PoeceptibleVR: Reinterpreting Chinese Traditional Calligraphic Poetry in VR with Multiple Scales and Senses

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ABSTRACT

PoeceptibleVR reinterprets Chinese ancient poetry as a multi-sensorial cross-scale aesthetic experience in virtual reality. It enhances, or rather restores the Chinese traditional poem, Chinese characters and character parts to their animated three-dimensional form, allowing viewers to "walk" through and "feel" the poem coming to life. PoeceptibleVR is intended to enable a global audience with little to no knowledge of the Chinese language to appreciate Chinese traditional poetry. It also invites the Chinese to defamiliarize with and rediscover their cultural heritage.

INTRODUCTION

Background

Chinese characters are three-dimensional mixtures of graphic and phonic elements that encourage association.They started as ideograms representing concrete objects or actions, then gradually, audio aspects are integrated into the original "graphic symbols", turning them into multi-sensorial phono-semantic compounds. The most interesting thing is that, even the phono-part of a compound character, often contributes to its overall meaning.[1]

Chinese traditional poetry is again, a multi-sensorial experience which relies on the organic combination of its audio, visual as well as semantic elements. Most of them follow an undulating tonal pattern. It is a pity that when translated into other languages, the sonic rhythm of a Chinese traditional poem is completely lost.

Chinese traditional poems invite multiple layers of visual examination. At a macro-scale, the whole poem tells a certain story or describes a certain scene. In between, each sentence has their independent roles, and they have to follow a standard pattern in the transition of mood. At a micro-scale, each character or word depicts an independent object or action, and they have to

be geographically correspondent to each other. This is unique to Chinese traditional poetry thanks to the condensity and discreteness of the Chinese language. Most intriguingly, at a nano level, even the character-parts, play a role in constructing the visual and semantic richness[2]. Through intentional distribution of these character-parts, the poet often hint the readers of the hidden theme of the poem. It is thus, a cross-scale wholistic experience to both look at the poem, perceiving the deliberate installation of its sentences, characters and parts, and look through the poem, absorbing its overall meaning.
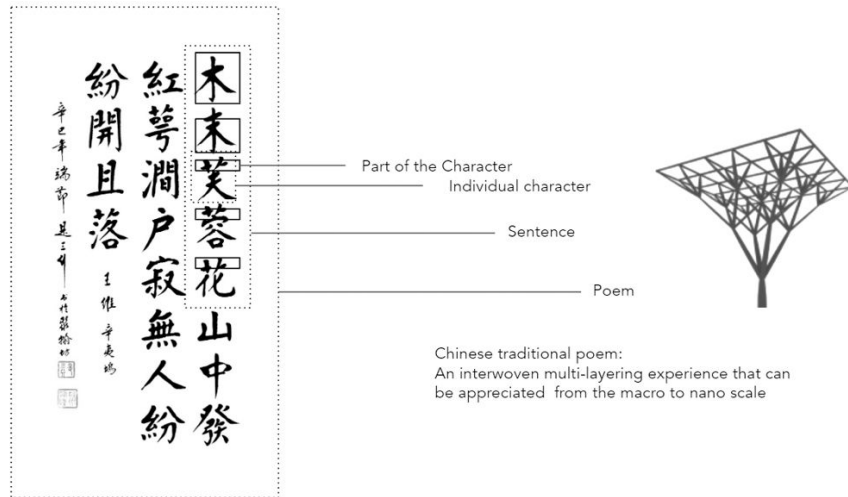

Fig.1: at a nano-level, the distribution of character-parts reveals the hidden theme of the poem

Calligraphic style adds another layer to a poem. To illustrate, the three inscriptions in Fig.2 below are the same poem paragraph written in different styles, which renders their atmosphere completely disparate, the first being desolate, the second elegant, while the last flamboyant.
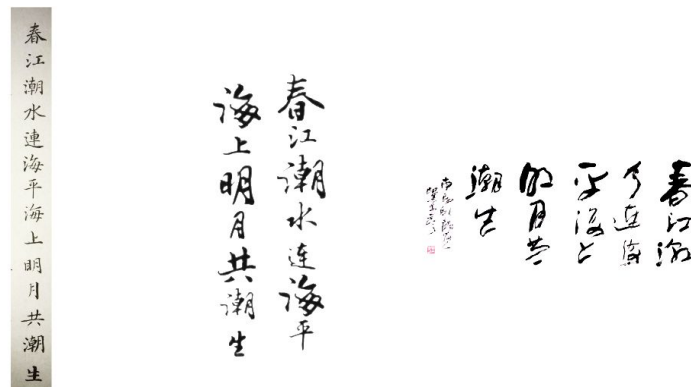

Fig.2: same poem paragraph written in different calligraphic styles expresses different emotions

Chinese painting, calligraphy, and poems are intertwined. In order to understand a painting, one must first read the poem on it. Since the poem is often layered and non-linearly temporal, Chinese painting is imbued with the same non-lineality similar to a 360 VR film or a series of evolving spatial graphics. While reading the poem, viewers are forced to travel through multiple locations on the painting simultaneously, going back and forth, zooming in and out, which itself is a quite modern aesthetic experience.
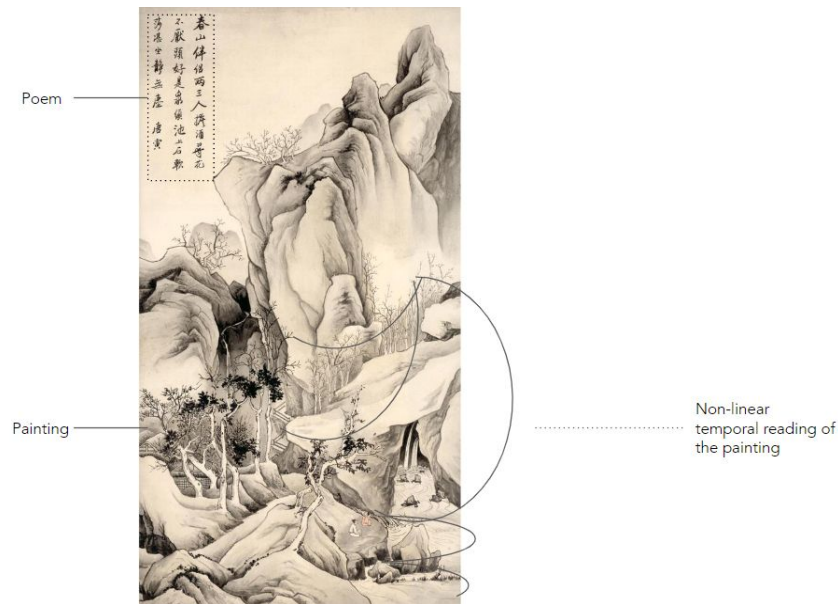

Fig.3: reading the poem directs a viewer through the painting in a non-linear manner

To summarize, it can be said that Chinese traditional poetry is in fact, a multi-sensorial experience that derives its beauty from the careful placement of visual, semantic and audio elements across scale and dimension. Any translation of Chinese ancient poetry into English or other foreign languages that discards its original sonic and visual forms, is doomed to fail.

Motivation

The purpose of this project is to communicate the inherent modernist quality of Chinese traditional poetry to the current-day audience. More specifically, Chinese characters are phono-semantic 2D representations which ought to be restored to their rich 3D origins. Chinese traditional poetry is a cross-pollination of visual and audio elements across various scales. While Chinese painting is a non-linear spatial and temporal landscape waiting to be explored from all angles and trajectories according to its theme poem. All these cultural abundance within

a traditional Chinese poem is lost to the contemporary audience, whether they understand Chinese or not. In that light, this project attempts to investigate what other forms Chinese ancient poetry can take to inspire a present-day audience. The author is interested in enabling non-Chinese speakers, and even the Chinese themselves, to discover the richness and modernity of Chinese painting, poetry and calligraphy as a whole.

POECEPTIBLE

Brief

PoeceptibleVR is a new type of immersive calligraphic poetry that weaves sonic, visual and semantic poetry altogether. It offers viewers a unique self-directed experience of navigating a "live" poem through physical movement. In VR, viewers will be able to travel through a 3-dimensional poetic landscape of evolving Chinese ancient characters rendered in a unique calligraphic style accompanied by the poem soundtrack. Viewers are encouraged to look at, look through, hear, touch and feel the "poem".
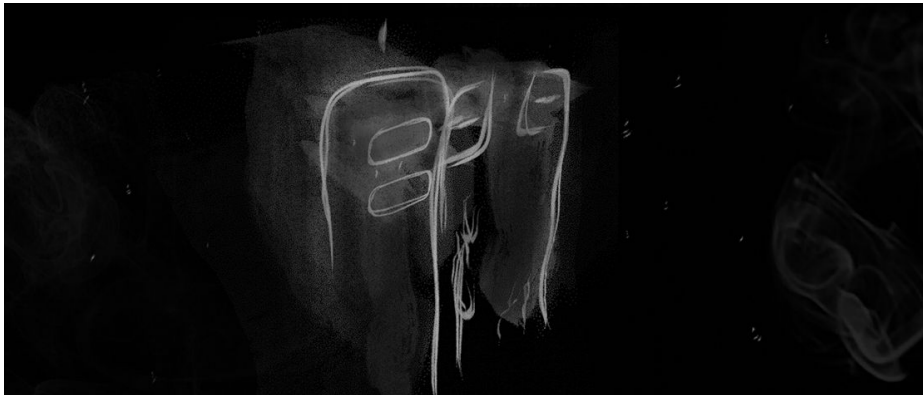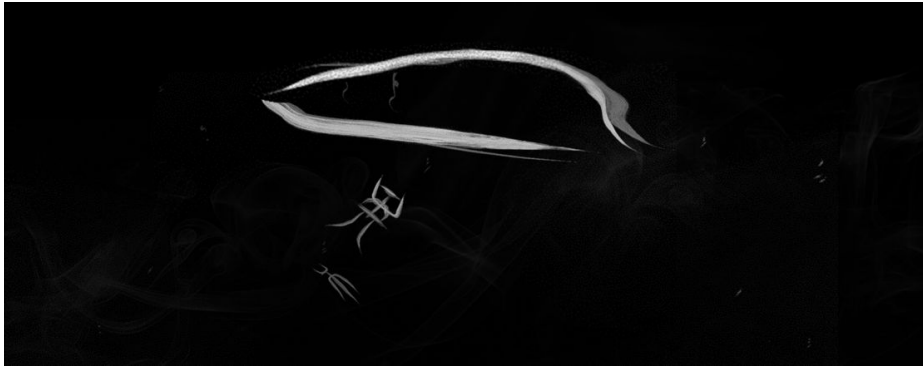
Fig.4: screenshots of PoeceptibleVR——spatialized and animated characters

Approach

The elements of the poem, "calligraphic characters", were hand-drawn and animated in VR using AnimVR. Then the author edited and shot a 360 video according to the poem soundtrack with the camera from AnimVR. Viewers can follow the optimal viewing path suggested by the result video to appreciate the poem. They are also given the freedom to "gang their own gait".

Expected Contribution

As mentioned above, the author expects PoeceptibleVR to set an example for reinterpreting Chinese traditional poetry in a contemporary context. From a cultural perspective, it is intended to communicate the aesthetic richness of Chinese traditional poetry, calligraphy and painting to a larger audience. From an educational perspective, it helps those who are interested in learning the Chinese language and poetry to understand them from a multi-sensorial angle, which actually restores the language to its origin with the help of current-day technology.

Process

The process includes four phases, selecting the poem, conducting research on its characters for "reconstruction", concept initiation (sketches), and animation in VR.

1.The poem

The renowned poem Shui Diao Ge Tou (Ming Yue Ji Shi You) was written in the Song Dynasty by the great scholar Su Shi on a moonlit night in memory of his family.

Poem 《水调歌头》
written in Xiaozhuan，
An ancient Chinese calligraphic style

Fig.5: poem selection—— ¼ of the famous Chinese ancient poem Shui Diao Ge Tou

How rare the moon, so round and clear! With cup in hand, I ask of the blue sky,

"I do not know in the celestial sphere, What name this festive night goes by?"

I want to fly home, riding the air, but fear the ethereal cold up there.

The jade and crystal mansions are so high! Dancing to my shadow, I feel no longer the mortal tie.

She rounds the vermilion tower, stoops to silk-pad doors, shines on those who sleepless lie.

Why does she, bearing us no grudge, shine upon our parting, reunion deny?

But rare is perfect happiness. The moon does wax, the moon does wane.

And so men meet and say goodbye. I only pray our life be long.

2. The character research

Research was done to analyze the ideographic parts of each character in this poem as a basis for association and reconstruction.[4]

Fig.6: poem character research ———— origin and evolution of each character parts
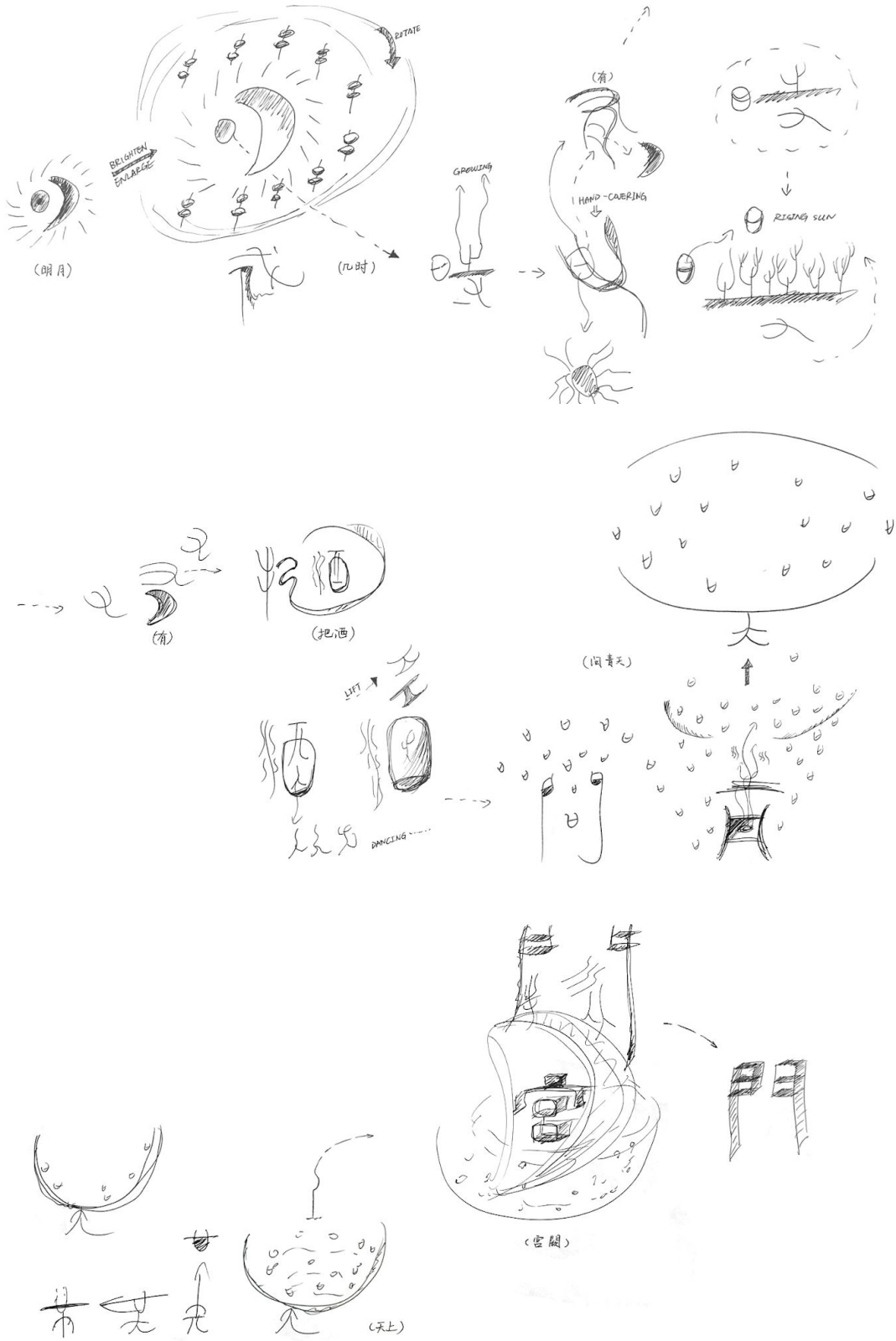
3. Initial Concept Sketch

Fig.7: sketches demonstrating how the characters shift and how the scenes are constructed

4. Animation & Video Production in VR

While visualizing and animating the individual characters in AnimVR, to create subtlety, a lot of effort was put into shifting shades and shadows, and adding micro-animations to the characters. Several characters were anthropomorphized to gain personalities and "spirits", as held by Chinese traditional poets. Once the video is shot, viewers can choose to follow the final video's shooting path inside VR as the optimal viewing path, or navigate the poem in their own fashion.
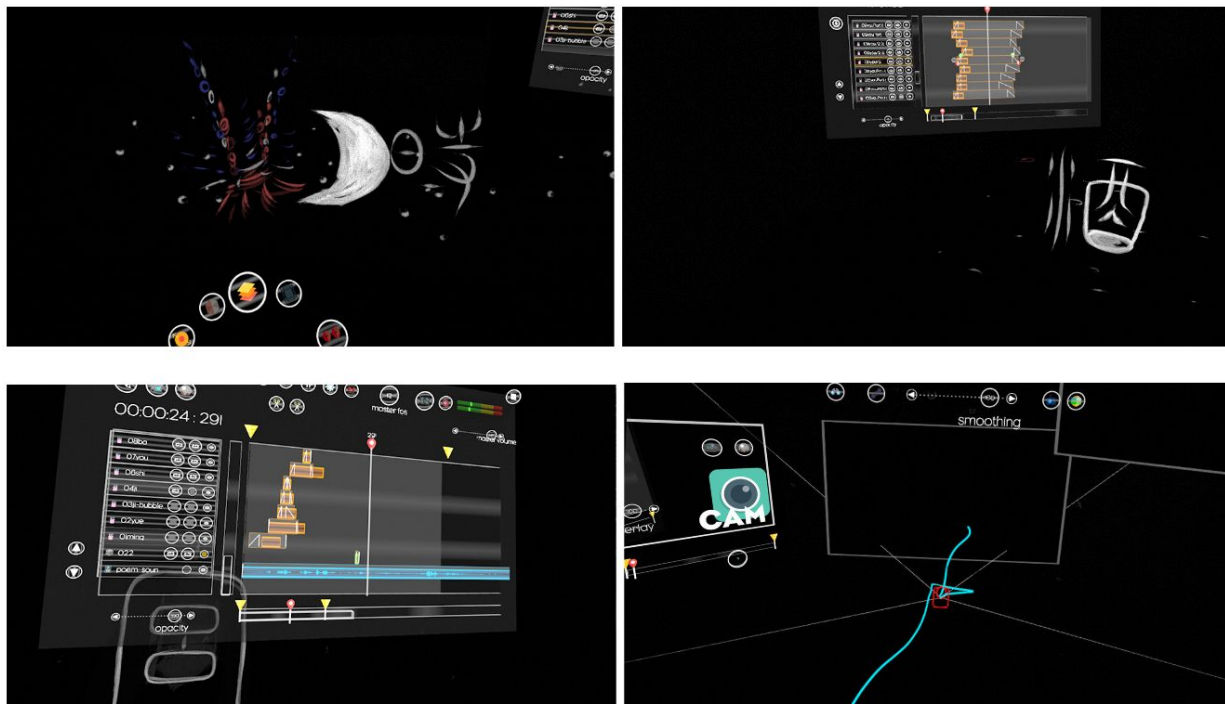

Fig.8: animating the poetic elements and shooting the video inside VR with AnimVR

Result

The result video can be seen on Youtube under the same name Poeceptible.

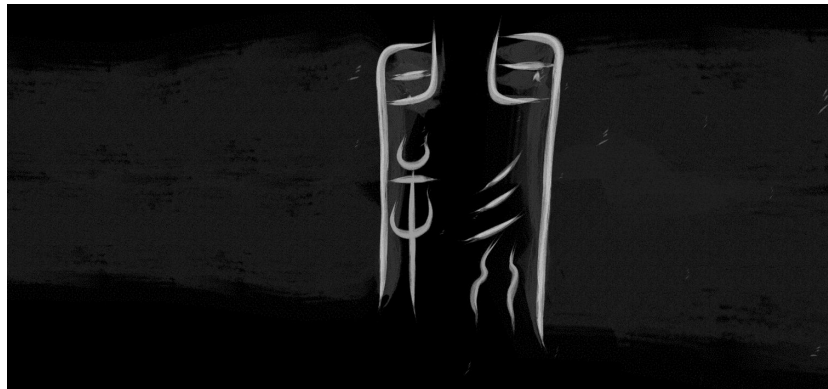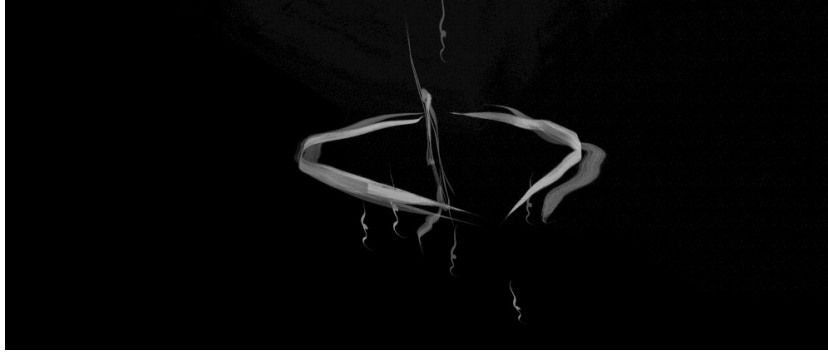Some of the close shots of the characters are listed below.

Fig.9: close shots of the PoeceptibleVR scene

Future Work

The author plans to develop this project further in the following aspects. First, animating the rest of the poem, as currently only ¼ of the entire poem was converted into PoeceptibleVR. Second, using player body movement as input to trigger the deformation of poetic characters with the potential to personalize character styles for different players. Finally, in the long run, the author considers expanding this series into a cultural reinvigoration project which tries to re-interpret modern Chinese characters as three-dimensional dynamic representations.

REFERENCES

[1] Imre Galambos, "Popular Character Forms (Súzì) and Semantic Compound (Huìyì) Characters in Medieval Chinese Manuscripts" International Dunhuang Project, British Library

[2] Francois Cheng, "Chinese Poetic Writing", 1982 Indiana University Press.

[3] vividict dictionary