230, 227-233.

Chen J., Wang D., Zhou Y. (2017). Education for Population Control: Migrant Children's Education Under New Policies in Beijing. In: Cha YK., Gundara J., Ham SH., Lee M. (eds) *Multicultural Education in Glocal Perspectives*. Springer, Singapore.

Goodburn, Charlotte. (2009). Learning from migrant education: A case study of the schooling of rural migrant children in Beijing. *International Journal of Educational Development*, 29, 495-504.

Yang, Zhenshan., Pu Hao, and Di Wu. (2019). Children's education or parents' employment: How do people choose their place of residence in Beijing. *Cities*, 93, 197-205.

Li, Yan., Zhaoyang Xiang, and Tao Xiong. (2020). Beijing Housing Prices from a Multiscale Perspective. <https://doi.org/10.1155/2020/5375206>.

Zhang, Zhiwen. (2020). Isn't "996" a Good Reason to Quit?. http://tesi.cab.unipd.it/64075/1/Zhang_Zhiwen.pdf.

Yacan Wang, Dick Ettema, Huiyu Zhou & Xiangrui Sun. (2018). Understanding peak avoidance commuting by subway: an empirical study in Beijing, *International Journal of Logistics Research and Applications*, 21:6, 597-613, DOI: 10.1080/13675567.2018.1466871.