Mirror Apocalypse

Introduction

Mirror Apocalypse is an interactive installation that explores the relationship between ritual, perception, and stress. Participants perform a worship-like gesture with a sensor. Upon recognition, five servo-driven mirrors rotate, revealing their own reflection. This shift from seeing only the hands to confronting one's face prompts a moment of self-inquiry, questioning whether devotion reveals divinity or a reflection of our own psyche under pressure.

VIDEO LINK: https://youtu.be/blcAOleDjRw

Inspiration

Excessive life pressure → Accumulation of negative emotions → Negative emotions turn into hallucinations → Pray to dispel hallucinations

Background

01 basical social phenomena

China is not a country of faith, but on social media, many people pay attention to or adopt theoretical content of religious beliefs to solve unexplainable situations or even daily issues they encounter.

Table 1:Religious Beliefs of Adults in China according to CFPS, Surveys of 2012 and 2014(%)

	2012	2014
Buddhism	6.50	15.87
Daoism	0.31	0.85
Popular belief		0.81
Islam	0.71	0.45
Catholicism	0.27	0.34
Protestantism	2.00	2.19
No religious belief	90.06	73.56
Other	0.15	5.94
Total	100.00 (20,035)	100.00 (19,260)

In summary, people without religious beliefs make up the majority of the population

02 However ···

Online, Chinese netizens are very interested in the topic of faith.

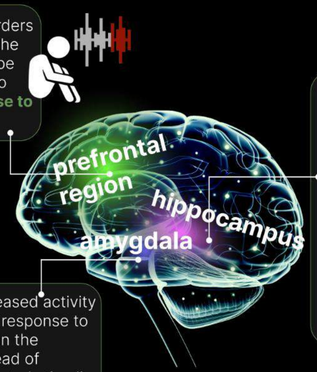
62.3% of Chinese netizens aged 18-35 have participated in online mystical activities

The annual growth rate of the dissemination of mystical content on Chinese social media has reached 15% -20%

03 Why are there paranormal experiences?

Instantaneous intense stress/fear triggers a cascade of neurobiological, neuroendocrine, and cognitive alterations that can directly contribute to the occurrence of hallucinations under certain conditions.

Patients with anxiety disorders have abnormal activity in the ventromedial prefrontal lobe (vmPFC) and are **unable** to suppress the **fear response to a safe stimulus**



When the function of the **hippocampus** is impaired, the individual is unable to distinguish between the current safe situation and the similar details of the traumatic memory, resulting in the **reappearance of traumatic memory fragments**.

Under fear conditions, increased activity of 'generalized neurons' (in response to CS and similar stimuli) within the **amygdala** leads to the spread of defensive behavior to unrelated stimuli, causing the brain to **misclassify fuzzy stimuli as threats**.

cited from: Dunsmoor, J. E., & Paz, R. (2015). Fear Generalization and Anxiety. Biological Psychiatry.

Research

The essence of common supernatural phenomena

Somatic hallucination

The patient perceives abnormal sensations of touch, movement, or pain in the body, internal or external, without real physical stimuli.

In the depressed and anxious state, the brain's prediction model of pain signals is amplified, and weak or ambiguous sensory input is more easily interpreted as pain/discomfort, and the function of the downward **pain regulation system** **is weakened.**

auditory hallucination

Sounds are heard in the absence of an external sound source, which may be from the inside or outside.

When the brain makes predictions about discourse, it **mistakenly recognizes** internally generated fragments of thought or speech as sounds from the outside, from others, and fails to emit effective "this is self-generated" predictive or inhibitory signals.

Visual hallucination

Seeing non-existent objects or figures when fully awake.

When the brain's ability to process visual information decreases (e.g., fatigue), the brain generates visual predictions based on prior knowledge and expectations (memory, imagination) to fill in the **input gaps.**

Schematic diagram of the neural pathways of fear-induced hallucinations:

Interview

Respondent information

Gender: Female
Age: 25
Religion: None
Education: Graduate

Have you ever had a paranormal experience?

I've had very brief moments of severe insomnia and DDL for days on end – I saw a shadow move out of the corner of my eye (like a human figure flashing), or heard a very slight voice calling my name (like a whisper), but turned my head to make sure there was nothing. These feelings are very real, but fleeting

What are your thoughts on this?

I'm skeptical. Think it's possible that the brain is warning about excessive stress, or that something supernatural is taking advantage of mental vulnerability. But all in all, I'm more inclined to think it's caused by too much stress.

What will you do after this?

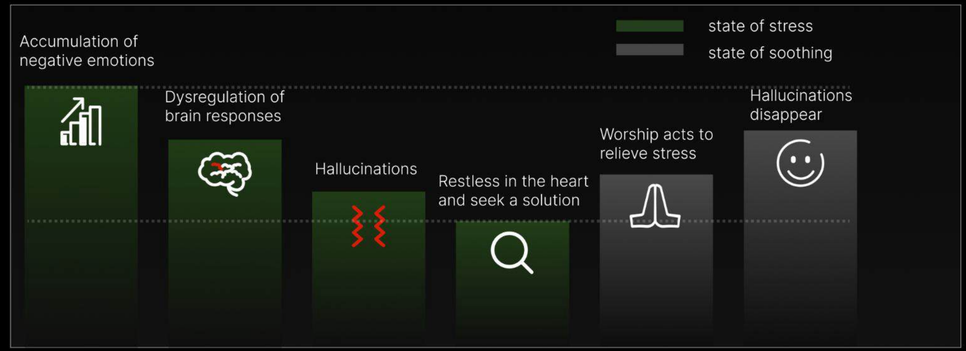
I will immediately arrange for myself to rest and have fun to reduce my psychological burden. If it doesn't improve for a while, you may search the internet for related posts, both supernatural and non-supernatural, while trying different workarounds.

Highlights of the interview

inner emotions — external paranormal — resolved through inner regulation

My opinion

The psychological process of people when a supernatural event occurs:



The essence of people's worship behavior is self-comfort, which is to use a self-approved behavior to relieve inner stress and provide positive cues

Concept

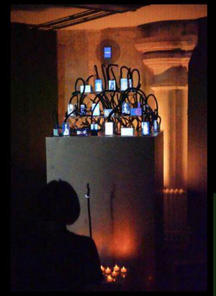
· How did I come up with this design?

main shape — It can arouse people's sense of religious reverence → altar

function — Reveals the inner activities of people; Forcing people to reflect on themselves → mirror

case study

Main reference work



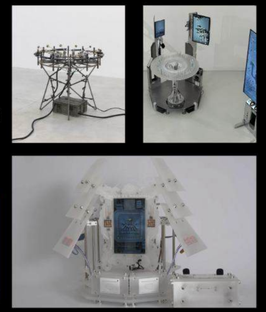
Title of the work: New Deity

Artist: ins: @zchsiung

Introduction: The "New God" is an interactive installation. Each spectator could receive their blessing text from the new deity by praying to the altar. All content is generated by StyleGAN and GPT-3.

Inspiration for me: When religious activities were transferred to the Internet, the concept of God seemed to become blurred. The sense of sacredness and ceremony has been replaced by rigid forms.

Other reference works

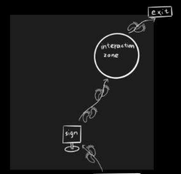


Sketch

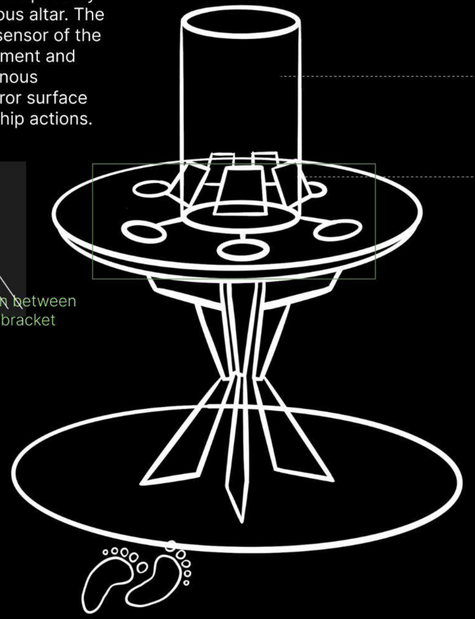
Device structure

The installation was inspired by the shape of a religious altar. The audience holds the sensor of the antique magic instrument and triggers the synchronous deflection of the mirror surface with traditional worship actions.

Connection between servo and bracket



Ground guidance and signs



glass column

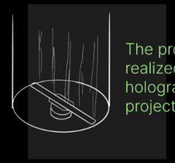
The middle section plays a video projection of worship, creating a sacred atmosphere

mirrors

The mirror can be raised by the steering wheel to reflect the movements and faces of the audience

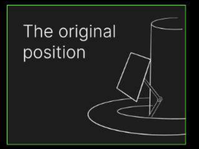
sensor

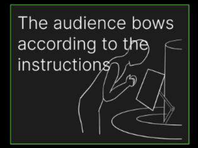
The sensor is designed to resemble a magic instrument and can be held in both hands for worship

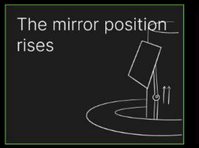


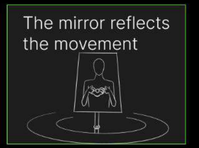
The projection is realized by a holographic fan projector.

· Interaction flow

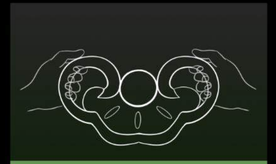








· Close-up of the structure

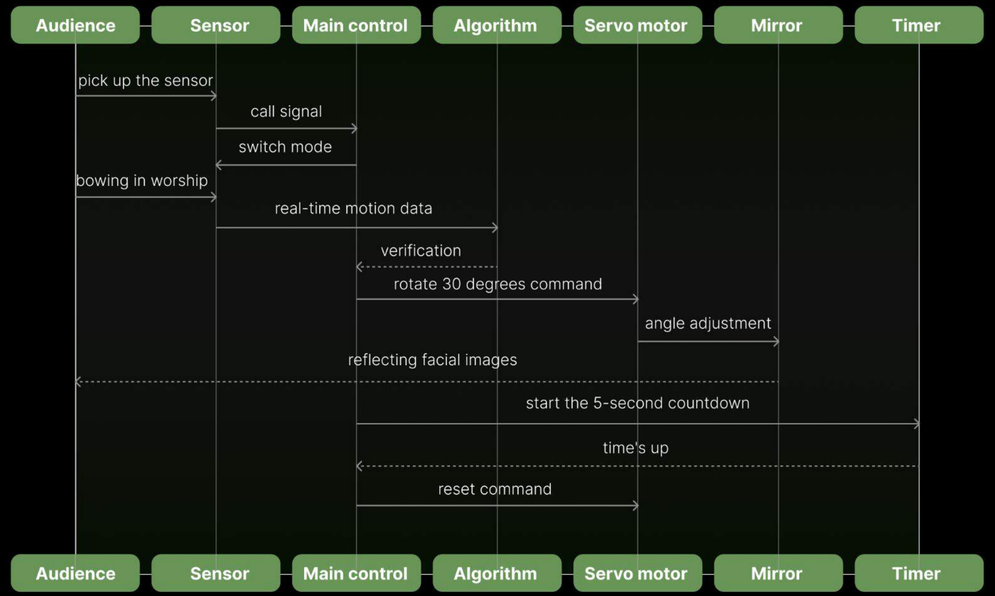


Close-up of the sensor structure

projection structure

Making process

Interactive Analysis

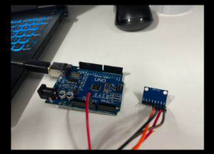


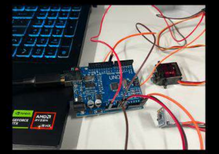
Technical Test

Test the angle sensor data fluctuations during the bowing

Record the initial data of the angle sensor when it is flat and the data when bowing

Ensure that the changes in the angle sensor can make the servo rotate



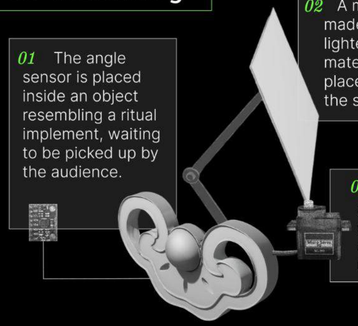


3D modeling

01 The angle sensor is placed inside an object resembling a ritual implement, waiting to be picked up by the audience.

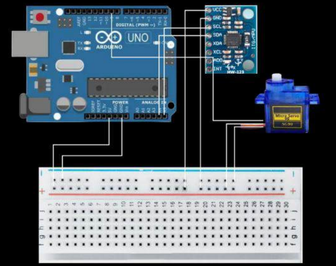
02 A mirror made of lighter material is placed on the stand.

03 The servo is located at the connection of the support frame and drives the mirror to move up and down.



Circuit connection

Arduino UNO	×1
Angle sensor	×5
Servo	×5
Breadboard	×1



```cpp
#include <Wire.h>
#include <MPU6050_light.h>
#include <Servo.h>

MPU6050 mpu(Wire);
Servo servo1;

const int SERVO_PIN = 9;
const int SERVO_ON_ANGLE  = 20;
const int SERVO_OFF_ANGLE = 0;

const float ROLL_TRIGGER = -20.0;
const float ROLL_RELEASE = -15.0;

bool triggered = false;

unsigned long lastPrint = 0;
const unsigned long PRINT_INTERVAL = 300;

void setup() {
  Serial.begin(9600);
  while (!Serial) {}

  servo1.attach(SERVO_PIN);
  servo1.write(SERVO_OFF_ANGLE);
  Wire.begin();
  delay(200);

  byte status = mpu.begin();
  if (status != 0) {
    Serial.print("MPU6050 init failed, code:
    Serial.println(status);
    while (1) { delay(1000); }
  }

  Serial.println("校准中，请平放静止...");
  delay(1000);
  mpu.calcOffsets(true, true);
  Serial.println("校准完成。开始检测 Roll 触发舵机。");
}

void loop() {
  mpu.update();

  float roll  = mpu.getAngleX();


  if (!triggered && roll < ROLL_TRIGGER) {
    triggered = true;
    servo1.write(SERVO_ON_ANGLE);
  } else if (triggered && roll > ROLL_RELEASE) {
    triggered = false;
    servo1.write(SERVO_OFF_ANGLE);
  }
```

Initialization

Main Loop

Update Sensor Data

Get Roll Angle

Trigger Judgment

Servo Control

Frequency-limited Output

Interactive process

Experience guidance

01

Ritual calling

The audience was attracted by the unique design of the circular mirror array and read the main guide sign.

Mirror Apocalypse

Step 1: Hold the ritual object with both hands in front of your chest.
Step 2: Devoutly raise it to your forehead and gaze at it.
Step 3: Bow deeply forward. When successful, the sacred mirror will reveal your true form.

02

Ritual commencing

The audience picks up the sensor from the designated base according to the sign.

Background voice: (After an ethereal sound) 'The ritual begins, please place the magical tool against your chest.'

03

Ritual Guiding

The audience tried to make gestures of worshiping the deity.

Real-time voice prompts:
"Detected preparation movement, please continue raising..."
"Position correct, please maintain gaze..."
"Now, complete the bowing ceremony"

END

Ritual Revealing

The audience completes the full sequence of worship gestures and sees their own face in the mirror.

Sound effects: Bell chimes, ethereal chords (528Hz)
Voice: 'The ritual is complete, the true self appears.'

Audience experience emotional chain

curious → understand → experiment → successful → surprise → reflection

- curious → understand: Watch the sign
- understand → experiment: Action Learning
- experiment → successful: Ceremonial participation
- successful → surprise: Mirror image appears
- surprise → reflection: Self-awareness

Making progress

Material testing

× A regular mirror is relatively heavy and difficult for the servo motor to drive.

√ Mirror stickers are lighter in weight.

× The iron stick is heavy for its own weight.

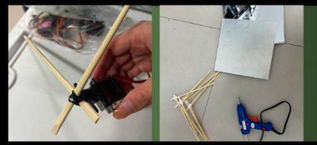
× The plastic stick is not sturdy enough.

√ The wooden stick is lightweight and flexible.

Connection method test

1 Connect the Arduino angle sensor's wiring properly

2 Connect all five sensors

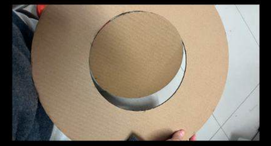


3 Connect the servo to the bracket

4 Connect the bracket to the mirror

Construction

1 Assemble the bracket parts

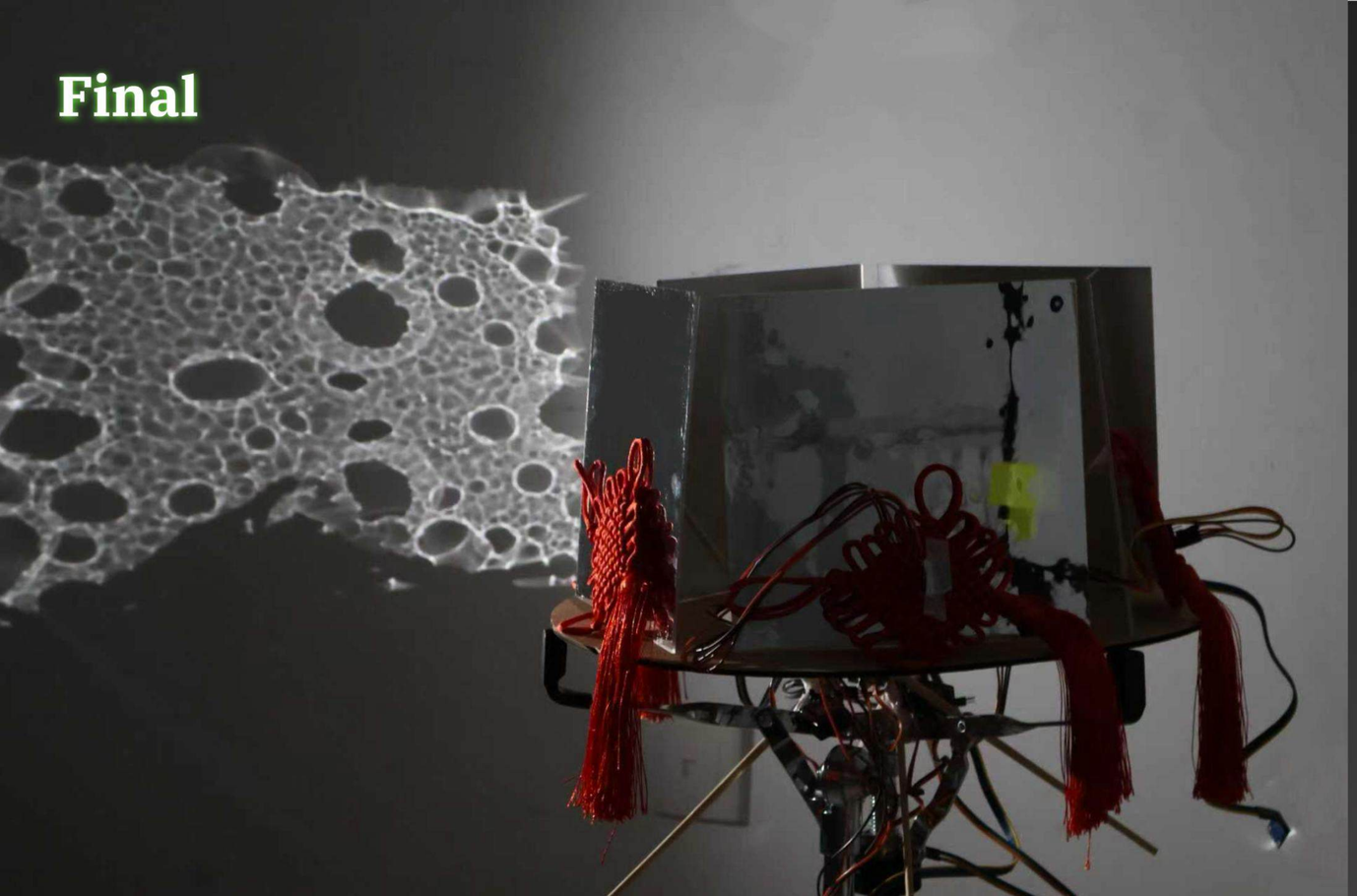


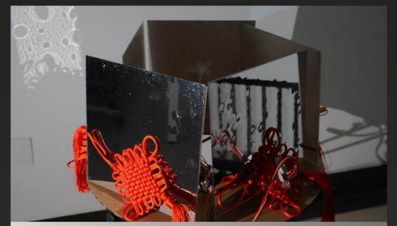
2 Cut the desktop section

3 Place the core components

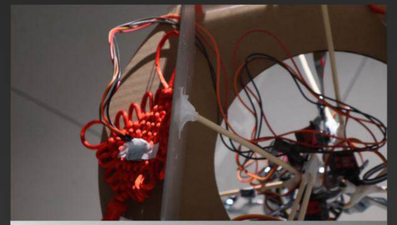
4 Complete the assembly

Final





Ring-arranged mirrors



Internal wiring structure

Close-up of the sensor

Feedback

Audience experience feedback

01 The anticipated 'moment of insight' was confirmed:

Participants reported that when the mirror rotated and their own face suddenly appeared in view, they generally experienced an **emotional journey** from confusion and surprise to profound reflection. This confirmed the effectiveness of the installation in externalizing **inner psychological processes** into perceptible experiences.

02 The Power of Rituals:

Many audience members mentioned that the ritualized steps of interaction have a wonderful **detaching effect**, helping them calm down from the daily hustle and bustle and focus more intently on self-observation.

03 The universality and variability of emotions:

Although the experience is universal, the feedback also revealed differences. Some participants felt a shocking revelation, while others experienced a slight unease of **being monitored**. This difference precisely reflects each person's unique relationship with self-examination and external pressure, enriching the layers of interpretation of the work.

Future plan

I will integrate a pulse sensor to deepen the experience. The mirror's movement and accompanying effects will respond to the participant's real-time heart rate, making the link between internal state and external perception physically tangible.