Blog

Introduction

If to someone had said to me before, "You'll learn about code and physical installations later on and use those things in your art installations." I would have laughed, I always felt I was a staunch advocate of traditional media and all the graphic work I did as an undergraduate made me embrace that idea even more, I never wanted to get out of that comfort zone. But one day when I realised the limitations of traditional media, I wanted to change. I wanted my work to be more interactive with the viewer, to communicate my ideas to the greatest extent possible, which traditional media could do in part, but as I learned more and more, I felt more and more powerless, so I turned from studying design to art, and then to what was 'beautiful'. But design, art and beauty all need a vehicle, a vehicle for diversity, and so I came to CCI.

In this blog, I'm going to describe in detail the process of creating my graduation project: "Order in Disorder" web-based interactive installation, which can be said to be one of the most difficult project experiences I can remember, bar none :D I can say that from the moment I decided on the theme to now, all the contents are full of challenges for me, but these challenges have made me progress very fast, and this kind of growth is not only my efforts alone, I also have a lot of people to help me from concept to completion, and this blog is a detailed record of the whole project. growth was not just my effort alone, I had the help of many people who helped me from concept to completion and this blog is a detailed account of the whole project.

June

Week one:

This is the last project of my graduate school years and I think I need to figure out what I need to do or what I want to do?

It was a free time due to the fact that I had submitted my final assignment for this semester, so I thought I needed to think about what I really needed to do, and I think that this kind of reflection is good for exploring the purpose of my rootedness.

In the initial topic idea stage, I filled in the form to explore ideas about the spiritual realm of beliefs and the like, and indeed I am very interested in this aspect of the topic, especially in the current social environment where people's spiritual world is incredibly empty (I like to refer to the current social environment as the "Floating World", where people become restless due to a lack of spiritual support). I like to call the current social environment "Fukiyo-e", where people become restless, turbulent and uneasy due to the lack of spiritual support. It seems to be peaceful, but in fact it is

a "whitewash", most people's material desires are satisfied in stages, but the pursuit of greater material desires, they become spiritually empty, although this has something to do with the "social winds", but I think that at this stage it is better to let go and look at oneself). (Although this has something to do with "social trends", I think at this stage it's better to let go and look at oneself).

This week I have been reading some books, revisiting Camus's The Myth of Sisyphus, and reading some of Zizek's analyses of the concept of the Big Other, and I want to find a breakthrough in this area.

Week two:

Last week wasn't too substantial to be honest, I'm still unsure of the main direction I want to go in, the topic of the spiritual world is too vast and many philosophical books aren't fully comprehensible to me, so this week I decided to look at the work, I'm hoping that browsing through other people's work will give me some answers. I really liked Wellington Lux's work '#entity255', his concept is very interesting: the work explores the mandala as a spiritual concept, a way of creating sacred space, and as an aid to meditation and entrainment. The work references the concept of the mandala as a microcosm of the universe and creates a digital version of this ancient symbol, generated by data and users. Once "#entity255" is up and running, its shape change and response to human interaction is handled by code. It draws its visual material from the vast universe of the Internet. In this sense, “#entity255” evokes a "living" digital organism that absorbs and releases energy, responding to its surroundings without any preconceived barriers.

I was very attracted to this work both in its conception and in its final presentation.

Week Three:

This week I'm trying to settle on my theme, after thinking about it for the last two weeks I realised that the subject of the spiritual world is really too big and requires a

fair amount of philosophical discernment and a lot of theory to back it up, so I've decided to change direction and go back to a question I've always had: the question of people's visual perceptions.

As an undergraduate I was deeply intrigued by the formation of visual order, especially in layout. Some seemingly haphazard elements can be combined with each other to magically create a sense of order, while others simply add to the visual chaos. The same pattern, the same colour, or even a few simple lines can inspire very different visual sensations in the eyes of different viewers. It's interesting, so I decided to take my theme in the direction of visual order. I'm travelling next week, so I've only decided on a general direction this week.

Week Four:

I've been travelling this week, and I have to say I'm really enjoying the natural beauty of the UK, the flowers of Canterbury and the White Cliffs of Dover have left a lasting impression on me, especially the White Cliffs of Dover on a rainy day, the feeling of being sparsely populated, coupled with the smell of rainy weather gives me a nostalgic vibe, and I'm really enjoying the atmosphere.

July

Week one:

This week I decided to delve deeper into the research in the direction that I have already set, but here I would like to say a few words about my thoughts, I think our perception of order is narrow.

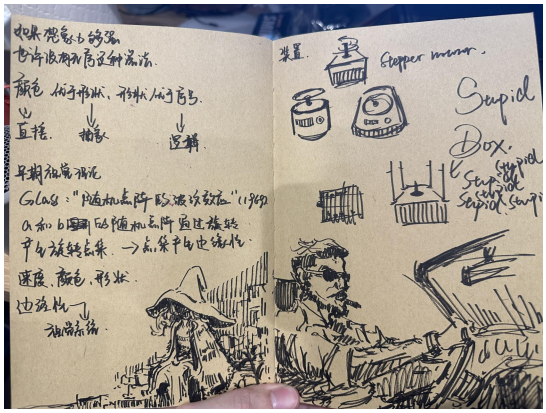
Our perception of order is full of limitations, and it is restricted by various factors, such as experience, habits, perceptions, perspectives, and so on. At the same time, individual differences will have different results and effects on the perception of order.

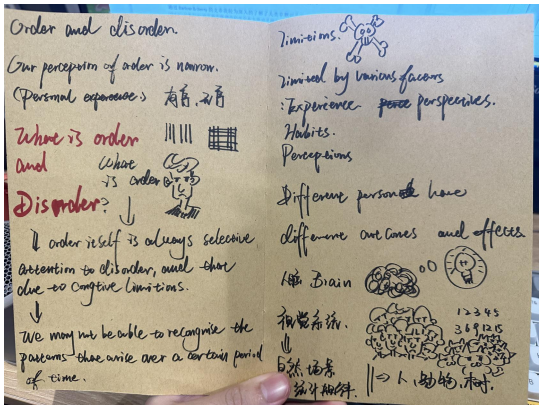
I believe that order itself is always a selective attention to disorder, and due to the limitations of cognition, we may not be able to perceive the pattern that arises in a certain period of time, which leads to the creation of disorder. It is for this reason that I believe that disorder itself is flawed order.

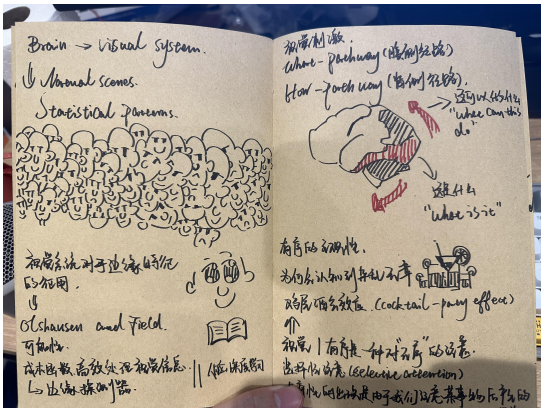
Since I'm doing an Arduino installation on a similar topic in my first semester Arduino class, I still have some personal opinions on the topic, and all I need to do now is to go deeper into these concepts, find the appropriate theories to back them up, and think about the form of the final product. (At this point I don't realise how difficult this theme is :(, To watch this Arduino installation visit the link:https://www.dropbox.com/scl/fi/z4dzxcl2g8fvgtmwbgsbw/Physical-Computing-Project-Blog.paper?rlkey=v7cibfrw31qbncwknq5ttmznj&dl=0)

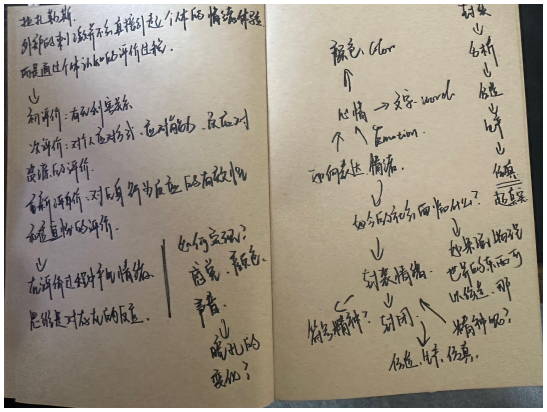
Week two:

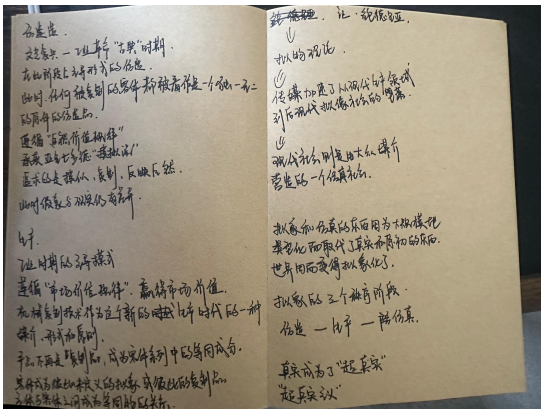
The main goal of this week was to brainstorm and do some mind mapping based on a previously identified topic, as well as find some papers related to the topic to use as theoretical support. Here are some drafts on the topic, some of which I had before, and re-reading them gave me an idea of some of my own thoughts at the time, as well as some new ones, though most of these were produced in Chinese for my own convenience.

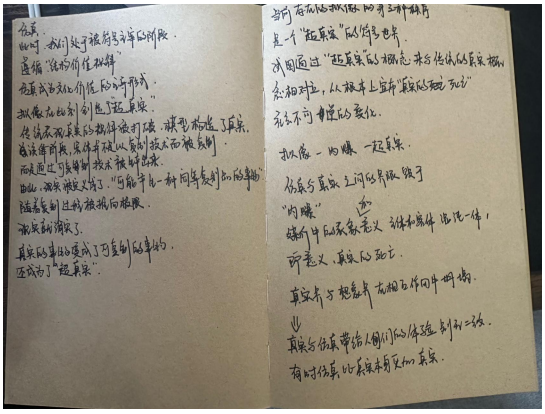


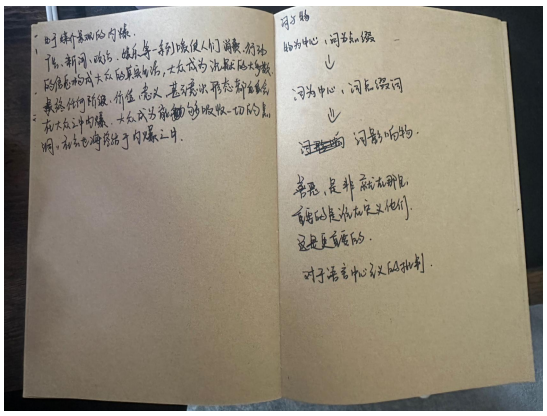












In the meantime, based on the Arduino research, I'm no longer limited to Glass' (1969) "Moiré Effect from Random Dots", but I want to go deeper, and explore some of the principles behind the birth of moiré as a visual phenomenon, the so-called "visual order", and why it came about. I need to find some articles about this concept, which may involve biology.

Here I found a little trick, Glass (1969) "Moiré Effect from Random Dots" is included in PMC, so I just need to check who has cited this article, and then I can harvest relevant articles to check, this method works very well and saves me a lot of time. This method is very useful and saves me a lot of time.

This week I looked at the article on the formation and interpretation of moire patterns by Olof Bryngdahl (1974), and to be honest, there was a lot of stuff in there related to optics, photonics, etc. that was a bit of a mystery to me, so maybe I should try a different direction.

Week three:

Off to Spain for a week this week whilst getting ready to pack my bags for a trip back to my home country, having been away for a year. I have to say Madrid is a really nice place, very laid back, except for the temperatures which are a bit high, also a few of the museums in Madrid are well worth a visit, the collections are extensive and good for the mind.

Week four:

To be honest, these weeks are not quite able to bring up the energy, on the one hand, the weather is too hot, on the other hand is back to a long time ago, there are a lot of things need to deal with the hometown, I think it is more ridiculous in China is that if you do not have the relevant professional work experience before graduation, then you can not find a better job at graduation, because of this I intend to look for an internship related to graphic design, but this is all beside the point. But that's all beside the point, it's a blog so it's okay to talk about it.

This week I've been reading more articles on visual cognition, such as Barlow & Berry's (2010) Cross- and auto-correlation in early vision, which was very helpful for me, as it analyses how human observers detect oriented stripes in arrays of randomly positioned dots, to better understand V1's function, especially how it processes visual information. The article has information about how the streaks mentioned in the experiment were created by two different methods: one by sinusoidal spatial modulation of locally averaged dot densities, and the other by introducing coherent pairs of dots to create a moiré pattern, similar to the work of Leon Glass. (V1 refers to the first area of the visual cortex, often called the primary visual cortex or area 1 of the visual cortex. This is the first major area of the brain that processes visual information and is located in the occipital lobe of the brain.Area V1 is critical to visual processing because it is responsible for receiving raw visual information from the eyes as it travels through the optic nerves and begins to process that information.) This article has provided me with some ideas for understanding how the brain processes more complex visual information.

To be honest, I was a bit crushed when I first read this article, it covers so much knowledge and at the same time these points are so deep that it would take years of specialised study to fully understand it, but ChatGPT is really good at helping you to understand terminology you don't understand and at the same time explaining the principles in a much more straightforward manner, and that's what has allowed me to slowly make sense of this article. (But to be honest it's getting a bit burnt out, I'm just not very good at subjects like biology, and physics.) I think I might need to speed things up a little.

August

Week one:

Based on what I said before, looking for articles based on citations, I found a few more articles I was looking for, which gave me a lot of theoretical support, for example, psychologists Kastner & Pinsk's (2004) article "Visual Attention as a Multilevel Selection Process", the psychologists Kastner & Pinsk (2004) proposed the idea that the process of perceptual organisation is dependent on the attentional process, which is very similar to my personal view that "I think that order is itself a selective attention to disorder all the time", which is very interesting and further motivated me, and Li & Wang (2016) in "A Review of Cognitive Mechanisms of Symmetric Visual Perception" mentioned that the process of perceptual organisation was previously thought to be automated, whereas the truth is that it can only be done when the visual field is selected for attention. This further supports my view on visual attention, and why it occurs. I personally believe it is a visual "cocktail party effect", which, in conjunction with the previous article by Barlow & Berry (2010), is the result of something stimulating the visual attention of a person in the visual field. I personally think it's a visual "cocktail effect", in line with Barlow & Berry's (2010) suggestion that something stimulates specific neurons in the V1 region to produce this kind of attention. (As an aside, it's worth noting that this particular neuron in V1 was discovered over 50 years ago by scientists who found that these neurons selectively respond to visual stimuli in different directions. This means that these neurons are more sensitive to stimuli from certain directions. But to this day, scientists are still not entirely sure how or why this direction selectivity arises.)

Week two:

Still read some articles this week, I personally have a habit of writing something when I read these articles, usually write some of my personal thoughts based on these articles, I think this will be very helpful for my later writing, because just unilaterally accepting the knowledge is very easy to forget, and it is also very boring, this way to write some of my thoughts, even if it is against some of the author's opinions, all can give me a deeper knowledge of the article.

This week I've been reading some articles related to visual attention, and one of them is an interesting set of visual control experiments by Chan & Chua (2003), in which participants were asked to assess which of two lines above and below a set of dots spaced apart was longer. The setup was sometimes accompanied by a widening of the dots, forming arrows and potentially triggering the Müller-Lyer illusion. The results showed that participants' discrimination was unconsciously affected by the illusion even when they did not significantly notice the presence of the arrows. This phenomenon reveals that perceptual discrimination is interfered with by illusions even when attention is not explicitly directed to the arrows and the direction of the arrows is not recognised. （The Müller-Lyer illusion is a well-known visual illusion first described in 1889 by the German psychologist Franz Carl Müller-Lyer. The illusion involves two line segments of equal length, each with arrows at the ends in different directions. One line segment has outward-facing arrows (similar to the letter "F") and the other has inward-facing arrows (similar to the letter "E"). Although the actual lengths of the two segments are the same, most people would perceive the segment with the inward arrows to be longer than the segment with the outward arrows.)

Based on these articles, I find that most of the experiments emphasise the intrinsic role of ordered perception in cognitive processing, suggesting a natural predisposition to order at the physiological as well as psychological level. So I think that due to the limitations of neuronal processing power, and the limitations of the cognitive framework itself, humans may not be fully aware of the regularities that appear in a given time period, and sometimes this limitation leads to apparent disorder. Thus, perceived selective attention not only reflects a preference for orderliness, but may also be an unconscious manifestation of the boundaries of cognitive capacity.

My ideas are corroborated by Hubel & Wiesel (1959), who found that most neurons are highly selective, not only for the location of visual stimuli in the visual field, but also for other properties: specific neurons respond only to visual stimuli, with orientation, direction of motion, and spatial-frequency content located in specific ranges, whose mean and width vary from neuron to neuron varying from neuron to neuron.

Week three:

Now there are enough theories to support my idea, but I should still think about the concrete implementation, that is, the graduation design born based on these theories. Honestly I'm not very confident about this matter, because even after reading so many articles, I still can't fully understand the knowledge in it, I still can't fully understand that the visual order is as and produced, why it is produced, and is it the same for everyone?

So I would like to say, should I take this graduation design as an experiment for me, after reading so much knowledge about it, I think I should try it myself. The question is what form should it take? What elements should be the main body? How does it interact? I think I need to think it over.

Week four:

I've also been reading some articles this week while thinking about what to implement, and some of the findings of Olshausen & Field (1997) are really interesting in that they found that simple cellular receptive fields in the visual cortex can be described as having spatially localised, oriented, and band-passed features, and are similar to the basis functions of the wavelet transform. That means that one can be based on this concept one can use unsupervised learning algorithms to reduce this natural system, or even say a perfect system, which could simply be an evolutionary direction for humans, but all that is beside the point.

To be honest, I thought about it, and after looking at some examples of device design, I think I should choose a device for my final project, but what is the subject matter is a big question, so I want to go back to my field: "Graphics", let's go back to the moiré, and think about it as the subject matter. Let's go back to the moiré and think about it as a subject, and let's think about how to realise this installation.

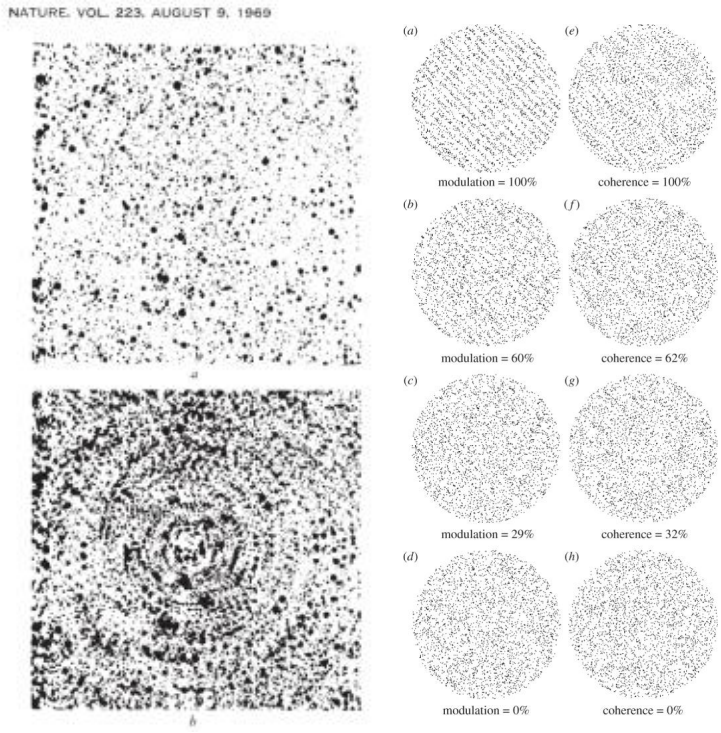
September

Week one:

Continuing my thinking from the previous week, now that the theoretical basis and related research have been more adequate, I need to shift my focus to practice, and keep a more minimalist feeling in the overall design style, because after a lot of research I found that an overly complex display may affect the effect of visual attention, so I need to make certain trade-offs in the overall style.

At the same time, I was also thinking about the means of interaction. In the field of interactive device design, the variety of means of interaction makes it difficult to accurately measure its advantages and disadvantages. However, the most appropriate means of interaction must be compatible with the tone of the work. So I chose to think about the main element of the installation, as I said I wanted to go back to the "graphic", so the moiré pattern undoubtedly became the key for me to think again.

During my research I found that moiré has been studied in many experiments, but the way in which it is produced varies. Barlow and Berry (2010) took a more systematic approach. They used a specific formula (to generate a random dot pattern and varied the density of the pattern by adjusting the parameters. Glass (1969), however, is more traditional in his approach, where he observes the resulting moiré phenomenon through the more primitive physical means of spraying black particles on white paper, followed by photocopying and rotating and overlapping them on transparent paper in order to generate a random dot matrix.



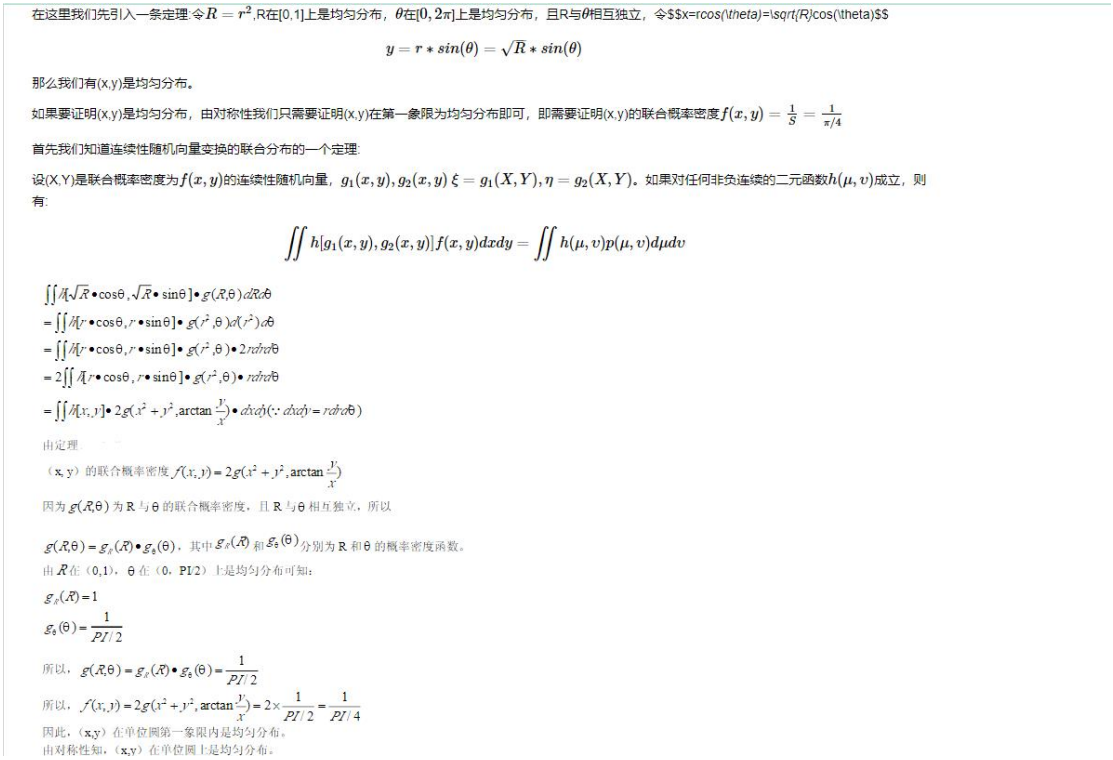
Upon actual observation I found that the visual effects of the dots produced by Barlow and Berry's (2010) method were not up to my expected standards.

And in terms of theoretical construction I preferred to follow the experimental ideas of Glass (1969) but modernise them into an algorithmic form.

Week two:

Based on what I identified last week I needed to start thinking about how to go about generating these dots, and I initially thought TouchDrsignrt would be a good choice as well as a good thing to try as I've never used it before. But while actually working on it I realised that it wasn't as convenient as I thought it would be, although generating the examples and rotating them was really quick and easy I still couldn't work out how to generate two layers of examples and have only the top layer rotated.

So I thought about what we learnt at Coding_One about JavaScript and the canvas, which might be a good way to do it. But here comes the headache. How am I supposed to generate and manipulate these dots in Js? I thought I'd stop thinking about manipulating them for a while and concentrate on generating them, so I turned to learning about the joint distribution of continuous random vector transforms, and I have to say that ChatGPT is really useful in this case, as it can help you find exactly the tutorials or the content you need.



在这里我们先引入一条定理:令$R=r^2$,R在[0,1]上是均匀分布，θ在$[0,2\pi]$上是均匀分布，且R与θ相互独立，令$$x=r\cos(\theta)=\sqrt{R}\cos(\theta)$$

$$y=r*sin(\theta)=\sqrt{R}*sin(\theta)$$

那么我们有(x,y)是均匀分布。

如果要证明(x,y)是均匀分布，由对称性我们只需要证明(x,y)在第一象限为均匀分布即可，即需要证明(x,y)的联合概率密度$f(x,y)=\frac{1}{S}=\frac{1}{\pi/4}$

首先我们知道连续性随机向量变换的联合分布的一个定理:

设(X,Y)是联合概率密度为$f(x,y)$的连续性随机向量，$g_1(x,y),g_2(x,y)\ \xi=g_1(X,Y),\eta=g_2(X,Y)$。如果对任何非负连续的二元函数$h(\mu,v)$成立，则有:

$$\iint h[g_1(x,y),g_2(x,y)]f(x,y)dxdy=\iint h(\mu,v)p(\mu,v)d\mu dv$$

$\iint h[\sqrt{R}\bullet\cos\theta,\sqrt{R}\bullet\sin\theta]\bullet g(R,\theta)dRd\theta$

$=\iint h[r^2\bullet\cos\theta,r^2\bullet\sin\theta]\bullet g(r^2,\theta)d(r^2)d\theta$

$=\iint h[r^2\bullet\cos\theta,r^2\bullet\sin\theta]\bullet g(r^2,\theta)\bullet 2rdrd\theta$

$=2\iint h[r^2\bullet\cos\theta,r\bullet\sin\theta]\bullet g(r^2,\theta)\bullet rdrd\theta$

$=\iint h[x,y]\bullet 2g(x^2+y^2,\arctan\frac{y}{x})\bullet dxdy(\because dxdy=rdrd\theta)$

由定理

（x, y）的联合概率密度$f(x,y)=2g(x^2+y^2,\arctan\frac{y}{x})$

因为$g(R,\theta)$为 R 与θ的联合概率密度，且 R 与θ相互独立，所以

$g(R,\theta)=g_R(R)\bullet g_\theta(\theta)$，其中$g_R(R)$和$g_\theta(\theta)$分别为 R 和$\theta$的概率密度函数。

由R在（0,1），θ在（0，PI/2）上是均匀分布可知：

$g_R(R)=1$

$g_\theta(\theta)=\frac{1}{PI/2}$

所以，$g(R,\theta)=g_R(R)\bullet g_\theta(\theta)=\frac{1}{PI/2}$

所以，$f(x,y)=2g(x^2+y^2,\arctan\frac{y}{x})=2\times\frac{1}{PI/2}=\frac{1}{PI/4}$

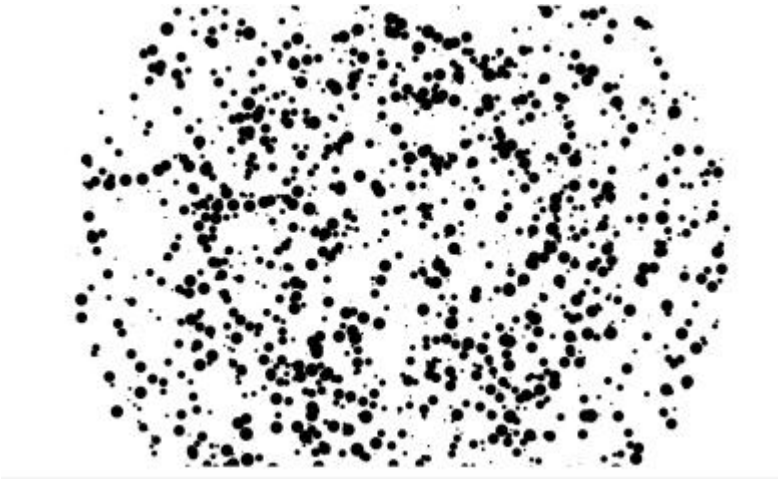
因此，（x,y）在单位圆第一象限内是均匀分布。

由对称性知，（x,y）在单位圆上是均匀分布。

The content on this chart relates to probability theory and transformations of random variables. Basically, what is depicted here is a transformation from polar to Cartesian coordinates, and the probability distribution under this transformation is examined.

Week three:

After the last week I've made some initial gains, I've tried to generate some dots and while there are still some issues, it did work. So before taking the next step I wanted to think about how I was manipulating them.



In terms of specific interactions, touch and joystick interactions complement the concept of rotary manipulation.

Touch interaction, with the advantage of being intuitive and fast, is controlled by the user's direct touch, which requires us to fine-tune the interaction experience of the device, especially in terms of comfort, although this may have an impact on the overall logic of the device.

In contrast, joystick interaction presents a simpler logic, where the user only needs to rotate the joystick to interact with the interface. However, joystick interaction has inherent limitations, for example, the limited operating range of the joystick does not provide fast and accurate positioning, and the vectorial information output from the joystick is not sufficiently precise to locate the target compared to a mouse. In addition, joysticks cannot select options outside of the interaction interface, and their cursors may cause abrupt jumps during sliding.

Considering the various scenarios, keyboard-mouse interactions demonstrate unique advantages on several levels. While the keyboard is similar to the joystick in terms of operability, the introduction of the mouse greatly expands the level and efficiency of the interface. The hovering feature of the mouse allows the user to break directly through the interface hierarchy and achieve rapid positioning, which is unmatched by the joystick in terms of speed. The precision and speed of the mouse further transforms the entire display area into a potential interactive space, where a large amount of information and interactive elements can be displayed unobstructed. The precision of the mouse reduces the likelihood of mis-touching, allowing the interactive elements to be designed more finely, thus increasing the density of the information displayed. Hovering the mouse cursor is equivalent to adding a new level

of interaction, allowing auxiliary information, such as prop details, to be hidden, further optimising the content of the interface.

Based on the above considerations, a keyboard and mouse were chosen as the main interaction method for the device in order to maximise control.

Week four:

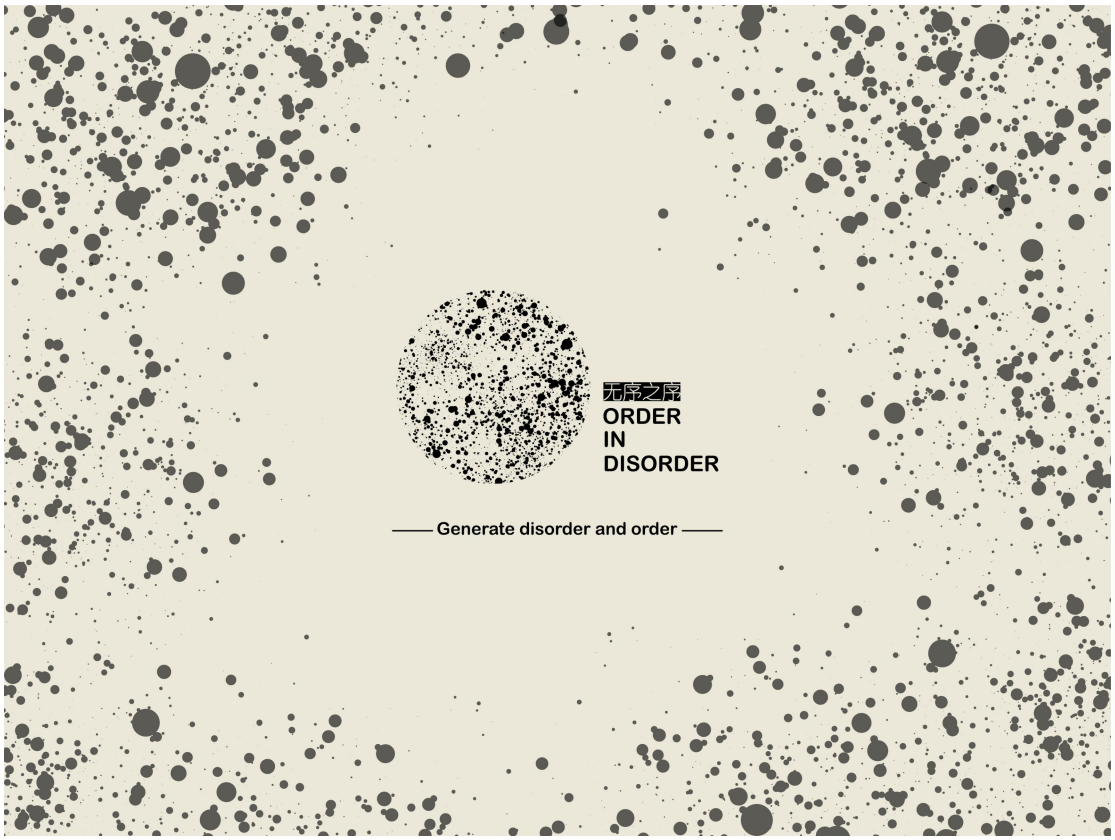
Most of this week has been spent packing up and preparing to return to the UK, but there has been some thought about the installation this week, I wondered if it would be possible to upload the installation to a web page, via server software such as nginx, whilst overall stylistically I would like to do something minimalist, which would be less intrusive in terms of extra elements and guidance, and would allow for the results of the experience to be presented in a more natural way.

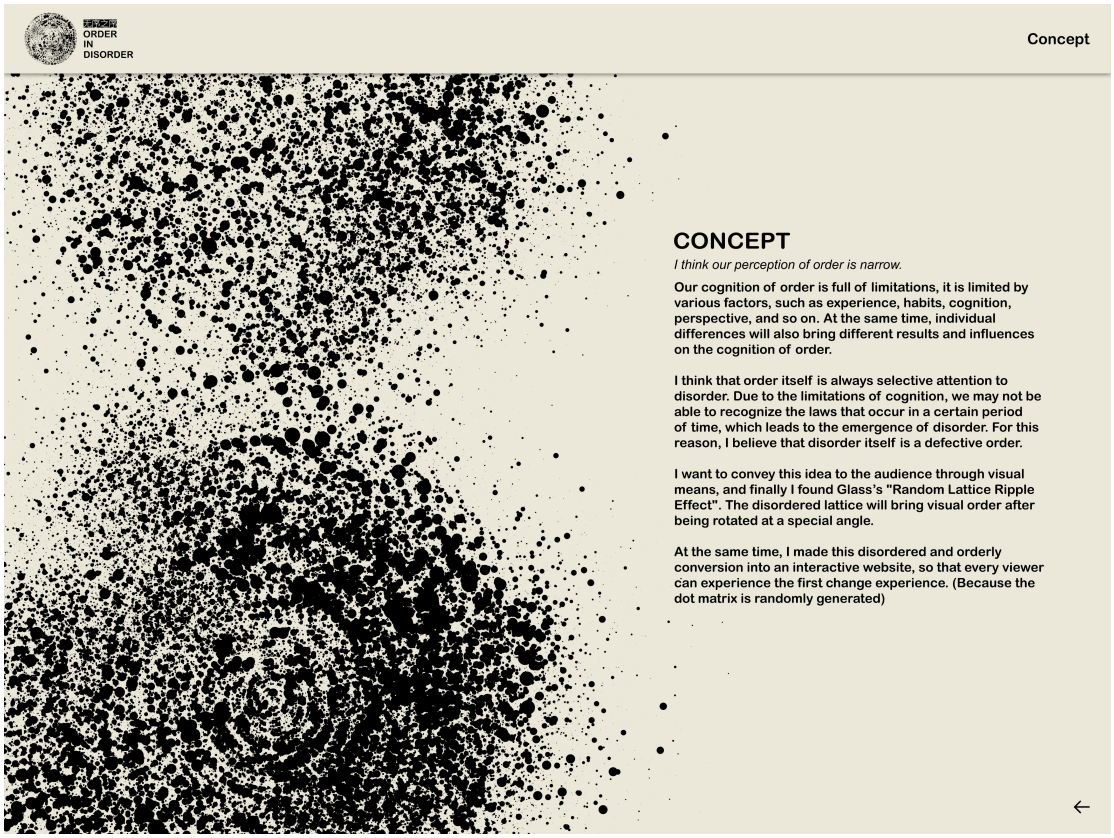
October

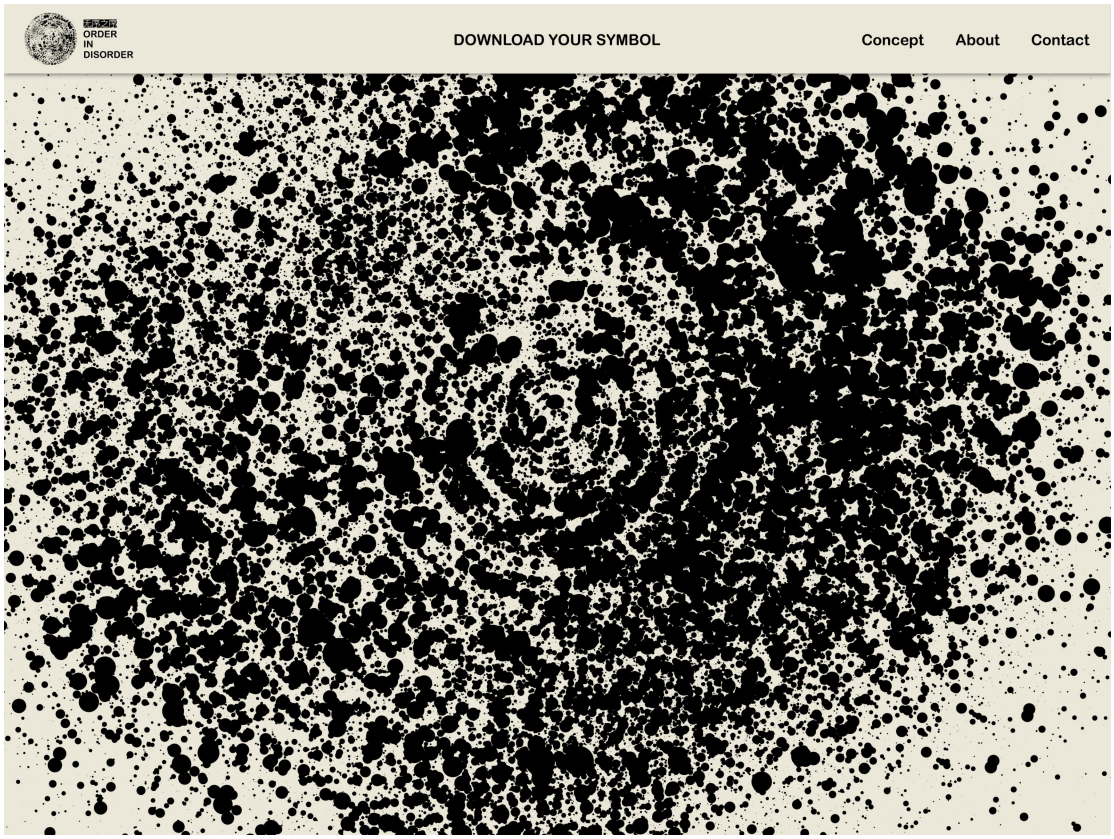
Week one:

Returned to the UK this week to prepare for my final term. In my free time this week I created the overall visual style of this installation, I've actually done something similar before so used some previous material which made my progress a little quicker. The overall style is rather simple, mainly because I wanted to minimise the distraction of extra elements and guidance.

Overall I'm pretty happy with it though, and the next main thing is to get this web-based interactive installation roughly finished, and it's time to prepare some of the dissertation side of things.







These visuals of the installation were created using AI and ID, and this material was also used on the final installation page.

This week I also made some dynamic versions of this logo, which was inspired by Glass' (1969) moiré experiment, which I reproduced and used as my logo.

(Due to formatting constraints the motion picture version of the logo can be viewed in the github blog!)

In terms of the name I decided to call it "Order in Disorder", which I like, I used it when I was building the Arduino device, and I think it has an inherent beauty, an order without order, which is very relevant to my theme, but at the same time it has a sense of absurdity to it. There are no absolutes, things change from moment to moment, and order is no exception.

Week two & three:

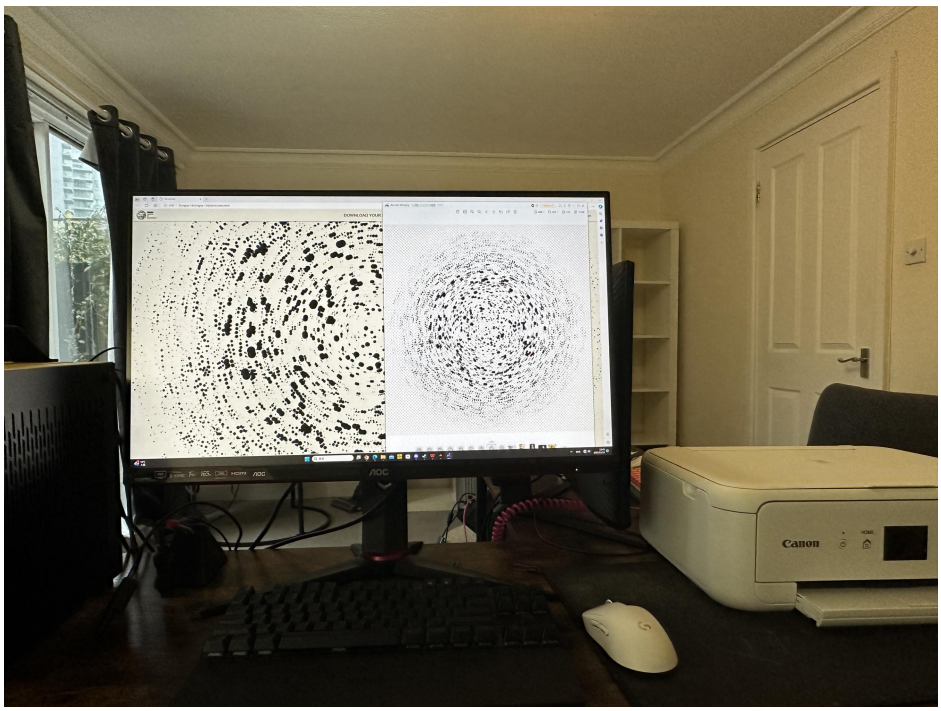
This fortnight I want to talk about it together, this fortnight's time are basically consumed in the production of this device, in fact, to be honest, rather than a device, rather than an interactive web page haha, after all, the device is just a carrier of it, the implementation of this matrix really took me a lot of effort, I use the element combined with the JavaScript class to achieve the generation and control of interactive particles. The particle generation process consists of the following key steps: initially determine the total number of particles and the radius of the canvas (i.e. this.num and this.canvasR). For each particle, a random radius is generated using the getRandomRadius function, which extracts a smooth weighted random number based on the SmoothWeightRoundRobin algorithm to determine the particle size. This algorithm ensures that the particle sizes are varied and remain within a predetermined distribution. Next, the randomPoint function randomly determines the coordinates (x, y) of the particles based on the centre point of the canvas and its radius, using a polar to Cartesian coordinate system. Eventually, these coordinates and other parameters (e.g. colour, centre coordinates) are used to instantiate the Particle class and the resulting particle instances are stored in the this.spreads array.

Finally the pre-set Js file is called in the combined Html to enable the generation of the dots, and some functionality is added to increase the spreading effect of the dots, and to add my Logo to this main web page.

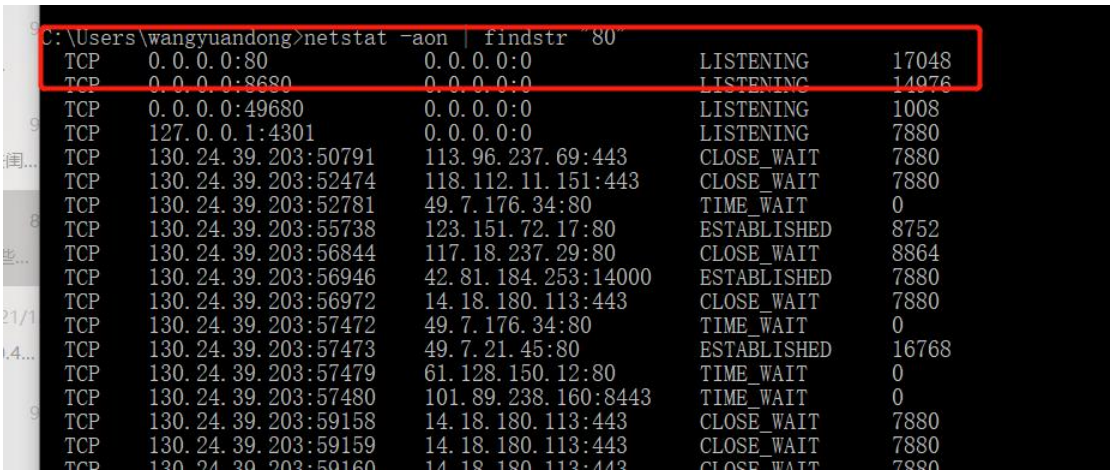
To be honest the whole process is really difficult, especially in the dot matrix generation of this board, initially due to a variety of problems, such as the number of particles generated too much (to be honest, my desktop configuration is considered to be relatively high i7-12700; 3090ti; 32G 6400 RAM strips, which is the first time that I felt the limits of the computer, when the number of particles generated is too much resulting in the computer directly jammed) or particles can not be controlled, so that I crashed many times, but in the end I learnt a lot of knowledge, I am very grateful to those who have helped me in this board students and teachers.

Week four:

This week I've been working on adding some extra features to what I've done before, such as downloading the generated images, adjusting the generation time and speed of the dot matrix, resizing the overall UI, and so on, which is a bit of a chore. Meanwhile, I also tried to use Nginx to upload my web pages this week, but it took a long time because of the port occupancy problem, but in the end it was quite successful (in fact, it's just deploying a server locally, and the web pages are published to the local server, and then opened through the url).



To be honest it's also causing me a lot of trouble here, both ports I set up in the beginning are occupied, resulting in never being able to open it via URL.



Of course, this week also began the writing of the paper, I think that due to the previous period of study, the writing of the paper is still relatively smooth, because the articles I read before impressed me (because it is too difficult to understand, to be honest, a lot of concepts are seemingly understandable). This week, I mainly wrote the overview and introduction and organised those articles I had read before, which I need to use in my dissertation.

November

Week one:

Over the course of the last week I completed the overview, introduction, and relevant research planks of my thesis, as well as integrating the reference list. So this week I got in touch with my tutor and showed her some of my successes so far, and the demo video of the device.

Caroline is a very responsible tutor, and after going through it she immediately started to help me fix some of the errors on my paper, or things that were unclear, as well as actively communicating with me, which really helped me a lot. At the same time in this week I am also continuing my thesis writing, I need to unify my whole design ideas and production process, and seize the key parts, put them into the thesis, only the combination of theory and practice can bring good design.

Week two:

I have continued my writing this week, I am hoping to have my thesis finished by the start of the next conference so I have more time to present them, I have had some feedback from Caroline this week which has been very useful and I have made some adjustments to the thesis in line with them, as well as doing the Blog organisation and some debugging on the device, after all, it's getting close to the submission date.

Week three:

I had some meetings with Caroline this week, and she gave me a lot of feedback on the direction of my thesis, as well as a lot of encouragement, which has given me the motivation to keep going as I've lost confidence several times due to the complexity of the area covered by the thesis being a bit more than I thought possible.

I've basically finished my dissertation this week, and while I'm waiting for feedback I've been doing some organising of my Blogs, as I prefer writing them in a notebook to writing them on the web, I like the feeling of writing, so I need to consolidate them and upload them to the web now.

During the week I also basically finished editing my demo video, which is generally just showing the whole concept of the design, and what it actually looks like in action.

To be honest I personally like to add some background music in my videos, and this choice of background music made me think for a long time, haha, I think the music a person likes can reflect that person's taste.

Week four:

It's the last four days before submission, and I'll be submitting all the design content on Friday of this week, and to be honest, I'm still very worried and nervous inside, wondering if all this stuff I'm doing showcases my own ideas and some of the knowledge I've learnt during my postgraduate studies.

In the last few days I have adjusted some of the content of the thesis, because the tutor may be very busy I have not received the final feedback, so I can only rely on my own feelings and refer to the examples of previous students to make some changes, I hope to pass successfully.

Thanks for watching and thanks a lot for your company :)

If I never see you again, good morning, good afternoon and good night.