

Paradise

Reality, Illusion and Dualism

by

Qianyu Xie

ABSTRACT

Paradise is an interactive installation which intends to create a discussion on dualism in contemporary society. Paradise provides an immersive experience by lighting and merging the installation's shadows and viewer's shadows. It is built for individuals to feel the reality and illusion simultaneously, as well as the disconnection between the installation and shadows.

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CHAPTER 1

INTRODUCTION

Where there is a shadow, there is light. Light and shadow exist in an opposite way, but make each other complete. The relationship between light and shadow reflects the relationship between two opposite sides of an object. According to Plato's view of dualism, mental phenomena are, in some respects, non-physical, or that the physical world is an extension of mental world. However, the relationship between mind and body is completely different today because of the rapidly changing technology. It is hard to tell what real world and virtual world are, and what the difference is. *Paradise* is trying to have a discussion on the relationship between abstraction and figuration, appearance and essence as well as reality and illusion.

Paradise, an interactive installation, includes kinetic sculptures and projected shadows. It provides an immersive experience by lighting and merging the sculptures' shadows and viewer's shadows when individuals stand in front of the sculpture. This experience will let them feel the reality and virtuality simultaneously, as well as the connection and contrast between the sculpture and shadows.

Paradise is made of mixed materials, with an abstract appearance including several small kinetic mechanisms and spotlights. The mechanisms driven by AC motors will move with a constant motion. *Paradise* uses an ultrasonic sensor to detect a single viewer's position. If the user is standing in front of this installation, several spotlights are triggered and a shadow of people with a pair of waving wings are shown on the wall. Ideally, the goal of this work is to get viewers involved in the dark and light environment,

let them have fun with moving shadows and think about the relationship between the shadow and the sculpture.

This paper is going to analyze the working process of Paradise, including inspirations, intentions, aesthetic issues and technical issues. It will contain some theoretical and technical research to support the project.

CHAPTER 2

INFLUENCES: BICYCLE WHEEL

Paradise was firstly inspired by *Bicycle Wheel* (Figure 1) made by Marcel Duchamp in 1913. *Bicycle Wheel* is considered to be the first of Duchamp's readymades—objects (sometimes manufactured or mass-produced) selected by the artist from design and designated as art. Most of Duchamp's readymades were individual objects that he repositioned or signed and called art, but *Bicycle Wheel* is what he called an "assisted readymade," made by combining more than one utilitarian item to form a work of art.

I appreciate and love Duchamp's *Bicycle Wheel* not only because he redefined sculptures by using readymades, but also because of the items he used for this piece. In this sculpture, Duchamp mounted a metal bicycle wheel and fork on a painted wooden kitchen stool. It visually creates a contrast between metal and wood, black and white, as well as movement of the wheel and stillness of the stool. I was impressed that Duchamp created those connections and contrasts simply by using only two ordinary items in daily life. That makes me understand that the selection of materials and items is a big part of the thought that goes into the style of a sculpture. *Paradise*, as a kinetic sculpture, refers to Duchamp's ideas of art and readymades in many ways, for example, *Paradise* uses an old wooden bench as its base and two bicycle wheels for movement.

Furthermore, from the perspective of the items themselves, there is a strong feeling of disconnection that initially confused me. The stool or the wheel make me always thinking about a question that which one the main part is of *Bicycle Wheel*. I

cannot give an answer. However, I was trying to bring this question to both my work and concept. In this way, *Bicycle Wheel* provides great value to my work both technically and conceptually.



Fig. 1 Marcel Duchamp *Bicycle Wheel*

CHAPTER 2

INFLUENCES: WILD MOOD SWINGS

Wild Mood Swings (Figure 2) is created by artists Tim Noble and Sue Webster in 2009. They are recognized as sculptors who take ordinary things including rubbish, to make assemblages and then point light to create projected shadows which show a great

likeness to something identifiable including self-portraits. *Wild Mood Swings* is a sculpture with an abstract appearance made by mixed materials such as wood pieces and leather. This sculpture is projecting a shadow which has a silhouette of a man and a woman sitting on a stool when it is illuminated from a specific angle. *Wild Mood Swings* provides a good example of extending the art piece itself to the environment by lighting and shading. From the perspective of a viewer, *Wild Mood Swings* is focusing on the communication between the sculpture and the shadow's silhouette, and that is what I am trying to do in *Paradise*. Meanwhile, The appearance of this sculpture is messy and disordered. It is so unrecognizable that viewers cannot associate it with people's portraits, and I think this is the key to hold audience's curiosity and the approach to impress them. Tim and Sue's work shows an excellent thinking of attracting and surprising audiences. In the same way, The mean part of *Paradise* is built as an abstract kinetic sculpture with seemingly useless and meaningless movements, but with a figurative and recognizable shadow on the wall.



Fig. 2 Tim Noble & Sue Webster *Wild Mood Swings*

CHAPTER 2

INFLUENCES: CYCLOGRAVEUR

In various ways *Paradise* was perhaps most inspired by Jean Tinguely's work. He is best known for his sculptural machines and kinetic art. *Cyclograveur* (Figure 3), one of his most famous work, is built in 1960s. It is a kinetic sculpture consists with several wheels, gears and mechanical arms and linkages. Tinguely constructed it by using rusty parts scavenged from bicycles, automobiles, and baby carriages. This machine allowed audience to seat and push the pedals to make a generative pattern on the large drawing board which extended beyond the pedals through the connection and movement of each part. What Tinguely affects me the most is his understanding to kinetic sculptures and machines. Usually, in practical machines, the goal is to reduce Irregularities as much as possible. But Tinguely seeks the opposite. He was focusing on discovering the maximum mechanical disorder within a controllable range and looking for the meanings of a non-functional machine. His ideas made *Cyclograveur* no longer an accurate and rigid machine, but an emotional and active sculpture. For example, loose and stretchable components and linkages bring some unexpected, but natural movements and sound that perhaps add a humorous or funny mood to this sculpture. I consider this understanding as an artistic language that makes a sculpture more authentic and interesting for audiences to watch and interact.

Moreover, *Cyclograveur* is a classic art piece to show the complexity and beauty of mechanical structures and shadows. I personally prefer mechanisms than well-polished

structures in *Paradise* because mechanized structures can create relatively complex and dynamic shadows, as well as make this work physically more powerful and tangible.

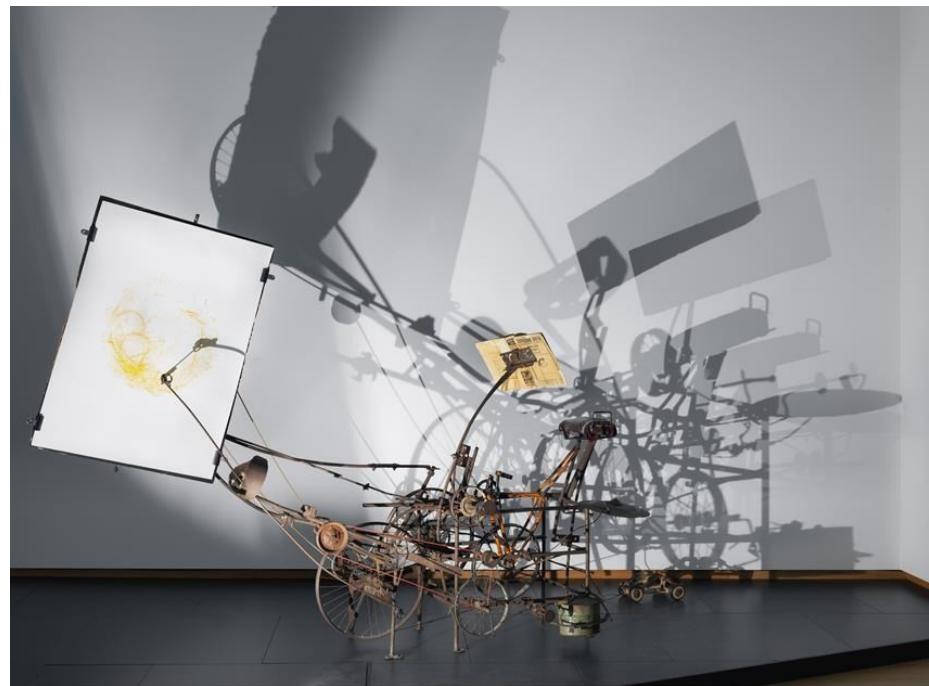


Fig. 3 Jean Tinguely *Cyclograveur*

CHAPTER 3

ISSUES OF CONTENT: INTENTION

As years passed by, I have witnessed the uprising of multiple digital technologies, such as motion capture, augmented reality, and virtual reality. These technologies allow us to integrate our actions and senses into the virtual world. I have also been addicted to and excited about these immersive experiences, but I have also felt a great sense of loss and emptiness. Every time I experience this mixed feeling, it leads me to think about what virtuality and reality are in the current era and what virtuality and reality mean to digital arts. An old philosophical concept called dualism somehow helps me better define the relationship between virtuality and the reality.

Dualism discussed the relationship between body and mind. The concept was put forward by the Greek philosopher Plato, thinking that the world is composed of mental world and physical world. The mental world is a real and permanent existence, and the physical world that human senses are exposed to is only an extension of the mental world. It consists of phenomena, and each phenomenon is caused by different factors such as changing time and space. According to this, Plato used it as the philosophical foundation of his theory. *Paradise* discusses neither specific classifications and theories of dualism, nor whether the theory is correct, but only draws on some of its dialectical perspectives and attempts to examine the definition of reality and illusion, and the relationship between them in this work.

The term “virtuality” which mentioned above does not only refer to the virtual world inside the screen but is a general concept which refers to what viewers speculate or

imagine based on the vision or sound of physical objects. Since the experience of my work is mainly based on vision, the term “illusion” is more appropriate than “virtuality”. In *Paradise*, there are two main parts of this work. One is the sculpture itself and the other is shadow. Shadow is a reflection and extension of an object. It reflects what the object is in some way and there is a dialectical connection between them. Therefore, the sculpture itself is viewed as a physical item which represents reality, and the shadow of wings is considered as something that initially does not exist, which represents illusion. However, the sculpture itself is a machine with a form of abstraction and non-functional movement. It does not have a name, definition and it is meaningless. Meanwhile, the shadow exists in an illusive way, but it shows the shape of a pair of wings, which is a very specific and figurative object. In other words, in this work, the actual item lacks meaning, but the illusion has value that can be understood by people. In this way, *Paradise* brings a question to audiences. If reality does not make any sense, can it be called reality? On the contrary, is an illusion still an illusion if it can make people react and cause people’s emotion?

The relationship between reality and illusion exists in two states in *Paradise*. One is the state when no one passes or stands around it, the sculpture stays still without motion, and shadows do not exist. They both maintain the meaningless state. The other is when the interaction between viewers and the sculpture happened, the sculpture starts to run and the shadow of an individual with waving wings appears on the wall. In this state, the shadow is the outcome of the sculpture and the individual. That is to say, reality and illusion are interdependent, and they make sense to each other. The interaction in this piece is to let viewers walk around and trigger the spotlights and motions so that they can see their shadow merged with the shadow of waving wings. This interaction between

people and the installation is to create an experiential and immersive environment, let them feel the reality and illusion simultaneously, and also have fun with the silhouette of shadows. Conceptually, it emphasizes that people's coming break the disconnection between the reality and illusion.

In a gallery, people can certainly have fun with *Paradise*, but as an art piece, *Paradise* is not just for people to play with. It contains more things that are worth to thinking about. It contains more things that are worth to thinking about. It does not give any specific answers and conclusions while it brings forth questions and discussions. The ideal goal of this piece is for viewers to ponder and get inspired.

CHAPTER 3

ISSUES OF CONTENT: ART LANGUAGE

As an artist who has been working in the new media and interactive fields for six years, my understanding of art and interaction is constantly changing due to the development of technology. In the past, I viewed digital art as a combination of technology and visual or sounds effects, which requires screens, buttons, and sounds. But in the past two years, I have been learning a lot from fine arts and other disciplines. As a digital art piece, the goal of this work is not to show the diversity of technology, but to show my concept powerfully by digital medias. Every component in my work is in support of my ideas. To me, the art language of my artwork includes physical mediums, digital media and interaction.

In *Paradise*, the sculpture is built to show a sense of abstraction and visual disorder. The sculptural part consists of various items, including an old wooden bench, bicycle wheels, spotlights, steel pipes, plywood boards, iron wires and plastics, etc. These

objects define the visual language of this sculpture, just like the colors and strokes in oil paintings. The diversity of textures of these materials actually enlarges the contrast, as well as makes this sculpture have a sense of chaos and disorder. For example, in this piece, the wooden bench is thick and heavy, the plastic boards under the light appears to be very shiny, and the metallic luster shows power and strength.

I kept scratches, rust and even some tags on those items so that the whole sculpture looks very handy, tangible and authentic. When spotlights and motors are triggered, the wheels start to spin as well as some parts of this sculpture begin to move. Meanwhile, the mechanisms create sounds of friction between different items. The movements and sounds are not smooth as a practical machine, and that make the sculpture move with some natural pause and unexpected sounds. I think these phenomena are also crucial components to enhance the experience.

The individual with a pair of waving wings is a specific figure that I choose as a romantic metaphor when discussing the relationship. Conceptually, this figure symbolizes an angel who does not exist in the physical world, but in everyone's mind, and this is the point where the name "Paradise" comes from. However, It is called "Paradise" because of not only the metaphor of angels, but also the extended concept of paradise. Paradise is often described as a "higher place" or "heaven". Apart from this, "Paradise" is the term for a place of timeless harmony. In this work, it indicates the reality and illusion that initially does not exist or makes no sense, but finally become meaningful when the silhouette of an individual with a pair of waving wings shows. The relationship among reality, illusion and people is a harmony in *Paradise*.

In summary, the combination of all elements I mentioned in this chapter composed my art language to *Paradise*.

CHAPTER 4

AESTHETIC ISSUES

Paradise is an interactive kinetic sculpture which consists of mixed materials. In this work, there are many items, including a wooden bench, two bicycle wheels, steel pipes, brass tubes, wooden dowels, iron wires and plastic pieces. These different items are both functional and aesthetic. They made the sculpture itself with appearance of abstraction and chaos. The view of the mechanical sculpture is not only to confuse audiences at their first sight but also to reveal the beauty of disorder and complexity (Figure 4).



Fig. 4 Installation view

The base of this sculpture is an abandoned old wooden bench. The bench is painted in dark red and the paint on the bench has cracked because of prolonged use.

Loose connections between bench legs and surface sometimes causes slight shaking.

These features make the base create a sense of roughness and heaviness.

The supporting structure of the right wing and one of the mechanical systems is set on the bench. There are two gear mounts made by plywood and an AC motor mounted on the bench surface. Two steel shafts separately pass through the holes on the gear mounts, and two bicycle wheels are individually attached at one end of each shaft (Figure 5).

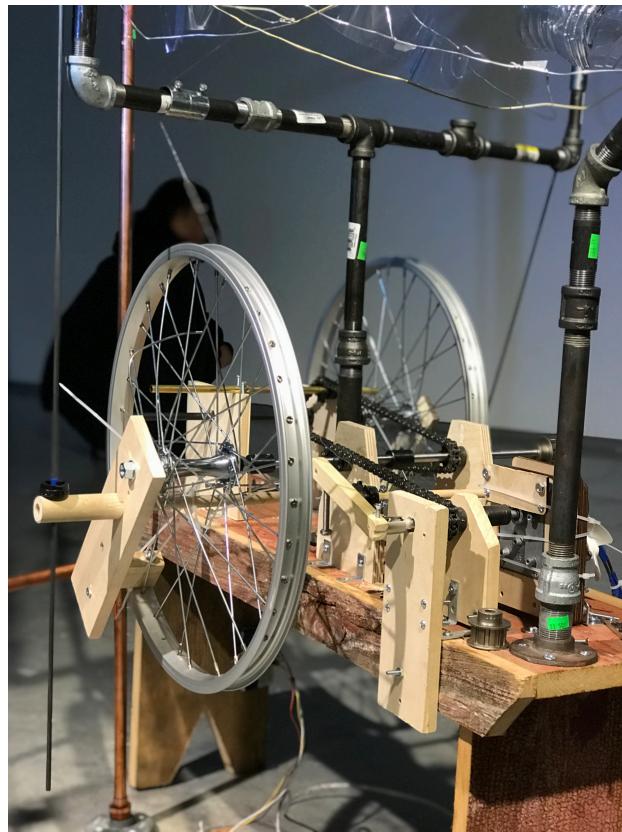


Fig. 5 Supporting structure and the mechanical system of the right wing

The supporting structure of the right wing is a 2 feet tall and 2.5 feet wide T-shaped steel pipe. It is connected by several short steel pipes. Both ends of the horizontal pipe are located above the wheels. Two 1.8 feet long branches vertically extend from both ends of the horizontal pipe.

There are two metal tubes separately set on two branches as sliders, and they can move smoothly along the branches. There are two iron rods individually connecting one wheel with one slider. The junctions are flexible so that the rods can push the sliders and let them move up and down when the wheel turns. This structure is the slider-crank mechanism, which is one of the mechanical systems of this sculpture.

The main skeleton (Figure 6) of the right wing consists of an iron rod, a wood dowel and a brass tube. The iron rod has its both ends connected to the two sliders, and this makes the two sliders can move simultaneously. One end of the wood dowel is hung on one slider, and the other end is put on top of a 4 feet tall copper pipe which fixed on the floor, next to the bench. Meanwhile, The brass tube has one of its end hung on another slider, and the other end connected to a fishing string. The fishing string passes through the top of another branch which extended from the bench surface, connects to a crank on the motor shaft. There are iron wires and plastic pieces attached on the skeleton as the carrier. The carrier is the crucial part of the shadow. A bunch of iron wires are wrapped around the skeleton, as well as several plastic pieces are randomly fixed or stuck on wires in different layers. The carrier is designed for filling the space of shadowed shape (Figure 7).

Another supporting structure is a 4 feet tall steel pipe which set 3 feet next to the bench, and fixed on the floor. It is used for supporting the left wing. Similarly, there is a brass tube as a slider set on the top of the pipe, and an AC motor set at the bottom. An iron rod connects the slider and the disk on the motor shaft. The skeleton of the left wing includes an iron rod and a short brass wire. One side of the iron rod is hung on the slider and the other side is put on the top of the copper pipe next to the bench. One end of the brass wire is attached on the slider likewise, and the other end is tied by another fishing line. The fishing line passes through the top of a branch which extended from the

supporting structure, and the other side of this line is connected to the disk on the motor shaft. There are also some iron wires and plastic pieces attached on the iron rod as the carrier of the left wing. The interpenetration and placement of all these items realize the function of the mechanical parts, and also create the complexity of the sculpture.

A 3.5 feet tall steel pipe set on the floor is for support a spotlight. The distance between the bench and pipe is about 4 feet. The spotlight faces the middle of this sculpture to project shadows of the whole sculpture. The spotlight is set in a very specific angle to make the shadows of some moving components and some carrier layers overlapped, so that the shadow of waving wings can be created by the light.

Although the shapes of carriers are irregular, the silhouette of it is still symmetric due to the specific lighting angle. However, the clearness is different due to the distance between each carrier and the spotlight. The shadow of the right wing is clear than the left wing, and shows more details. The plastic pieces are cut from plastic water bottles and there are patterns initially on the plastic surface. The shadow projected from the patterns shows a great likeness to feathers.

The materials in this sculpture mainly include wood, plastic, iron, steel and brass. Diverse textures in this sculpture show both shininess and roughness under the light, as well as a mixed sensory experience. Because of some handmade mechanisms and linkages are not accurate as a practical machine, there are some natural sounds of friction and a slight offset of movements when the sculpture is running. Meanwhile, some labels and tags are left on the some of the items, and some scratches and rust are not removed on pipes and wood. These outcomes are not intentional, but they do not detract from the whole and enforce the original intent. The unexpected outcomes provide more natural randomness and do not affect the expression of the concept. In addition, these visual details make the sculpture more rough and authentic.

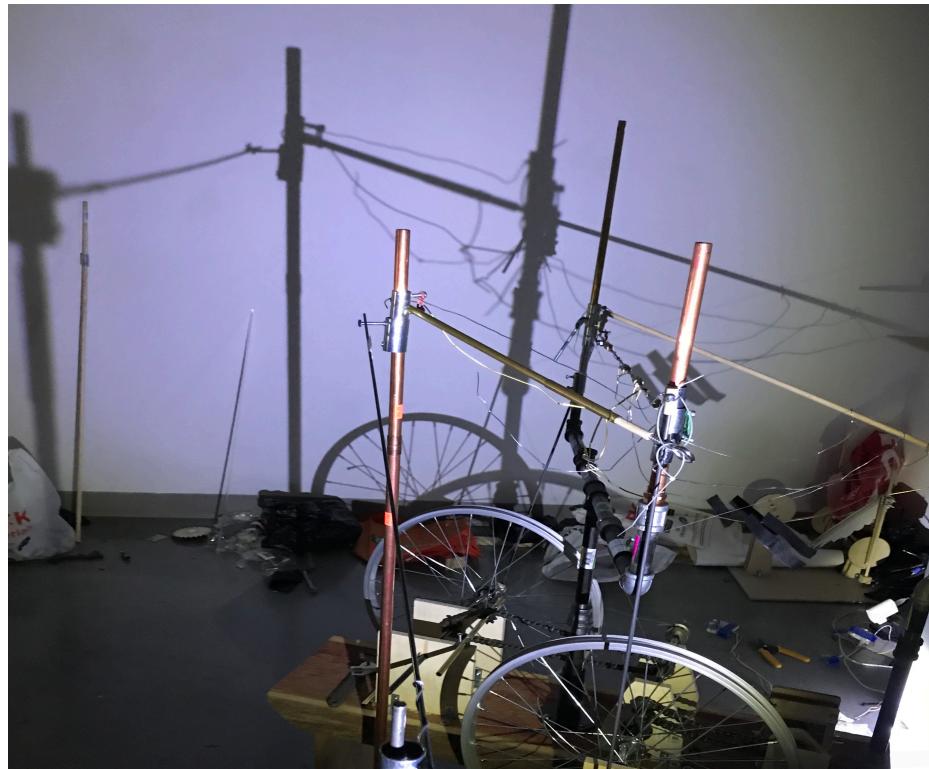


Fig.6 Skeleton of the right wing

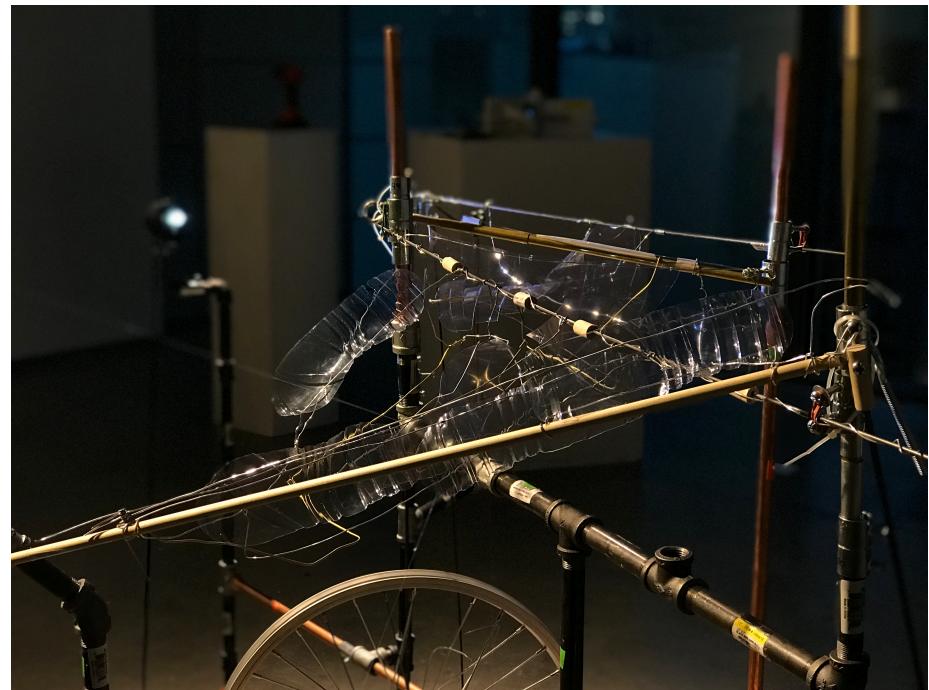


Fig.7 Carrier of the right wing

CHAPTER 5

TECHNICAL ISSUES: MECHANISM

Paradise is a kinetic sculpture based on the slider-crank mechanism. The slider-crank mechanism is used to convert rotary motion into linear motion. In this piece, there are two slider-crank mechanisms (Figure 8). One is a regular slider-crank mechanism for the left wing. The other is a complicated slider-crank mechanism for the right wing.

To take the mechanism of the right wing as an example, it is set on the bench surface. Various couplings are used in the mechanisms for connections between different shafts. Each wheel is connected with a polished steel shaft by using a flange-mounted shaft support. Different shafts are connected each other by shaft couplings. In addition, some set screw couplings are used for connecting pipes and branches. These precise connectors allow the core mechanical structure to run smoothly. Several sprockets are fixed on the steel shafts and the motor shaft. There are two circular roller chains hung on the sprockets, connecting the steel shafts to the motor shaft. When the motor turns, the shafts connected by the roller chains rotate with it. Both wheels rotate at the same time, and drive the slider and the carrier. The load capacity of the motor is limited. Iron wires and plastic pieces are relatively light, and this is the reason why they are selected as carriers.

The two bicycle wheels and the disk mentioned above are working as cranks. The farther the slider is from the spotlight, the bigger moving space it requires. Therefore, the distance between the center of each wheel or disk and each joint are different. In other words, the length of each crank is different, and that determines the moving space of each

slider. Moreover, the fishing string connected to the crank on the motor shaft creates a pulling motion and it makes the waving motion more vivid.

At beginning of this work, I used a software called *Algodoo* to do some experiments and on various mechanisms. *Algodoo* is a software with simple functionality that user can draw and interact with physical systems on computer. It is used for simulating the motion of waving wings and how slider-crank mechanism works. Figure 9 and Figure 10 show the research period on mechanisms. After many attempts on building models and tracking movements, slider-crank mechanism is the most suitable one for actual constructing.

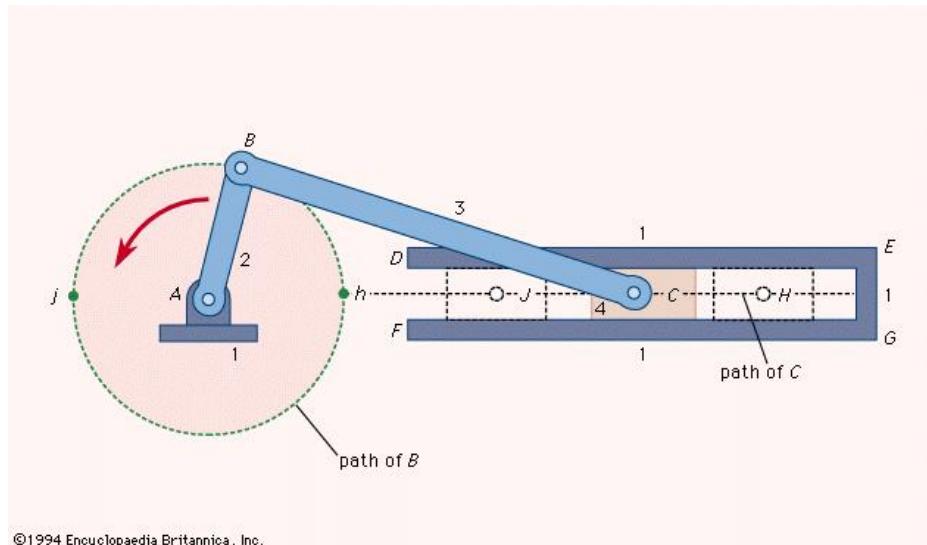


Fig. 8 Slider-crank mechanism

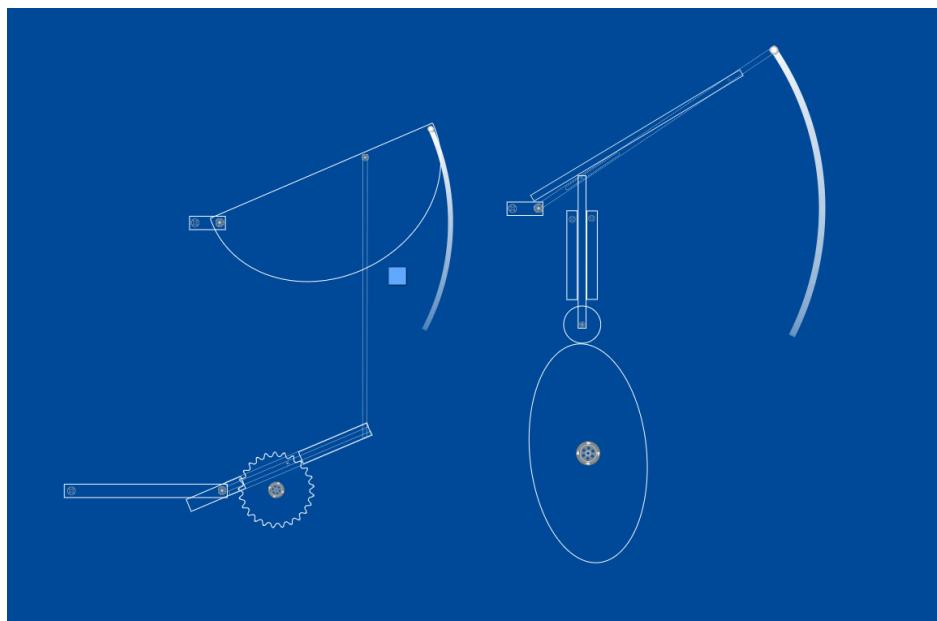


Fig. 9 *Algodox* sketch 01

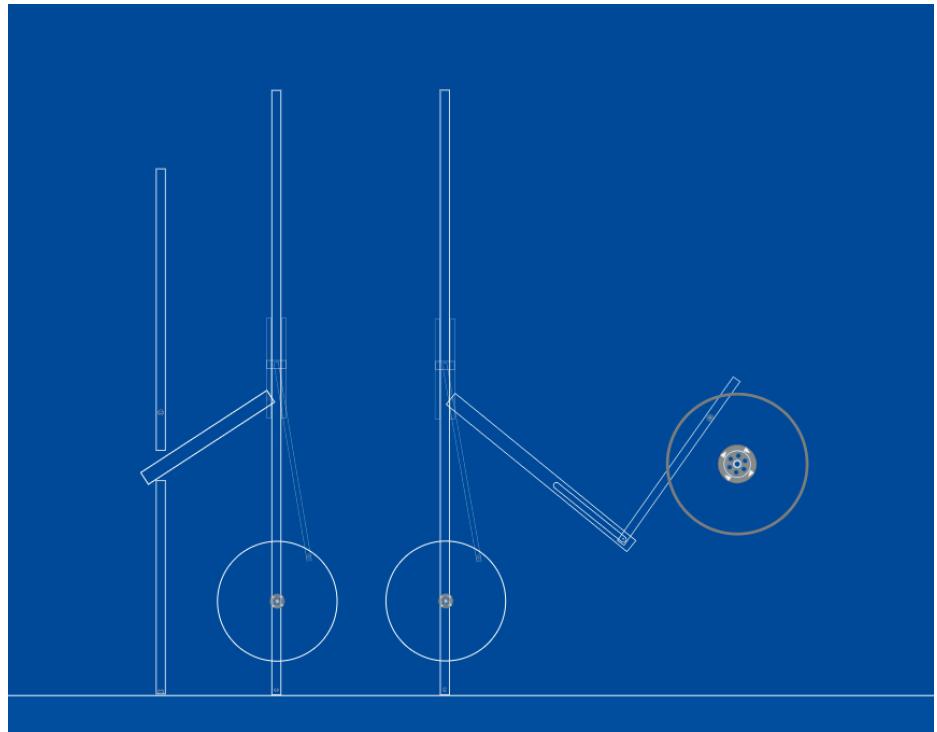


Fig. 10 *Algodox* sketch 02

CHAPTER 5

TECHNICAL ISSUES: INTERACTION AND ELECTRIC COMPONENTS

Paradise is an interactive sculpture. The electronic components used in this work includes an ultrasonic sensor, an Arduino Uno board, a controllable four outlet power relay, two AC motors and several spotlights (Figure 11).

Ultrasonic sensors measure distance by using ultrasonic waves. The sensor head emits an ultrasonic wave and receives the wave reflected back from the target. In this piece, the ultrasonic sensor is fixed inside the bench leg. When individuals come and stand in front of the sculpture, it measures the distance to the viewer by measuring the time between the emission and reception. The ultrasonic sensor will send data to the Arduino board when it detects viewers.

The controllable four outlet power relay has four outlets that allow the switching of plugged AC powered devices. There are two outlets in Normally OFF mode, one outlet in Normally ON mode and one outlet in Always ON mode. The outlets in Normally OFF and Normally ON mode are programmable, and the outlet in Always ON mode is a regular outlet. In this work, spotlights and motors are connected to the outlets in Normally OFF mode by extension cords, and that means they will be turned on when the relay receives specific orders.

The Arduino Uno board is used for processing data received from the ultrasonic sensor and sending data to the relay. It has two output serial ports connected with the relay, and two input and output serial ports connected to the ultrasonic sensor. If received data indicates the distance is within 4 feet, the Arduino board will send orders to the

relay and the Normally OFF outlets on the relay will switch to turn on the motors and spotlights. This brief process is how this sculpture interact with viewers.

In Paradise, the Arduino board, the relay, and the ultrasonic sensor are connected by electrical wires. The AC power devices are connected by to several extend cords that directly plugged in regular outlets.

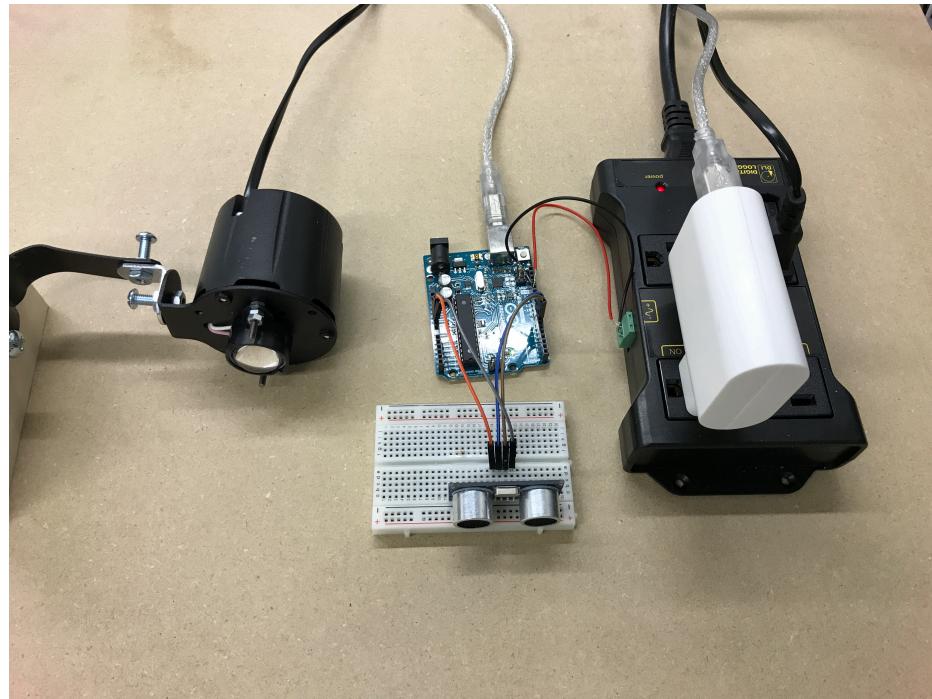


Fig. 11 Electrical Components

CHAPTER 5

TECHNICAL ISSUES: PROGRAMMING

The software used to program is Arduino Software (IDE). In general, *Paradise* requires data communication and transmission. Figure 12 and Figure 13 show the code used in this work. There is a library included in this sketch to simplify the codes of ultrasonic part.

Figure 12 shows some default settings. At beginning, the echo pin and trigger pin of the ultrasonic sensor, and the relay pin are defined that they are connect to the digital pin7, digital pin8 and digital pin13 separately. Then some variables are declared before the main code, including the maximum and the minimum range of the ultrasonic sensor, the distance between viewers and the sensor, the duration used to calculate distance, and a switch called “turnOn”.

Inside “void setup”, the echo pin is set as an input pin to collect data. The trigger pin and the relay pin are set as output pins to send data. Codes inside “void setup” will be ran only one time as default settings for digital pins. Figure 13 shows the interactive instructions which will be looped when the piece is turned on. Codes inside “void loop” show the potential logic and flow of data processing. In this loop, the trigger pin of the ultrasonic sensor is periodically turned off and on to make the echo pin emit ultrasonic wave constantly. The “duration” is the data received by echo pin. Then, the value of distance is calculated by the data. After that, there is a judgment. If the value of distance is less than 150, the Arduino board will send an instruction to turn the relay pin on, and after 10 seconds, turn the pin off. If the value of distance is greater than 150, the Arduino board will send an instruction to turn the relay pin off. The actual condition is the spotlights and motors will be turned on for 10 seconds when a viewer stands in front of the sensor. When the viewer stands outside the detecting range or walks out of the maximum distance, nothing will be triggered

```

IOTRelay

#define echoPin 7           // Echo Pin
#define trigPin 8            // Trigger Pin
#define relayPin 13          // Relay Pin

boolean turnOn = false;
int maximumRange = 200;      // Maximum range needed
int minimumRange = 0;        // Minimum range needed
long duration, distance;    // Duration used to calculate distance

void setup() {
  Serial.begin (9600);
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  pinMode(relayPin, OUTPUT);
}


```

Fig. 12 Codes 01 (default settings)

```

void loop() {
  digitalWrite(trigPin, LOW);
  delay(50);

  digitalWrite(trigPin, HIGH);
  delay(50);

  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);

  distance = duration / 58.2;

  if (distance <= 150) {
    turnOn == true;
    digitalWrite(relayPin, HIGH);
    delay(1000);
    digitalWrite(relayPin, LOW);
    delay(50);
  } else {
    digitalWrite(relayPin, LOW);
  }
  delay(50);
}


```

Fig. 13 Codes 02 (interaction)

CHAPTER 5

TECHNICAL ISSUES: GALLERY IMPLEMENTATION

During the installing process in the gallery, there are some changes and adjustments both in physical part and electronic part. Figure 14 shows the final view of *Paradise* (Fig. 14).

Firstly, the shadows of the supporting structures are too dark and conspicuous. There are two spotlights added in front of the sculpture, lighting towards the wall to weaken the shadow. That finally makes the shadow of wings more clear. Secondly, the space above the sculpture is empty because the ceiling of the gallery is high. A spotlight is added on the floor, at the rear of the sculpture, lighting towards one wheel. It creates a weak and blurry shadow up top of the wall. This shadow does not disturb the wings, but attracts viewers' attention when they are far away. Moreover, another spotlight is added on the bench surface, lighting towards the floor. The goal of this light is to show the exact position where the sensor will be triggered. The last but not least, electric components are hided under the bench. The Arduino board, the sensor and the relay are fixed on the inside of bench legs. There are six extension cords used due to the scattered locations of electrical items. And they are placed on the ground between the sculpture and the main spotlight without organizing. The placement makes them fill the emptiness between the sculpture and the main spotlight, and also avoid the problem of difficulty in placing cords. Generally, all these implementations are to enhance the effect of the work and the user experience in the show both digitally and physically.



Fig. 14 Installation view in the gallery

CONCLUSION

The process of creating this work lasted for nearly seven months. I enjoyed a lot and gained a lot from it. Personally, I think that my work is successful. As a digital art piece, it can express my thoughts and concept powerfully. It gives great aesthetic pleasure to viewers. The interactive experience can also let viewers have fun. In the final exhibition, it was successfully displayed without technical issues.

Through this work, I learned a lot about art and technology. Specifically, this work expands my understanding of fine arts, mechanisms, and fabrication. My physical computing and programming skills have also been improved. Most importantly, this project helped me improve my multitasking capabilities because it is a massive project that requires comprehensive knowledge and needs to be completed independently. Although this seven-month building process was dull, and sometimes painful, the final result still made me feel the strong excitement of success.

I have always considered technology as an artistic language to express my ideas and concept. When people showed a surprised or happy smile to my work, I felt that any effort was worthwhile. That makes me understand how powerful digital art is as a medium for sharing ideas. I believe that in the future, I will be willing to continue to work and explore in the field of digital arts.

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