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Packing Universes

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Packing Universes

I am a genius pianist who cannot play the piano for a long time for some reason. One day, I decide to play the piano. I visit the music department in some universe to show my piano performance, but a professor says my hands are too stiff to play the piano. During the piano practice, I hear about a legendary piano. I desire to play the piano, so I go on a journey to find the legendary piano. I struggle on my way because of wardens, which are dogs speaking human words. During my journey, I run away from the wardens between idiosyncratic, accordion-shaped buildings. While running away, I overcome my fear by jumping between buildings and run to achieve my purpose. Finally, I find the piano on the second floor of a ruined building. I play a performance on the legendary piano and overcome adversity in front of the public.

This is a summary of my dreams. I was the girl and I had the experience through her. In my other dreams, I became various characters. I was a psychology consultant who was threatened by a serial killer, or a person who was confined in a school by zombies. After dreaming, I am haunted by vivid memories that feel real. I began to believe in other worlds that are similar but different, ones that exist beyond the universe where I live. I imagined the existence of my other selves in that other universe. I borrow the eyes of my other selves in my dreams. In other words, dreams are a channel to connect me with my other selves. After thinking about it, I found movies, books, and blogs, which focus on the subjects of dreams and other worlds. Therefore, the ideas of the other worlds expand to the multiverse. This interesting theory led me to study multiverse theory, especially, quilted multiverse and string multiverse theories. The Multiverse and dreams became important subjects of my artworks.

Dreaming is defined as the brain's subconscious nightly work, the rearranging of information gathered during the day. It is a means for the brain to encode memories. To me, it is also a means to foretell the future or allow new experiences. Since I was a child, I was able to categorize dreams according to their kinds. I classify two types of dreams: my dreams are like a very short film, which is a prophetic dream, and another dream is a regular dream that is like a movie. In the two kinds of dreams, I express the movie-like dream for my art. The dreams are through my other selves' eyes in the other worlds. Also, based on people who usually sleep eight hours, people have three or four cycles of 1, 2, 3, and 4 REM stages. People dream in the REM stage (rapid eye movement stage). That means people dream three or four times a day. I do not remember every night's dreams,

while I remember a couple of dreams a night. The special experiences allow me to assume our “universe” is not the only “universe.” After realizing this and learning about the multiverse theory, I try to remember and record the story of my dreams when I dream. I compare the stories of how different they are from this world.

The ideas of other worlds and dreams are a common subject in many artworks like *Alice’s Adventures in Wonderland*, *The Matrix*, *Inception* and *Another Earth*. The idea of *Alice’s Adventures in Wonderland* has an especially similar idea as my own. In the story, Alice goes to Wonderland where there is another world by following the white rabbit through tumbling down the rabbit hole. She has novel experiences in another world where Alice meets with talking animals and flowers and changes her body size. At the end of the story, she wakes up from her dream and talks to her sister about the strange adventures of hers. Her sister thinks of Alice and all her wonderful adventures, and her sister dreams of Alice. In the book, “...she listened or seemed to listen, the whole place around her became alive with the strange creatures of her little sister’s dream” (Carroll, 244). This quote reveals her sister perceives Alice’s adventure as a dream, but when she imagines her sister, she stands on the border between dream and reality. For example, “The long grass rustled at her feet as the White Rabbit hurried sound compare with the frightened mouse splashed his way through the neighboring pool” (244). This story leaves a place for questioning whether her experience is reality or a dream. This story has had a large impact on me since my childhood. Alice goes into another world herself through physical methods such as a rabbit hole. However, I improve upon the idea and apply it to my dreams. I imagine that my spirit can go to other universes through my dream. My spirit can see the life of my other selves indirectly.

What do dreams mean to me? Dreams are a way out of reality. When I was a teenager, I slept over 14 hours on average. That time was one of the hardest times in my life, so I spent most of my time sleeping. During my sleep, I had various experiences and it gave me the energy to live the rest of the day. This represents my escapism unconsciously, which is related to Chuang Tzu's “Butterfly Dream”. Through Chuang Tzu’s “Butterfly Dream”, I can explain another reason why I became interested in dreams. Chuang Tzu, who is a Chinese philosopher, said, “I thought I was Chuang Tzu who had a dream of being a butterfly. What if I am a butterfly who, at this very moment, is dreaming of being Chuang Tzu” (Chuang-Tzu). In the story, he questions whether his reality is Chuang Tzu or if it is the butterfly. In my opinion, his idea reflects his unconscious escapism just like I do in my dreams. I concentrate on getting out of isolation, which allows me to reach out and explore

the universe. Through this exploration, I seek not only a sense of belonging, but also a sense of interconnectivity. Since my childhood, I sometimes have felt isolation and a sense of difference like Neo, who is a hero in the movie *The Matrix*. I feel this whether I stay with my friends or am alone in my room. Also, this sense leads me to suspect that I am real in this space. I guess that this thought is not only my feeling, but most people ignore the feeling of isolation and a sense of difference because it is a quick moment with a slight feeling. I often muse about the feeling and associate it with my main ideas. Eventually, the sense might arise from the mind which I want to escape.

These streams of thought are naturally connected to the Multiverse theory. These days, various multiverse theories exist such as the quilted multiverse, the inflationary multiverse, the string theory, and the simulated multiverse. In many multiverse theories, I thought the quilted and inflationary multiverse had interesting points for my idea. The quilted multiverse is based on infinite space. Numerous universes are in the infinite space, which has a boundary line called the cosmic horizon. Nothing can get through the cosmic horizon. This point allows me to suppose the only way to get through the cosmic horizon is through a dream. What this means is that, as Brian Greene said, “a finite number of particles, each of which can have finitely many distinct positions and velocities, means that within any cosmic horizon only a finite number of different particle arrangements are available,” in the *Hidden Reality* (Greene, 33). Eventually, the same universe is possible to exist, which has the entirely same arrangement of the particles like a doppelganger. In the book, he says, “a short calculation reveals that the number of distinct possible particle configurations within a cosmic horizon is about $10^{10^{122}}$ ” (33). In other words, the $10^{10^{122}}$ universe might be exactly the same world as our universe. If this universe was the first universe, then the universes between the 1st and $10^{10^{122}}$ universes are either similar universes or totally different. Through these thoughts, people often dream similar situations with what they experience before. However, these situations are similar, but not the same. These features are melded in my works.

The inflationary cosmology, moreover, is the theory of the exponential expansion of space. *The Hidden Reality* explained easily, “the universe as a gigantic block of Swiss cheese, with the cheesy parts being regions where the inflation field’s value is high and the holes being regions where it’s low.” According to this explanation, the holes are the universes where we live. The field keeps expanding the space and the number of holes increases. Scientists called each hole a bubble universe or pocket universe. The Quilted multiverse and the Inflationary multiverse theories have a different source, but these have interrelation.

As previously stated, the quilted multiverse is based on infinite space, and the inflationary universe – pocket or bubble universe – is finite space, but it expands. The Pocket universe Greene explained, looks finite when observed from the outside. However, when people who live in the pocket universe observe it, it looks infinite. In other words, "... ourselves as occupying one of a vast inflationary system of parallel universes, each of which harbors its own vast collection of quilted parallel universes."

As mentioned above, both dream and multiverse are important subjects in my work. People live in one of the multiverses, and they can see the other selves' lives through their dreams. My thesis artworks are *Brain Multiverse*, *P(F)ine Dream*, and *Packing Universes*. Most of my recent works are projection mapping projects which project video on three-dimension objects. At first, *Brain Multiverse* consists of about twenty circle panels, which are different sizes and levels from the wall. Each circle has a video projection of my dream stories. *Brain Multiverse* is my first piece to challenge interactive art. The dream is the personal area, but I would like to invite viewers to my dream worlds to become travelers. I searched for the right device to fit my theme. Viewers can participate by controlling the visual signals through the device. The Mindwave EEG headband is a device which makes it possible to see a person's brain signal visually. It is possible to show the eight signals of Delta, Theta, Low Alpha, High Alpha, Low Beta, High Beta, Low Gamma, High Gamma. In *Brain Multiverse*, when there is no brain signal, the videos of my dream stories represent randomly on each circle. When there are brain signals detected, a waveform brain signal covers the dream story videos. This waveform means dream paths, so it changes the form depending on the signals among the multiverse. In other words, the circular waveform covers the twenty circular panels when the viewer's brain signals activate them. A program called TouchDesigner 099, which is a real-time interactive multimedia program, creates the interactive visual waveform.

Next, *P(F)ine Dream* represents the diverse effects of videos on a pine cone. Pinecones are common around us, so people pass by them without noticing. However, I always think about hidden worlds. According to the Kaluza-Klein theory in String theory, many tiny and hard to show dimensions exist in a larger dimension. Theodor Kaluza and Oskar Keim said, "there might be additional dimensions that are tiny and curled up, making them difficult" (Greene, p.84). Therefore, these invisible 'extra spatial dimensions' which gave me inspiration about the hidden world or tiny world. In my opinion, extra spatial dimensions exist in common, tiny, and hidden places. However, people cannot observe just because the worlds are tiny and hidden. Another reason why I chose the pine cone as material for this

work is that it has many leaves to express the multiverse and various worlds. Each leaf of the pine cone presents different videos such as geometrical shapes, waveforms, and flame-like shapes. For example, the geometrical shapes and waveforms are squares, circular patterns, and circular line waveforms with changing colors and locations.

The final work, *Packing Universes*, is based on the idea of the Bubble Universe in the Inflationary theory. Instead of Swiss cheese, I used the bubble wrap for this piece. *Packing Universes* has the same flow as *P(F)ine Dream*, in which the world belongs in the tiny and common space. When people receive packages, they throw away bubble wrap and boxes. However, this feature has become attractive to me. Through video projection, the bubbles in the bubble wrap depict different other selves who are doing different actions. They are all me, but they exist in other universes. That is why I wear the white mask, they are all me, but I cannot guarantee they have the same figure as me. In each bubble, they do yoga, die, and look melancholy, for example. The concept of *Packing Universes* is all bubbles go on at the same time. Another reason I chose common objects was Sarah Sze's exhibition in the Tanya Bonakdar Gallery in New York. Sarah Sze is a contemporary artist known for sculpture and installation works. Visiting her exhibition helped me to focus on everyday objects. In her exhibition, she projected her video onto a ripped piece of paper that had been taped. Although she used everyday objects, her installation has a powerful energy. Her works look fragile and common, but each figure has valuable stories. Through her exhibition, I realized that common and small objects could be powerful materials if I video map a story on them.

Video projection and projection mapping are an important process in my work. I was looking for the best way to express my dream worlds to viewers. Video projection is the best way to express the images of my dreams. I usually project my video pieces on my objects or installation works. I desire to work with time-based materials because these materials enable viewers to have unique experiences in my works. I prefer to combine the analog and digital. In my opinion, the combination of the physical object and digital content is a more effective way to communicate with viewers than just digital content. The video itself has contents, but it is complete with physical objects. Projection mapping is a technology that makes video projection on irregular objects look as if it is on the objects surface. This feature appealed to me because this enables time-based video works and installation to work together. Also, to express my imagination, video and projection mapping are one of the best ways because it represents narrative pieces. Most of my videos have a flow from one stage to another. My works have emphasized that dreams are a

connection between the other worlds as channels. The loop images make people feel the connection between worlds and the real world. Through the images, I depict a visually confused and semiconscious condition.

Most of my works present vivid colors. I have had migraines. According to *Migraine* by Oliver Sacks, the migraine symptom includes aura's various symptoms like "specific visual, tactile, and other sensory hallucinations, general alterations of sensory threshold and excitability, alterations in level of consciousness and muscular tone, alterations of mood and affects, and disorders of higher integrative functions: perception, ideation, memory, and speech." (Sacks, 57) In the migraine, I usually have visual hallucinations. People have different symptoms in visual hallucinations. In my case, a 'C' shape appears in my view, which stays very close in my eyes. The color of the object is like analog TV noise with white and vivid colors. Therefore, I have consciously used colorful colors in my work.

I intend my works to appeal visually to viewers and to induce surreal feelings in them. My desire for the first impression of my works to viewers is pleasant and light artworks. However, in the end, I have worked to induce a feeling of the uncanny deep inside. My dream is not only wonderful, but most of it is a nightmare. My purpose is to invite them into my dreams to travel by escaping that reality. Traveling my dream worlds allows people to refresh and cure their emotional state. When people want to refresh their condition, they usually read a book, watch a movie, and hang out, even if the experience gives them a weird feeling. These behaviors are a direct and indirect experience which helps to change their condition. The dream is like watching a movie to me, though it might be a horrific or fun movie. My final goal is to show to the viewers both pleasant and uncanny feelings through my dream-worlds.

I give surreal feelings to viewers because while "dream" and "universe" are familiar words to us, they are still mysterious. Although the multiverse theory cannot be proved with modern technology, this theory is one of the most active discussions between physicists. Also, many psychoanalysts and scientists study dreams, like Sigmund Freud and Carl Jung. However, dreams remain an uncertain field because they are very subjective. These unverifiable fields stimulate my imagination. The proper mix of reality and surrealism remains a subtle uncanny feeling to us. Moreover, humans instinctively settle down and want to have a sense of belonging. Since I sometimes feel isolated and have not yet found a sense of belonging, I seek out a place far beyond. These points are united and developed within my art, depicting a dream as a channel to other universes. Weird dreaming and interesting knowledge are a large part of my life. Feelings of isolation and a sense of

difference are feeble and momentary, so all people feel that, but they usually do not realize it. Perhaps you are dreaming now, and you live in another universe.

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